APPENDIX A

Air Quality and Greenhouse Gas Modeling Report

Draft

2005 W. JAMES M WOOD BLVD HOTEL PROJECT

Air Quality Technical Report

Prepared for
Tina Chen
Infinitely Group, Inc.
1717 S. Vermont Avenue
Los Angeles, CA 90006

February 2017

ESA

Draft

2005 W. JAMES M WOOD BLVD HOTEL PROJECT

Air Quality Technical Report

Prepared for
Tina Chen
Infinitely Group, Inc.
1717 S. Vermont Avenue
Los Angeles, CA 90006

February 2017

626 Wilshire Boulevard
Suite 1100
Los Angeles, CA 90017
213.599.4300
www.esassoc.com

ESA

Irvine	Sacramento
Los Angeles	San Diego
Oakland	San Francisco
Orlando	Santa Monica
Pasadena	Seattle
Petaluma	Tampa
Portland	Woodland Hills

D170061.00

OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

TABLE OF CONTENTS

Appendices

List of Figures

List of Tables

EXECUTIVE SUMMARY

The purpose of this Air Quality Technical Report is to assess and discuss the impacts of potential air quality impacts that may occur with the implementation of the proposed 2005 James M Wood Boulevard Hotel Project located in the City of Los Angeles. Emissions of greenhouse gases (GHGs) are also quantified and evaluated in this Technical Report. The Project site is located on the northwest corner of the intersection of James M Wood Boulevard and Westlake Avenue. The Project would remove existing commercial/retail uses on the Project site and develop a hotel use with 100 hotel rooms (a hotel with up to 110 hotel rooms is analyzed in this Technical Report).

The analysis describes the existing buildings' operational impacts in the project area, estimates future emission levels at surrounding land uses resulting from construction and operation of the project, and identifies the potential for significant impacts. An evaluation of the project's contribution to potential cumulative air quality impacts is also provided. Air quality worksheets and technical data used in this analysis are provided in the Appendices.

This report summarizes the potential for the Project to conflict with an applicable air quality plan, to violate an air quality standard or threshold, to result in a cumulatively net increase of criteria pollutant emissions, to expose sensitive receptors to substantial pollutant concentrations, or to create objectionable odors affecting a substantial number of people. The findings of the analyses are as follows:

- The Project would be consistent with air quality policies set forth by the City of Los Angeles, the South Coast Air Quality Management District (SCAQMD), and the Southern California Association of Governments (SCAG).
- The incremental increase in emissions from construction and operation of the Project would not exceed the regional daily emission thresholds set forth by the SCAQMD. Thus, the Project would not result in a regional violation of applicable air quality standards or jeopardize the timely attainment of such standards in the South Coast Air Basin (the Air Basin).
- The incremental increase in onsite emissions from construction and operation of the Project would not exceed the localized significance thresholds set forth by the SCAQMD. Thus, the Project would not result in a localized violation of applicable air quality standards or expose offsite receptors to substantial levels of regulated air contaminants resulting in a less than significant impact.
- Emissions from the increase in traffic due to operation of the Project would not have a significant impact upon 1-hour or 8-hour local carbon monoxide (CO) concentrations due to mobile source emissions.

- The Project could potentially result in substantial emissions of toxic air contaminants (TACs) during construction affecting adjacent sensitive receptors. Implementation of **Mitigation Measure AIR-1**, listed below, would be expected to reduce this impact to less than significant.

  Mitigation Measure AIR-1: Off-road diesel-fueled heavy-duty construction equipment greater than 50 horsepower (hp) used for this Project and located on the Project site for a total of five (5) days or more shall meet at a minimum the United States Environmental Protection Agency (USEPA) Tier 3 emissions standards and the equipment shall be outfitted with Best Available Control Technology (BACT) devices including a CARB certified Level 3 Diesel Particulate Filter or equivalent control device.

- Project construction and operations would not result in significant levels of odors.
- The Project would result in a less than significant cumulative air quality impacts during construction and operation of the Project.

1.0
Introduction

1.1 Project Description

The Project Applicant proposes to redevelop an approximately 20,256 net square foot (22,500 gross square foot) parcel located at 2005 James M Wood Boulevard in the City of Los Angeles with a hotel use ("the Project"). The location of the Project site and nearby vicinity is shown in **Figure 1, Regional and Vicinity Location Map**.

The Project would consist of a hotel use with 100 hotel rooms (a hotel with up to 110 hotel rooms is analyzed in this Technical Report) consisting of studio units and suites, and hotel amenities including meeting rooms, kitchen and breakfast area, lobby and reception area, office space, and a luggage room. Vehicle loading would occur in an enclosed area on the ground floor. The refuse collection area would be located in an enclosed area on the ground floor on the northeast end of the building. The proposed building would be six floors totaling approximately 60,631 square feet with two basement levels totally approximately 37,020 square feet. The floor-to-area ratio would be 2.99 (60,631 square feet / 20,256 net square feet = 2.99). The Project would provide 100 parking spaces in an enclosed structure on the ground floor and basement levels, which would exceed the City of Los Angeles parking requirement. Short-term and long-term bicycle parking would also be provided. The Project site plan is shown in **Figure 2,** *Project Site Plans*.

1.2 Existing Site Uses

The Project site is developed with approximately 8,228 square feet of commercial/retail uses and surface parking areas. The Project would remove existing commercial/retail uses on the Project site and the existing surface parking areas.

Figure 1 Regional and Vicinity Location Map

Figure 2 Project Site Plan

2.0
Regulatory and Environmental Setting

2.1 Regulatory Setting

2.1.1 Air Quality

A number of statutes, regulations, plans and policies have been adopted which address air quality concerns. The Project site and vicinity is subject to air quality regulations developed and implemented at the federal, State, and local levels. At the federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of the federal Clean Air Act. Some portions of the Clean Air Act (e.g., certain mobile source requirements and other requirements) are implemented directly by the USEPA. Other portions of the Clean Air Act (e.g., stationary source requirements) are implemented through delegation of authority to State and local agencies. At the state and regional levels, the California Air Resources Board (CARB) and South Coast Air Quality Management District (SCAQMD) are responsible for air quality planning and regulation. A number of plans, policies, and regulations have been adopted by various agencies that address air quality concerns. Those plans, policies, and regulations that are relevant to the Project are discussed below.

Federal

The federal Clean Air Act of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. At the federal level, the USEPA is responsible for implementation of certain portions of the Clean Air Act including mobile source requirements. Other portions of the Clean Air Act, such as stationary source requirements, are implemented by state and local agencies.

The Clean Air Act establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The 1990 Amendments to the Clean Air Act identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones.

Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions) of the Clean Air Act are most applicable to the development and operations of the Project. Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants: ozone (O_3); nitrogen dioxide (NO_2); carbon monoxide (CO); sulfur dioxide (SO_2); fine particulate

matter (PM10); and lead (Pb). Later, the NAAQS were amended to include an 8-hour standard for O_3 and to adopt a NAAQS for fine particulate matter (PM2.5). **Table 1**, *Ambient Air Quality Standards*, shows the NAAQS currently in effect for each criteria pollutant.

TABLE 1
AMBIENT AIR QUALITY STANDARDS

		California Standards [a]		National Standards [b]		
Pollutant	**Average Time**	**Concentration [c]**	**Method [d]**	**Primary [c, e]**	**Secondary [c,f]**	**Method [g]**
O_3 [h]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
NO_2 [i]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m^3)	None	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		53 ppb (100 µg/m^3)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m^3)		9 ppm (10 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
SO_2 [j]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)9
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas) [j]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) [j]	—	
PM_{10} [k]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
$PM_{2.5}$ [k]	24 Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3 [k]	15 µg/m^3	
Lead [l,m]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)m	Same as Primary Standard	

Pollutant	Average Time	California Standards [a] Concentration [c]	Method [d]	National Standards [b] Primary [c, e]	Secondary [c,f]	Method [g]
	Rolling 3-Month Average [m]	--		0.15 µg/m^3		
Visibility Reducing Particles [n]	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of 10 miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates (SO_4)	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride [l]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

NOTES:

a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m^3) is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

g Reference method as described by the USEPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the USEPA.

h On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

i To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.

j On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

k On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3.

l The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

m The national standard for lead was revised on October 15, 2008 to a rolling three-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

n In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: California Air Resources Board, Ambient Air Quality Standards (10/1/15), http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed January 2016.

The Project is located within the South Coast Air Basin (Air Basin), which is an area designated as non-attainment because it does not currently meet NAAQS for certain pollutants regulated under the Clean Air Act. The Air Basin previously exceeded the NAAQS for PM10, but has met effective July 26, 2013.[1] The Air Basin does not meet the NAAQS for O_3 and PM2.5 and is classified as being in non-attainment for these pollutants. The Los Angeles County portion of the Air Basin is designated as non-attainment for the lead NAAQS; however, this was due to localized emissions from two previously operating lead-acid battery recycling facilities located in the City of Vernon and the City of Industry (SCAQMD 2012a). These facilities are no longer operating and would not affect the Project site. **Table 2**, *South Coast Air Basin Attainment Status (Los Angeles County)*, lists the criteria pollutants and their relative attainment status.

TABLE 2
SOUTH COAST AIR BASIN ATTAINMENT STATUS (LOS ANGELES COUNTY)

Pollutant	National Standards	California Standards
Ozone (1-hour standard)	N/A [a]	Non-attainment
Ozone (8-hour standard)	Non-attainment – Extreme	Non-attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment (Maintenance)	Attainment
Sulfur Dioxide	Attainment	Attainment
PM10	Attainment (Maintenance)	Non-attainment
PM2.5	Non-attainment – Serious	Non-attainment
Lead	Non-attainment (Partial) [b]	Attainment
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Attainment
Vinyl Chloride	N/A	N/A [c]

NOTES: N/A = not applicable
[a] The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.
[b] Partial Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors. Expect to remain in attainment based on current monitoring data.
[c] In 1990, the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.

SOURCE: South Coast Air Quality Management District, February, 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2. Accessed February 2017.

The Clean Air Act also specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards would be met. The 1990 amendments to the Clean Air Act identify specific emission reduction goals for basins not meeting the NAAQS. These amendments require both a

[1] *Federal Register*, Vol. 78, No. 123, June 26, 2013, 38223-38226.

demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones.

Title II of the Clean Air Act pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

State

California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include State-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act, responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. **Table 1** shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the State. As shown, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. **Table 2** provides a summary of the attainment status of the Los Angeles County portion of the Air Basin with respect to the state standards.

California Air Resources Board Air Quality and Land Use Handbook

The CARB published the *Air Quality and Land Use Handbook* in April 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit TAC emissions (CARB 2005a). The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

California Air Resources Board On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other Toxic Air Contaminants (TACs) (13 CCR, Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure generally does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given location with certain exemptions for equipment in which idling is a necessary function such as concrete trucks.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_X, PM10, and PM2.5 emissions from existing diesel vehicles operating in California (13 CCR, Section 2025, subsection [h]). The requirements were amended in December 2010 and apply to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating greater than 14,000 pounds. Under the regulation newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to meet the emissions standards for 2010 model year engines or equivalent.

In addition to limiting exhaust emissions from trucks, CARB promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) (e.g., bulldozers, loaders, backhoes, forklifts, etc.). The regulation adopted by the CARB on July 26, 2007 (13 CCR, Section 2449) reduces emissions by the installation of diesel particulate matter filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models. Fleets must demonstrate compliance through one of two methods. The first option is to calculate and maintain declining fleet average emissions targets. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (VDECS) on a certain percentage of its total fleet horsepower. Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with large fleets beginning compliance in 2014, medium fleets in 2017, and small fleets in 2019. The compliance schedule requires that BACT turn overs or retrofits (VDECS installation) be fully implemented by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

Regional

South Coast Air Quality Management District

The SCAQMD is primarily responsible for planning, implementing, and enforcing air quality standards for all of Orange County, Los Angeles County (excluding the Antelope Valley portion), the western, non-desert portion of San Bernardino County, and the western, Coachella Valley, and San Gorgonio Pass portions of Riverside County. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards.

Air Quality Management Plan

The SCAQMD has adopted a series of Air Quality Management Plans (AQMP) to meet the CAAQS and NAAQS. SCAQMD and CARB have adopted the 2012 AQMP which incorporates the latest scientific and technological information and planning assumptions, including the Southern California Association of Governments (SCAG) 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and updated emission inventory methodologies for various source categories (SCAQMD 2012b). The Final 2012 AQMP was adopted by the AQMD Governing Board on December 7, 2012.

The key undertaking of the 2012 AQMP is to bring the Air Basin into attainment with the NAAQS for the 24-hour $PM_{2.5}$ standard. It also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 8-hour O_3 standard deadline with new measures designed to reduce reliance on the federal Clean Air Act Section 182(e)(5) long-term measures for NO_X and VOC reductions. The SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The control measures in the 2012 AQMP consist of four components: (1) Basin-wide and Episodic Short-term $PM_{2.5}$ Measures; (2) Contingency Measures; (3) 8-hour Ozone Implementation Measures; and (4) Transportation and Control Measures provided by SCAG. The Plan includes eight short-term PM2.5 control measures, 16 stationary source 8-hour ozone measures, 10 early action measures for mobile sources and seven early action measures are proposed to accelerate near-zero and zero emission technologies for goods movement related sources, and five on-road and five off-road mobile source control measures. In general, the SCAQMD's control strategy for stationary and mobile sources is based on the following approaches: (1) available cleaner technologies; (2) best management practices; (3) incentive programs; (4) development and implementation of zero- near-zero technologies and vehicles and control methods; and (5) emission reductions from mobile sources. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities associated with the Project include strategies denoted in the AQMP as ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment. Descriptions of measures ONRD-04 and OFFRD-01 are provided below:

> **ONRD-04 – Accelerated Retirement of Older On-Road Heavy-Duty Vehicles:** This proposed measure seeks to replace up to 1,000 heavy-duty vehicles per year with newer or new vehicles that at a minimum, meet the 2010 on-road heavy-duty NO_X exhaust emissions standard of 0.2 grams per brake horsepower-hour (g/bhp-hr). Given that exceedances of the 24-hour $PM_{2.5}$ air quality standard occur in the state, priority will be placed on replacing older diesel trucks that operate primarily at the warehouse and distribution centers. Funding assistance of up to $35,000 per vehicle is proposed and the level of funding will depend upon the NO_X emissions certification level of the replacement vehicle. In addition, a provision similar to the Surplus Off-Road Option for NO_X (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation will be sought to ensure that additional NO_X emission reduction benefits are achieved.

OFFRD-01 – Extension of the SOON Provision for Construction/Industrial Equipment: This measure seeks to continue the Surplus Off-Road Option for NO_X (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation beyond 2014 through the 2023 timeframe. In order to implement the SOON program in this timeframe, funding of up to $30 million per year would be sought to help fund the repower or replacement of older Tier 0 and Tier 1 equipment, with reductions that are considered surplus to the statewide regulation with Tier 4 or cleaner engines.

The SCAQMD released the Draft 2016 AQMP on June 30, 2016 for public review and comment (SCAQMD 2016a). A Draft Final 2016 AQMP was released in December 2016 and public hearings were scheduled for February 3, 2017, which was continued to March 3, 2017 (SCAQMD 2016b). The purpose of the hearings is for the SCAQMD Governing Board to consider approving the AQMP (SCAQMD 2016c). Key elements of the Revised Draft 2016 AQMP include implementing fair-share emissions reductions strategies at the federal, state, and local levels; establishing partnerships, funding, and incentives to accelerate deployment of zero and near-zero-emissions technologies; and taking credit from co-benefits from greenhouse gas, energy, transportation and other planning efforts. The strategies included in the Draft Final 2016 AQMP are intended to demonstrate attainment of the NAAQS for the federal non-attainment pollutants O_3 and PM2.5.

Air Quality Guidance Documents

The SCAQMD published the *California Environmental Quality Act (CEQA) Air Quality Handbook* to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts (SCAQMD 1993). The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* with the *Air Quality Analysis Guidance Handbook*. While this process is underway, the SCAQMD recommends that lead agencies avoid using the screening tables in Chapter 6 (Determining the Air Quality Significance of a Project) and the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L as they are outdated. The SCAQMD instead recommends using other approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod) software, initially released in 2011 and updated in 2013 and again in 2016.

The SCAQMD has published a guidance document called the *Final Localized Significance Threshold Methodology* that is intended to provide guidance in evaluating localized effects from mass emissions during construction (SCAQMD 2008a). The SCAQMD adopted additional guidance regarding PM2.5 in a document called *Final Methodology to Calculate Particulate Matter (PM)2.5 and PM2.5 Significance Thresholds* (SCAQMD 2006). This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and *Final Localized Significance Threshold Methodology*.

Rules and Regulations

Several SCAQMD rules adopted to implement portions of the AQMP may apply to construction or operation of the Project. The Project may be subject to the following SCAQMD rules and regulations:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which may apply to the Project:

- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM_{10} emissions to less than 50 micrograms per cubic meter ($\mu g/m^3$) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for different specific sources. The following is a list of rules which may apply to the Project:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.
- **Rule 1186 – PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations:** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM_{10} emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).
- **Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:** This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the Southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) in April 2016, which addresses regional development and growth forecasts and forms the basis for the land use and transportation control portions of the AQMP (SCAG 2016). The growth forecasts are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. The RTP/SCS and AQMP are based on projections originating within local jurisdictions.

SCAG is required to adopt an SCS pursuant to Senate Bill (SB) 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional greenhouse gas (GHG) reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. In February 2011, CARB adopted the final GHG emissions reduction targets for the Southern California Association of Governments (SCAG), which is the Metropolitan Planning Organization for the region in which the City of Los Angeles is located. The target is a per capita reduction of 8 percent for 2020 and 13 percent for 2035 compared to the 2005 baseline. The 2016-2040 RTP/SCS meets or exceeds these targets, lowering greenhouse gas lowering greenhouse gas emissions (below 2005 levels) by eight percent by 2020; 18 percent by 2035; and 21 percent by 2040. Of note, the proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and the low carbon fuel standard regulations. Compliance with and implementation of 2016-2040 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions associated with reduced per capita VMT.

SCAG's SCS provides specific strategies for successful implementation. These strategies include supporting projects that encourage diverse job opportunities for a variety of skills and education, recreation, cultures, and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

Local

Local jurisdictions, such as the City of Los Angeles, have the authority and responsibility to reduce air pollution through its land use decision-making authority. Specifically, the City is

responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City's General Plan includes City wide goals, objectives, and policies related to air quality resources. Several goals, objectives, and policies are relevant to the project and are related to stationary source, mobile source, transportation and land use control, and energy conservation measures.

The City of Los Angeles is also responsible for the implementation of transportation control measures as outlined in the AQMP. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality by requiring such improvements as bus turnouts as appropriate, installation of energy-efficient streetlights, and synchronization of traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation measures.

The City of Los Angeles has incorporated the California Green Building (CALGreen) Standards Code, with amendments in Article 9 in its Municipal Code. The City's ordinance requires applicable projects to comply with specified provisions to reduce energy consumption.

2.1.2 Greenhouse Gases

California Greenhouse Gas Reduction Targets

The Governor announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

CARB subsequently expressed its intention to initiate the second update to the Climate Change Scoping Plan update during 2015 and 2016 with adoption scheduled thereafter in the second quarter of 2017.

California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines GHGs as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. Under the original projections, the State must reduce its 2020 business as usual (BAU) emissions by 28.4 percent in order to meet the 1990 GHG emissions target level. In 2014, CARB revised the target using the global warming potential values (GWP) values from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4) and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 million metric tons of carbon dioxide equivalents ($MMTCO_2e$). CARB also updated the State's 2020 BAU emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently adopted for motor vehicles and renewable energy. CARB's revised 2020 BAU emissions estimate using the GWP values from the IPCC AR4 is 509.4 $MMTCO_2e$. Therefore, the emission reductions necessary to achieve the 2020 emissions target of 431 $MMTCO_2e$ would be 78.4 $MMTCO_2e$, or a reduction of GHG emissions by approximately 15.4 percent.

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, both were signed by Governor Brown. SB 32 and AB 197 amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities. CARB is in the process of preparing the second update to the Scoping Plan to reflect the 2030 target established in Executive Order B-30-15 and SB 32.

Transportation Sector

In response to the transportation sector accounting for a large percentage of California's CO_2 emissions, AB 1493 (HSC Section 42823 and 43018.5), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. The federal Clean Air Act ordinarily preempts state regulation of motor vehicle emission standards; however, California is allowed to set its own standards with a federal Clean Air Act waiver from the USEPA. In June 2009, the USEPA granted California the waiver.

The USEPA and United States Department of Transportation (USDOT) adopted federal standards for model year 2012 through 2016 light-duty vehicles. In light of the USEPA and USDOT standards, California – and states adopting the California emissions standards (referred to as the Pavley standards) – agreed to defer to the national standard through model year 2016. The state standards require additional reductions in CO_2 emissions beyond model year 2016 (referred to as the Pavley Phase II standards). The USEPA and USDOT also adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the Pavley Phase II standards, but the State of California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly less reductions in California, it would achieve greater reductions nationally and is stringent enough to meet state GHG emission reduction goals. In 2012, CARB adopted regulations that allow manufacturers to comply with the 2017-2025 national standards to meet state law.

In January 2007, Governor Brown enacted Executive Order S-01-07, which mandates the following: (1) establish a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) adopt a Low Carbon Fuel Standard (LCFS) for transportation fuels in California. CARB identified the LCFS as one (1) of the nine (9) discrete early actions in the Climate Change Scoping Plan. The LCFS regulations were approved by CARB in 2009 and established a reduction in the carbon intensity of transportation fuels by 10 percent by 2020 with implementation beginning on January 1, 2011. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted.

As discussed previously, SCAG is required to adopt an SCS pursuant to SB 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions. The 2016-2040 RTP/SCS demonstrates a reduction in per capita transportation GHG emissions by eight percent by 2020; 18 percent by 2035; and 21 percent by 2040.

Energy Sector

The California Energy Commission (CEC) first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2)

Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality" (CBSC 2010). The CALGreen Code is mandatory for all new buildings constructed in the state and establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality. The CALGreen Code was most recently updated in 2016 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2017 (CBSC 2016).

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the State's Renewables Portfolio Standard to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the Renewables Portfolio Standard with a Renewable Energy Standard that will result in a total renewable energy requirement for utilities of 33 percent by 2020. But on April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's Renewables Portfolio Standard to 33 percent by 2020. SB 350 (Chapter 547, Statues of 2015), signed into law on October 7, 2015, further increased the Renewables Portfolio Standard to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027.

The City of Los Angeles has adopted a Green Building Code in Los Angeles Municipal Code (LAMC) Chapter IX, Section 99.01.101 et seq. The Green Building Code adopts the CALGreen Code, as well as more stringent City-specific requirements to improve energy, water, and waste efficiency and reduce building-related criteria pollutant and GHG emissions.

2.2 Environmental Setting

2.2.1 Air Quality Sensitive Receptors

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. The nearest existing air quality sensitive uses in close proximity to the Project site include the following:

- Multi-Family Residential Dwellings: A two-story multi-family residential building is located adjacent to the Project site property to the north. Two- and three story multi-family residential buildings are located further to the north (approximately 80 feet and greater from the Project site) and to the east across Westlake Avenue (approximately 60 feet and greater from the Project site). Residential uses are also located to the south of James M Wood Boulevard (approximately 180 feet and greater from the Project site).

All other air quality sensitive receptors are located at greater distances from the Project site, and would be less impacted by Project emissions. Impacts are quantified for the above sensitive receptors.

2.2.2 Regional Air Quality

Criteria Air Pollutants

The distinctive climate of the Air Basin is determined primarily by its terrain and geographical location. Regional meteorology is dominated by a persistent high pressure area which commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause changes in the weather patterns of the area. Warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and moderate humidity characterize local climatic conditions. This normally mild climatic condition is occasionally interrupted by periods of hot weather, winter storms, and hot easterly Santa Ana winds.

The Air Basin is an area of high air pollution potential, particularly from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Air Basin vary with location, season and time of day. Ozone concentrations, for example, tend to be lower along the coast, higher in the near inland valleys and lower in the far inland areas of the Air Basin and adjacent desert.

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them. A brief description of the health effects of these criteria air pollutants are provided below.

Ozone (O_3): Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds (VOCs) and nitrogen oxides (NO_X) under favorable meteorological conditions such as high temperature and stagnation episodes. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of ozone irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower the lung efficiency (CARB 2015).

Volatile Organic Compounds (VOCs): VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some VOCs are also classified by the State as TACs. These are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons, as are architectural coatings. Emissions of VOCs themselves are not "criteria" pollutants; however, they contribute with NO_X to form O_3 and are regulated as O_3 precursor emissions.

Nitrogen Dioxide (NO_2) and Nitrogen Oxides (NO_X): NO_X is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include NO_2 and nitric oxide (NO), which can quickly oxidize in the atmosphere to form NO_2. Ambient air quality standards have been promulgated for NO_2, which is a reddish-brown, reactive gas. The principle form of NO_X produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO_2, creating the mixture of NO and NO_2 referred to as NO_X. Major sources of NO_X emissions include power plants, large industrial facilities, and motor vehicles. Emissions of NO_X are a precursor to the formation of ground-level ozone. NO_2 can potentially irritate the nose and throat, aggravate lung and heart problems, and may increase susceptibility to respiratory infections, especially in people with asthma. According to the CARB, "NO_2 is an oxidizing gas capable of damaging cells lining the respiratory tract. Exposure to NO_2 along with other traffic-related pollutants, is associated with respiratory symptoms, episodes of respiratory illness and impaired lung functioning. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children" (CARB 2011). The terms "NO_X" and "NO_2" are sometimes used interchangeably. However, the term "NO_X" is primarily used when discussing emissions, usually from combustion-related activities. The term "NO_2" is primarily used when discussing ambient air quality standards. More specifically, NO_2 is regulated as a criteria air pollutant under the Clean Air Act and subject to the ambient air quality standards, whereas NO_X and NO are not. In cases where the thresholds of significance or impact analyses are discussed in the context of NO_X emissions, it is based on the conservative assumption that all NO_X emissions would oxidize in the atmosphere to form NO_2.

Carbon Monoxide (CO): Carbon monoxide is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations (CARB 2009a).

Sulfur Dioxide (SO_2): Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness (CARB 2009b).

Particulate Matter (PM10 and PM2.5): The human body naturally prevents the entry of larger particles into the body. However, small particles including fugitive dust, with an aerodynamic diameter equal to or less than 10 microns (PM10) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns (PM2.5), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate

existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM10 and PM2.5. In children, studies have shown associations between PM exposure and reduced lung function and increased respiratory symptoms and illnesses. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids (CARB 2005b).

Lead (Pb): Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body. The Project would not include sources of lead emissions and would not generate emissions of lead; therefore, lead is not discussed further in this Technical Report.

Toxic Air Contaminants

TACs are generally defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. TACs are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects; however, emission of TACs does not automatically create a health hazard. Other factors, such as the amount of the chemical; its toxicity; how it is released into the air; the weather; and the terrain, all influence whether the emission could be hazardous to human health. TACs are emitted by a variety of industrial processes such as petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust and may exist as particulate matter or as vapors (gases).

Between July 2012 and June 2013, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES IV), which is a follow-up to previous air toxics studies conducted in the Air Basin. The MATES IV Final Report was issued in May 2015 (SCAQMD 2015a). The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the Air Basin equates to a background cancer risk of approximately 418 in 1,000,000 primarily due to diesel exhaust, which is about 65 percent lower than the previous MATES III cancer risk (SCAQMD 2015a). Subsequent to the SCAQMD's risk calculations estimates performed for MATES IV, the California Office of Environmental Health Hazard Assessment (OEHHA) updated the methods for estimating cancer risks (OEHHA 2015). The updated method utilizes higher estimates of cancer potency during early life exposures and uses different assumptions for breathing rates and length of residential exposures. When combined together, SCAQMD staff estimates that risks for the same inhalation exposure level will be about 2.5 to 2.7 times higher using the updated methods. This would be reflected in the average

lifetime air toxics risk estimated from the monitoring sites data going from 418 per million to 1,023 per million (SCAQMD 2015a). Under the updated OEHHA methodology, adopted in March of 2015, the relative reduction in risk from the MATES IV results compared to MATES III would be the same (about 65 percent reduction in risk). Approximately 68 percent of the airborne carcinogenic risk in the Air Basin is attributed to emissions of diesel particulate matter.

2.2.3 Local Air Quality

Existing Ambient Air Quality in the Surrounding Area

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The monitoring station most representative of the Project Site is the Central Los Angeles Monitoring Station, located at 1630 North Main Street, Los Angeles, CA 90012. Criteria pollutants monitored at this station include O_3, NO_2, CO, SO_2, PM10, and PM2.5. The most recent data available from the SCAQMD for these monitoring stations are from years 2011 to 2015 (SCAQMD 2011-2015). The pollutant concentration data for these years are summarized in **Table 3**, *Pollutant Standards and Ambient Air Quality Data from Representative Monitoring Stations*.

TABLE 3
POLLUTANT STANDARDS AND AMBIENT AIR QUALITY DATA FROM REPRESENTATIVE MONITORING STATIONS

Pollutant/Standard	2011	2012	2013	2014	2015[a]
O_3 (1-hour)					
Maximum Concentration (ppm)	0.120	0.117	0.011	0.091	0.119
Days > CAAQS (0.09 ppm)	8	8	4	0	11
O_3 (8-hour)					
Maximum Concentration (ppm)	0.084	0.088	0.083	0.079	0.094
4th High 8-hour Concentration (ppm)	0.081	0.081	0.079	0.069	0.087
Days > CAAQS (0.070 ppm)	10	15	17	2	34
Days > NAAQS (0.075 ppm)	6	8	6	1	15
NO_2 (1-hour)					
Maximum Concentration (ppm)	0.068	0.080	0.073	0.073	0.073
98th Percentile Concentration (ppm)	0.056	0.057	0.060	0.065	0.052
NO_2 (Annual)					
Annual Arithmetic Mean (0.030 ppm)	0.022	0.022	0.020	0.022	0.014
CO (1-hour)					
Maximum Concentration (ppm)	--	--	--	3	3.0
CO (8-hour)					
Maximum Concentration (ppm)	2.4	2.4	2.4	3	2.5

Pollutant/Standard	2011	2012	2013	2014	2015[a]
SO_2 (1-hour)					
Maximum Concentration (ppm)	0.009	0.007	0.011	0.005	0.013
99th Percentile Concentration (ppm)	0.005	0.003	0.004	0.004	0.006
PM_{10} (24-hour)					
Maximum Concentration (µg/m^3)	61	55	52	68	88
Samples > CAAQS (50 µg/m^3)	2	1	1	2	26
Samples > NAAQS (150 µg/m^3)	0	0	0	0	0
PM_{10} (Annual Average)					
Annual Arithmetic Mean (20 µg/m^3)	28.4	26.4	28.5	31.2	33.1
$PM_{2.5}$ (24-hour)					
Maximum Concentration (µg/m^3)	47.8	54.2	45.1	64.6	36.8
98th Percentile Concentration (µg/m^3)	33.5	28.2	30.4	29	28.4
Samples > NAAQS (35 µg/m^3)	5	2	4	2	1
$PM_{2.5}$ (Annual)					
Annual Arithmetic Mean (12 µg/m^3)	13.2	12.2	12.2	12.1	8.84

NOTES:
ppm = parts per million; µg/m^3 = micrograms per cubic meter.
SOURCE: South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. Accessed December 2016.

Existing Toxic Air Contaminant Risk Levels

As part of the MATES IV, the SCAQMD prepared maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps represent the estimated number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years). The grid in which the Project site is located has an estimated background potential cancer risk per million people using the update OEHHA methodology of 1,554 to 1,610 per million (compared to an overall South Coast Air Basin-wide risk of 1,023 per million) based on the SCAQMD analyzed grid-specific data from 2012-2013 in MATES IV, which is graphically displayed in the Carcinogenic Risk Interactive Map available on the SCAQMD website.[2] Generally, the risk from air toxics is lower near the coastline: it increases inland, with higher risks concentrated near diesel sources (e.g., freeways, airports, and ports).

[2] Background inhalation cancer risk value was obtained from detailed map data found at: South Coast Air Quality Management District, Multiple Air Toxics Exposure Study, MATES IV Carcinogenic Risk Interactive Map, http://www3.aqmd.gov/webappl/OI.Web/OI.aspx?jurisdictionID=AQMD.gov&shareID=73f55d6b-82cc-4c41-b779-4c48c9a8b15b. Accessed February 2017.

2.2.4 Greenhouse Gases and Climate

Worldwide man-made emissions of GHGs were approximately 49,000 $MMTCO_2e$ annually including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation) (IPCC AR5). Emissions of CO_2 from fossil fuel use and industrial processes account for 65 percent of the total while CO_2 emissions from all sources accounts for 76 percent of the total. Methane emissions account for 16 percent and N_2O emissions for 6.2 percent. In 2013, the United States was the world's second largest emitter of carbon dioxide at 5,300 MMT (China was the largest emitter of carbon dioxide at 10,300 MMT) (PBL 2014).

CARB compiles GHG inventories for the State of California. Based on the 2014 GHG inventory data (i.e., the latest year for which data are available from CARB), California emitted 441.5 $MMTCO_2e$ including emissions resulting from imported electrical power and 405 $MMTCO_2e$ excluding emissions related to imported power (CARB 2016). The transportation sector is the largest contributor to statewide GHG emissions at 36 percent in 2014.

2.2.5 Existing Site Emissions

Criteria Air Pollutants

The Project site is currently developed with a retail strip mall area. The current site usage generates existing vehicle trips and air quality emissions from operations related to retail activities at the site. **Table 4**, *Existing Site Operational Emissions*, identifies the existing emissions from the existing strip mall. The emissions were estimated using the California Emissions Estimator Model (CalEEMod), which is an emissions inventory software program recommended by the SCAQMD. Emissions calculation worksheets are provided in **Appendix A** of this Technical Report.

TABLE 4
EXISTING SITE OPERATIONAL EMISSIONS (POUNDS PER DAY) [A]

Emissions Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Existing Operational						
Area (Consumer Products, Landscaping)	<1	<1	<1	<1	<0.1	<0.1
Energy (Natural Gas)	<1	<1	<1	<1	<0.1	<0.1
Motor Vehicles	1	2	6	<1	1.2	0.3
Total Existing Emissions	**1**	**2**	**6**	**<1**	**1.2**	**0.3**

NOTES:

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A.

SOURCE: ESA 2017.

Greenhouse Gases

The existing site GHG emissions are provided in **Table 5**, *Existing Site Greenhouse Gas Emissions*, identifies the existing emissions from the existing strip mall. The emissions were estimated using CalEEMod. Emissions calculation worksheets are provided in **Appendix A** of this Technical Report.

TABLE 5
EXISTING SITE GREENHOUSE GAS EMISSIONS [A]

Emissions Source	CO_2e (Metric Tons per Year)
Existing Operational	
Area	<1
Electricity	73
Natural Gas	1
Motor Vehicles	262
Water Conveyance	8
Waste	1
Existing Total Emissions	**345**

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A.

SOURCE: ESA 2017.

3.0
Environmental Impacts

3.1 Significance Thresholds

3.1.1 Air Quality

Appendix G of the State CEQA Guidelines provides a set of screening questions that address impacts with regard to air quality. These questions are as follows:

Would a project:

a. Conflict with or obstruct the implementation of the applicable air quality plan (Impact Threshold AIR-1);

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation (Impact Threshold AIR-2);

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (Impact Threshold AIR-3);

d. Expose sensitive receptors to substantial pollutant concentrations (Impact Threshold AIR-4); or

e. Create objectionable odors affecting a substantial number of people (Impact Threshold AIR-5).

Pursuant to the State CEQA Guidelines (Section 15064.7), a lead agency may consider using, when available, the significance criteria established by the applicable air quality management district or air pollution control district when making determinations of significance. The *L.A. CEQA Thresholds Guide* incorporates the Appendix G screening questions, and relies on the thresholds established by the SCAQMD. The potential air quality impacts of the Project are, therefore, evaluated according to the most recent thresholds adopted by the SCAQMD in connection with its CEQA *Air Quality Handbook*, *Air Quality Analysis Guidance Handbook*, and

subsequent SCAQMD guidance as discussed previously.[3] The Project would result in a potentially significant impact to air quality if it would exceed the thresholds described below.

Air Quality Plan

The Project would have a significant impact if it would substantially conflict with or obstruct implementation of relevant air quality policies in the adopted SCAQMD AQMP (evaluated under Impact Thresholds AIR-1).

Regional Construction

Regional construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed daily emissions thresholds (SCAQMD 2015b) (evaluated under Impact Thresholds AIR-2 and AIR-3):

- 75 pounds a day for VOC;
- 100 pounds per day for NO_X;
- 550 pounds per day for CO;
- 150 pounds per day for SO_2;
- 150 pounds per day for PM10; or
- 55 pounds per day for PM2.5.

Localized Construction

The SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards or ambient concentration limits. Impacts would be considered significant if the following would occur (SCAQMD 2008a) (evaluated under Impact Threshold AIR-4):

- Maximum daily localized emissions of NO_X and/or CO during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for NO_2 and/or CO.
- Maximum daily localized emissions of PM10 and/or PM2.5 during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project site to exceed 10.4 micrograms per cubic meter ($\mu g/m^3$) over 24 hours (SCAQMD Rule 403 control requirement).

[3] While the SCAQMD CEQA Air Quality Handbook contains significance thresholds for lead, Project construction and operation would not include sources of lead emissions and would not exceed the established thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from commercial and residential land use projects such as the Project. As a result, lead emissions are not further evaluated in this Technical Report.

The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards or ambient concentration limits without project-specific dispersion modeling. This analysis uses the SCAQMD screening criteria to evaluate impacts from localized emissions.

Regional Operations

The SCAQMD has established numerical emission indicators of significance for operations. The numerical emission indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health (SCAQMD 1993). The SCAQMD has established numeric indicators of significance in part based on Section 182(e) of the CAA which identifies 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone (SCAQMD 1993). The SCAQMD converted this significance level to pounds per day for ozone precursor emissions (10 tons per year × 2,000 pounds per ton ÷ 365 days per year = 55 pounds per day). The numeric indicators for other pollutants are also based on federal stationary source significance levels. The Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur (SCAQMD 2015b) (evaluated under Impact Thresholds AIR-2 and AIR-3):

- 55 pounds a day for VOC;
- 55 pounds per day for NO_X;
- 550 pounds per day for CO;
- 150 pounds per day for SO_2;
- 150 pounds per day for PM10; or
- 55 pounds per day for PM2.5.

Localized Operations

In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. Impacts would be considered significant if the following would occur (SCAQMD 2008a) (evaluated under Impact Threshold AIR-4):

- Maximum daily localized emissions of NO_X and/or CO during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for NO_2 and/or CO.

- Maximum daily localized emissions of PM10 and/or PM2.5 during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the project site to exceed 2.5 µg/m^3 over 24 hours (SCAQMD Rule 1303 allowable change in concentration).

The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards or ambient concentration limits without project-specific dispersion modeling. This analysis uses the SCAQMD screening criteria to evaluate impacts from localized emissions.

Carbon Monoxide Hotspots

The Project would be considered significant if the following would occur (SCAQMD 2015b) (evaluated under Impact Thresholds AIR-4):

- The Project would cause or contribute to an exceedance of the CAAQS one-hour or eight-hour CO standards of 20 or 9.0 parts per million (ppm), respectively, at a Project-impacted intersection or roadway.

Toxic Air Contaminants

Based on the City of Los Angeles CEQA Thresholds Guide and criteria set forth by the SCAQMD, the Project would expose sensitive receptors to substantial concentrations of toxic air contaminants if any of the following would occur (SCAQMD 2015b) (evaluated under Impact Thresholds AIR-4):

- The Project would emit carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or an acute or chronic hazard index of 1.0.

Odors

The Project would be considered significant if the following would occur (SCAQMD 2015b) (evaluated under Impact Thresholds AIR-5):

- The Project would create objectionable odors affecting a substantial number of people.

3.1.2 Greenhouse Gases

Appendix G of the State CEQA Guidelines provides a set of screening questions that address impacts with regard to air quality. These questions are as follows:

Would a project:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (Impact Threshold GHG-1)?

b. Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (Impact Threshold GHG-2)?

Greenhouse Gas Emissions

The City of Los Angeles has not yet adopted a numerical significance threshold for assessing impacts related to GHG emissions. When no guidance exists under CEQA, the lead agency may look to and assess general compliance with comparable regulatory schemes.[4]

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for stationary source/industrial projects where the SCAQMD is lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects) and formed a GHG Significance Threshold Working Group to further evaluate potential GHG significance thresholds. The Working Group released draft guidance regarding interim CEQA GHG indicators of significance in October 2008, proposing a tiered approach. Under Tier 1, projects that are exempt from CEQA would be less than significant. Under Tier 2, projects that are consistent with an adopted GHG reduction plan would be less than significant. Under Tier 3, non-industrial projects with 3,000 metric tons of CO_2e per year or less would be less than significant. Tier 4 uses performance standards, which requires projects to demonstrate a percent emission reduction target below BAU or an efficiency-based threshold such as GHG emissions on a per service population basis. The aforementioned Working Group has been inactive since 2011 and has not formally submitted thresholds to the Governing Board for approval.

Given the lack of a formally adopted numerical significance threshold or a formally adopted local plan for reducing GHG emission applicable to this project, the significance of the project is evaluated consistent with CEQA, California Air Pollution Control Officers Association (CAPCOA), and Office of Planning and Research (OPR) guidelines and advisories. The significance of the project will be based on an assessment of the project's GHG emissions sources for general compliance with comparable regulatory schemes. "Tier 3," the primary tier by which SCAQMD currently determines the significance of stationary emission sources, relies on Executive Order S-3-05 as the basis for a screening level, and was established at a level that captures 90 percent of Air Basin-wide land use GHG emissions. The SCAQMD proposed a screening level of 3,000 metric tons of carbon dioxide equivalents ($MTCO_2e$) per year for commercial or mixed-use residential projects under which project impacts are considered less than significant, "to achieve the same policy objective of capturing 90 percent of the GHG emissions from new development projects in the residential/commercial sectors" (SCAQMD

[4] See Protect Historic Amador Waterways v. Amador Water Agency (2004) 116 Cal. App. 4th 1099, 1107 [""[A] lead agency's use of existing environmental standards in determining the significance of a project's environmental impacts is an effective means of promoting consistency in significance determinations and integrating CEQA environmental review activities with other environmental program planning and resolution."""]. Lead agencies can, and often do, use regulatory agencies' performance standards. A project's compliance with these standards usually is presumed to provide an adequate level of protection for environmental resources. See, e.g., *Cadiz Land Co. v. Rail Cycle (2000) 83 Cal.App.4th 74, 99* (upholding use of regulatory agency performance standard).

2008b). In CAPCOA's January 2008 CEQA and Climate Change white paper, CAPCOA suggested a possible quantitative threshold option that would capture 90 percent of GHG emissions from future discretionary development projects. According to CAPCOA, the "objective was to set the emission threshold low enough to capture a substantial fraction of future residential and nonresidential development that will be constructed to accommodate future statewide population and job growth, while setting the emission threshold high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions" (CAPCOA 2008, pg. 42-43). A 90 percent capture rate would "exclude the smallest proposed developments from potentially burdensome requirements … to mitigate GHG emissions" (CAPCOA 2008, pg. 43-44). The SCAQMD's proposed screening level of 3,000 $MTCO_2e$ per year is a South Coast Air Basin-specific level that would meet CAPCOA's intent for the suggested quantitative threshold option. It should be noted that the SCAQMD has formally adopted a GHG significance thresholds of 10,000 $MTCO_2e$ per year for industrial/stationary source projects where the SCAQMD is the lead agency based on a 90 percent capture rate for the industrial/stationary source sector. Given the lack of a formally adopted numerical significance threshold applicable to this project, the significance of the project is evaluated based on the SCAQMD's proposed screening level of 3,000 $MTCO_2e$.

Greenhouse Gas Reduction Plans, Policies, or Regulations

Local and regional agencies and the State recommend general policies and measures to minimize and reduce GHG emissions from land use development projects. Thus, if the Project is designed in accordance and not in conflict with applicable policies and measures, it would result in a less than significant impact since it would be consistent with the strategies and actions to reduce GHG emissions. Therefore, a significant impact would occur if the Project would conflicts with applicable plans, policies, or regulations for the purpose of reducing the emissions of GHGs:

3.2 Methodology

The methodology to evaluate potential impacts to regional and local air quality that may result from the construction and long-term operations of the Project is conducted as follows.

3.2.1 Air Quality

Consistency with Air Quality Plan

The SCAQMD is required, pursuant to the Clean Air Act, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of the NAAQS (e.g., ozone and $PM_{2.5}$). The SCAQMD's 2012 Air Quality Management Plan contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving the NAAQS. These strategies are developed, in part, based on regional growth projections prepared by the SCAG. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide and the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, which provide the basis for the land use and transportation components of the Air Quality Management Plan and are used in the preparation of the air quality forecasts and the consistency analysis included in the Air

Quality Management Plan. Both the Regional Comprehensive Plan and Air Quality Management Plan are based, in part, on projections originating with county and city general plans.

The 2012 Air Quality Management Plan was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are consistent with the assumptions used in the Air Quality Management Plan do not interfere with attainment because the growth is included in the projections utilized in the formulation of the Air Quality Management Plan. Thus, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the Air Quality Management Plan would not jeopardize attainment of the air quality levels identified in the Air Quality Management Plan, even if they exceed the SCAQMD's numeric indicators.

Construction Emissions

Construction of the Project has the potential to generate temporary criteria pollutant emissions through the use of heavy-duty construction equipment, such as excavators and forklifts, and through vehicle trips generated from workers and haul trucks traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and various soil-handling activities. Mobile source emissions, primarily NO_X, would result from the use of construction equipment such as dozers and loaders. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The emissions are estimated using the CalEEMod (Version 2016.3.1) software, an emissions inventory software program recommended by the SCAQMD. CalEEMod is based on outputs from the CARB off-road emissions model (OFFROAD) and the CARB on-road vehicle emissions model (EMFAC), which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on- and off-road vehicles. The input values used in this analysis are based on conservative assumptions in CalEEMod with appropriate adjustments to be Project-specific based on equipment types and expected construction activities. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate criteria pollutant emissions values for each construction activity. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in **Appendix B**.

Construction of the Project is estimated to begin as early as mid-2017 with an anticipated completion in 2018. Subphases of construction would include demolition of some of the existing structures and features on-site, site clearing, grading, excavation, building construction, architectural coating, and paving. Demolition activities would generate approximately 1,316 tons of demolition debris (asphalt and general construction debris). The Project would export

approximately 16,590 cubic yards of soil during grading and excavation activities. Emissions from these activities are estimated by construction phase. It should be noted that the maximum daily emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day of Project construction. The maximum daily emissions are compared to the SCAQMD daily regional numeric indicators.

Operational Emissions

Operation of the Project has the potential to generate criteria pollutant emissions through vehicle trips traveling to and from the Project Site. In addition, emissions would result from area sources on-site such as natural gas combustion, landscaping equipment, and use of consumer products. Operational impacts were assessed for the anticipated Project buildout year (i.e., 2018).

The operational emissions are estimated using the CalEEMod software. CalEEMod was used to forecast the daily regional emissions from area sources that would occur during long-term Project operations. In calculating mobile-source emissions, the trip length values were based on the distances provided in CalEEMod. The trip distances were applied to the maximum daily trip estimates, based on the trip rates in the Project traffic impact analysis prepared by Linscott, Law & Greenspan Engineers (LLG) for the Project (LLG 2017).

Area source emissions are based on natural gas (building heating and water heaters), landscaping equipment, and consumer product usage (including paints) rates provided in CalEEMod. Natural gas usage factors in CalEEMod are based on the California Energy Commission (CEC) California Commercial End Use Survey (CEUS) data set, which provides energy demand by building type and climate zone. However, since the data from the CEUS is from 2002, CalEEMod incorporates correction factors to account for the appropriate version of the Title 24 Building Energy Efficiency Standards in effect.

Operational air quality impacts are assessed based on the incremental increase in emissions compared to baseline conditions. As discussed previously, the Project Site is currently developed with a strip mall that is currently in use and has existing emissions (refer to **Table 1**). Therefore, the analysis is based on the Project's net operational emissions by subtracting the existing site emissions from the Project emissions. The maximum daily net emissions from operation of the Project are compared to the SCAQMD daily regional numeric indicators. Detailed emissions calculations are provided in **Appendix C**.

Localized Emissions

The localized effects from the onsite portion of the emissions are evaluated at nearby sensitive receptor locations potentially impacted by the Project according to the SCAQMD Final Localized Significance Threshold Methodology (SCAQMD 2008a), which relies on on-site mass emission rate screening tables and project-specific dispersion modeling, where appropriate. The localized significance thresholds are only applicable to NO_X, CO, PM10, and PM2.5. For NO_X and CO, the thresholds are based on the ambient air quality standards. For PM10 and PM2.5, the thresholds are based on requirements in SCAQMD Rule 403 (Fugitive Dust) and Rule 1303 (New Source Review Requirements). The SCAQMD provides mass emission rate screening tables that

are used for projects which are five acres or less. Projects which are larger than five acres, detailed dispersion modeling is recommended to assess air quality impacts. The Project site is less than one acre; therefore, the screening tables are used to evaluate localized emissions.

The screening criteria depend on: (1) the area in which the project is located, (2) the size of the project site, and (3) the distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals). The SCAQMD provides screening criteria for distances of 25, 50, 100, 200, and 500 meters and allows for linear interpolation to estimate the screening criteria between these distances. The Project site is located in the Central Los Angeles County area and is approximately 0.52 acres in size. The nearest existing off-site sensitive receptor is the residential development located to the north of the Project site. Therefore, the screening criteria are linearly interpolated for a 0.52-acre site in the Central Los Angeles County area with sensitive receptors located adjacent to the site.

Carbon Monoxide Hotspots

Localized areas where ambient concentrations exceed state and/or federal standards are termed CO hotspots. The potential for the Project to cause or contribute to the formation of off-site CO hotspots are evaluated based on prior dispersion modeling of the four busiest intersections in the Air Basin that has been conducted by the SCAQMD for its CO Attainment Demonstration Plan in the AQMP. The analysis compares the intersections with the greatest peak-hour traffic volumes that would be impacted by the Project to the intersections modeled by the SCAQMD. Project-impacted intersections with peak-hour traffic volumes that are lower than the intersections modeled by the SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations compared to the SCAQMD modeled values in its AQMP.

Toxic Air Contaminants

The greatest potential for TAC emissions during construction would be related to diesel particulate matter emissions associated with heavy-duty equipment during demolition, excavation and grading activities. Construction activities associated with the Project would be sporadic, transitory, and short-term in nature. The OEHHA is responsible for developing and revising guidelines for performing health risk assessments under the State's the Air Toxics Hot Spots Program Risk Assessment (AB 2588) regulation. In March 2015, OEHHA adopted revised guidelines that update the previous guidance by incorporating advances in risk assessment with consideration of infants and children using Age Sensitivity Factors (ASF) (OEHHA 2015). The analysis of potential construction TAC impacts considers the OEHHA revised guidelines as well as the duration of construction, level of construction activity, scale of the Project, and compliance with regulations that would minimize construction TAC emissions.

During long-term operations, TACs could be emitted as part of periodic maintenance operations, cleaning, painting, etc., and from periodic visits from delivery trucks and service vehicles. However, these uses are expected to be occasional and result in minimal exposure to off-site sensitive receptors. As the Project consists of hotel uses, the Project would not include sources of

substantive TAC emissions identified by the SCAQMD or CARB siting recommendations. Thus a qualitative analysis is appropriate.

Odors

Potential odor impacts are evaluated by conducting a screening-level analysis followed by a more detailed analysis as necessary. The screening-level analysis consists of reviewing the Project's site plan and Project description to identify new or modified odor sources. If it is determined that the Project would introduce a potentially significant new odor source, or modify an existing odor source, then downwind sensitive receptor locations are identified and a site-specific analysis is conducted to determine Project impacts.

3.2.2 Greenhouse Gases

Greenhouse Gas Emissions

The total GHG emissions from the Project were quantified to determine the level of the Project's estimated annual GHG emissions. Consistent with the Air Quality section calculations, in summary, construction emissions were estimated using CalEEMod by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source emissions factors. The modeling used the same input values as previously discussed under the methodology section for air quality (Section 3.2.1, Air Quality). The SCAQMD guidance, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, recognizes that construction-related GHG emissions from projects "occur over a relatively short-term period of time" and that "they contribute a relatively small portion of the overall lifetime project GHG emissions" (SCAQMD 2008b). The guidance recommends that construction project GHG emissions should be "amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies" (SCAQMD 2008b). In accordance with that SCAQMD guidance, GHG emissions from construction are amortized over an assumed 30-year lifetime of the Project.

CalEEMod was also used to estimate operational GHG emissions from electricity, natural gas, solid waste, water and wastewater, fireplaces, and landscaping equipment. Building electricity and natural gas usage rates were adjusted to account for current Title 24 Building Energy Efficiency Standards. Mobile source emissions were estimated based on the CARB EMFAC model. For mobile sources, CalEEMod was used to generate the vehicle miles traveled (VMT) from the existing and Project uses based on the Project traffic impact analysis prepared by LLG for the Project (LLG 2017).

With regard to energy demand, the consumption of fossil fuels to generate electricity and to provide heating and hot water generates GHG emissions. Energy demand rates were estimated based on square footage and number of rooms of the hotel use, as well as predicted water supply needs for these uses. Energy demand (off-site electricity generation and on-site natural gas consumption) for the Project was calculated within CalEEMod using the CEC CEUS data set, which provides energy demand by building type and climate zone. However, since the data from

the CEUS is from 2002, correction factors are incorporated into CalEEMod to account for the current version of the Title 24 Building Energy Efficiency Standards.

Emissions of GHGs from solid waste disposal were also calculated using CalEEMod software. The emissions are based on the waste disposal rate for the land uses, the waste diversion rate, and the GHG emission factors for solid waste decomposition. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, were used in this assessment. A waste diversion rate of 76 percent for municipal solid waste from the City of Los Angeles is applied to the solid waste emissions calculations (City of LA 2013).

Emissions of GHGs from water and wastewater result from the required energy to supply and distribute the water and treat the wastewater. Wastewater also results in emissions of GHGs from wastewater treatment systems. Emissions are calculated using CalEEMod and are based on the water usage rate for the hotel use, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the emission factors for the wastewater treatment process.

Other sources of GHG emissions from operation of the Project include equipment used to maintain landscaping, such as lawnmowers and trimmers. The CalEEMod software uses landscaping equipment GHG emission factors from the CARB OFFROAD model and the CARB *Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003)* (CARB 2003).

Consistency with Greenhouse Gas Plans, Policies, and Regulations

In the latest *CEQA Guidelines* amendments, which went into effect on March 18, 2010, the OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. The City does not have a programmatic mitigation plan to tier from, such as a Greenhouse Gas Emissions Reduction Plan as recommended in the relevant amendments to the *CEQA Guidelines*. However, the City has adopted the Green Building Code that encourages and requires applicable projects to implement energy efficiency measures. Thus, if the Project is designed in accordance with these policies and regulations, it would result in a less than significant impact, since it would be consistent with the overarching State regulations on GHG reduction.

3.2.3 Project Characteristics

The Project would represent an urban infill development, since it would be undertaken on a currently developed site and would be located near existing off-site commercial and retail destinations and in close proximity to existing public transit stops, including within approximately a quarter mile of the Metro Red and Purple Line Westlake/McArthur Park Station.

Proximity to off-site destinations and public transportation would result in reduced vehicle trips and VMT, and associated air pollutant and GHG emissions compared to the statewide and Air Basin average. Vehicle trips reductions are accounted for, and supported by evidence, in the Project traffic impact analysis prepared by LLG for the Project (LLG 2017).

3.2.5 Project Design Features

The Project would incorporates Project Design Features that would reduce construction emissions and target sustainable site development, water savings, energy efficiency, green-oriented materials selection, and improved indoor environmental quality. The following project design features (PDFs) would be implemented based on required compliance with regulatory measures:

- The Project would comply with SCAQMD Rule 403 (Fugitive Dust), which requires specific dust control measures during construction activities. Control measures include, but are not limited to, the following:
  - Water or a stabilizing agent shall be applied to exposed surfaces at least two times per day to prevent generation of dust plumes.
  - All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
  - Construction activity on unpaved surfaces shall be suspended when wind speed exceed 25 miles per hour (such as instantaneous gusts).
  - Ground cover in disturbed areas shall be replaced as quickly as possible.
- The Project would be designed in accordance with applicable energy, water, and waste efficiency measures specified in the Title 24 Building Energy Efficiency Standards, CALGreen standards, and City of Los Angeles Green Building Code (LAMC Chapter IX, Section 99.01.101 et seq.

3.3 Project Impacts

Impact Threshold AIR-1: A significant impact would occur if the Project would conflict with or obstruct the implementation of the applicable air quality plan.

Impact Statement: The Project would not conflict with or obstruct implementation of relevant air quality policies in the adopted Air Quality Management Plan. Therefore, impacts would be less than significant.

Construction

Under this criterion, the SCAQMD recommends that lead agencies demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or

residential units) upon which the air quality plan are based. The Project would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under the Project would not conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include strategies denoted in the AQMP as ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. The Project would not conflict with implementation of these strategies. Additionally, the Project would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment. The Project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403.

Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Project would not conflict with the control strategies intended to reduce emissions from construction equipment, the Project would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

Operation

The AQMP is designed to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP.

The Project would replace existing commercial/retail uses with a hotel use. As a result, the Project would not result in a substantial change in long-term operational population or employment growth that exceeds planned growth projections. As the Project would not conflict with the growth projections in the AQMP, impacts would be less than significant.

Impact Threshold AIR-2: A significant impact would occur if the Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact Statement: Construction of the Project would not exceed the applicable SCAQMD significance thresholds. Operation of the Project would not exceed the applicable SCAQMD significance thresholds. Therefore, construction and operational emission impacts would be less than significant.

Regional Construction Emissions

The maximum daily emissions were estimated for construction of the Project for each construction phase. Some individual construction phases could potentially overlap, which is taken into account in the modeling. The maximum daily emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day of construction. Detailed emissions calculations are provided in **Appendix B**. Results of the criteria pollutant calculations are presented in **Table 6**, *Maximum Unmitigated Regional Construction Emissions*. As shown therein, construction-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_2, PM10, and PM2.5) would be substantially below the SCAQMD significance thresholds. Therefore, regional construction emissions would be less than significant and mitigation measure would not be required.

TABLE 6
MAXIMUM UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY) [A]

Source	VOC	NO_X	CO	SO_2	PM10 [b]	PM2.5 [b]
Project Construction						
Demolition	3	34	18	<1	4	2
Site Preparation	2	18	9	<1	3	2
Grading and Excavation	3	52	19	<1	5	3
Building Construction, Architectural Coating, and Paving	25	32	27	<1	3	2
Maximum Regional Emissions	**25**	**52**	**27**	**<1**	**5**	**3**
SCAQMD Significance Thresholds	75	100	550	150	150	55
Over (Under)	(50)	(48)	(523)	(150)	(145)	(52)
Exceeds Indicator?	No	No	No	No	No	No

NOTES:
[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix B**.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

SOURCE: ESA, 2017.

Regional Operational Emissions

Operational emissions were assessed for mobile, area, and stationary sources. Operational criteria pollutant emissions were calculated for the estimated earliest Project buildout year (i.e., 2018). Detailed emissions calculations are provided in **Appendix C**. Results of the criteria pollutant calculations are presented in **Table 7**, *Maximum Unmitigated Regional Operational*

Emissions. The increase in operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_2, PM10, and PM2.5) would be substantially below the SCAQMD thresholds of significance. Therefore, regional operational emissions would be less than significant and mitigation measure would not be required.

TABLE 7
MAXIMUM UNMITIGATED REGIONAL OPERATIONAL EMISSIONS (POUNDS PER DAY) [A]

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Project Operations						
Area (Consumer Products, Landscaping)	1	<1	<1	<1	<0.1	<0.1
Energy (Natural Gas)	<1	<1	<1	<1	<0.1	<0.1
Motor Vehicles	2	7	18	<1	3.9	1.1
Total Project Operational Emissions	**3**	**7**	**18**	**<1**	**4.0**	**1.1**
Existing Project Site Emissions	1	2	6	<1	1.2	0.3
Net Project Operational Emissions	**2**	**5**	**12**	**<1**	**2.8**	**0.8**
SCAQMD Significance Thresholds	55	55	550	150	150	55
Over/(Under)	(53)	(50)	(538)	(150)	(147)	(54)
Exceeds Thresholds?	No	No	No	No	No	No

NOTES:
[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix C**.

SOURCE: ESA 2017.

Impact Threshold AIR-3: A significant impact would occur if the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Impact Statement: The South Coast Air Basin is designated as non-attainment for O_3, PM10, and PM2.5 under federal and/or state ambient air quality standards. Construction of the Project would not exceed the applicable BAAQMD significance thresholds for ozone precursor emissions (i.e., VOCs and NO_X), PM10, or PM2.5. Operation of the Project would not exceed the applicable SCAQMD significance thresholds for ozone precursor emissions (i.e., VOCs and NO_X), PM10, or PM2.5. Therefore, construction and operational emissions would be less than significant.

Construction

The Project would result in the emission of criteria pollutants for which the project area is in non-attainment during both construction and operation. A significant impact may occur if a project

would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. The Air Basin is currently in non-attainment under federal or state standards for ozone, PM10, and PM2.5.

The emissions from construction of the Project are not predicted to exceed any applicable SCAQMD regional or local impact threshold and therefore, are not expected to result in ground level concentrations that exceed the NAAQS or CAAQS. Therefore, the project would not result in a cumulatively considerable net increase for non-attainment pollutants or ozone precursors and would result in a less than significant impact for construction emissions.

Operation

Future operations would generate ozone precursors (i.e., VOCs and NO_X), CO, PM10, and PM2.5. Operational emissions would not exceed the SCAQMD regional or local thresholds and would not be expected to result in ground level concentrations that exceed the NAAQS or CAAQS. Since the project would not introduce any substantial stationary sources of emissions, Therefore, operation of the Project would not result in a cumulatively considerable net increase for non-attainment of criteria pollutants or ozone precursors. As a result, the project would result in a less than significant impact for operational emissions.

Impact Threshold AIR-4: A significant impact would occur if the Project would expose sensitive receptors to substantial pollutant concentrations.

Impact Statement: Construction and operation of the Project would not exceed the localized significance thresholds at off-site sensitive receptors. Therefore, localized impacts would be less than significant. The Project would not cause or contribute to an exceedance of the CAAQS one-hour or eight-hour CO standards of 20 or 9.0 parts per million (ppm), respectively. Therefore, CO hotspots impacts would be less than significant. Construction of the Project would generate emissions of TACs (i.e., diesel particulate matter) that could potentially result in a significant health impact to off-site sensitive receptors in the immediate vicinity of the Project site, based on the State's recently updated conservative health risk assessment guidelines that incorporate childhood exposure age sensitivity factors. Implementation of Mitigation Measure AIR-1 would be expected to reduce construction health impacts to less than significant. Operation of the Project would not include permanent sources (equipment, etc.) that would generate substantial long-term TAC emissions in excess of the health risk thresholds. Therefore, operational TAC impacts would be less than significant.

Localized Construction Emissions

The localized construction air quality analysis was conducted using the methodology described in the SCAQMD Localized Significance Threshold Methodology (SCAQMD 2008a). The screening criteria provided in the Localized Significance Threshold Methodology were used to determine localized construction emissions thresholds for the Project. The maximum daily

localized emissions for each of the construction phases and localized significance thresholds are presented in **Table 8,** *Maximum Unmitigated Localized Construction Emissions*. As shown therein, maximum localized construction emissions would not exceed the localized thresholds for NO_X, CO, PM10, and PM2.5 at sensitive receptors. Therefore, with respect to localized construction emissions, impacts to existing and future sensitive receptors would be less than significant.

Localized Operational Emissions

The localized operational air quality analysis was conducted using the methodology described in the SCAQMD Localized Significance Threshold Methodology (SCAQMD 2008a). The screening criteria provided in the Localized Significance Threshold Methodology were used to determine localized construction emissions thresholds for the Project. The maximum daily operational localized emissions and localized significance thresholds are presented in **Table 9,** *Maximum Unmitigated Localized Operational Emissions*. As shown therein, maximum localized construction emissions would not exceed the localized thresholds for NO_X, CO, PM10, and PM2.5 at sensitive receptors. Therefore, with respect to localized operational emissions, impacts to existing and future sensitive receptors would be less than significant.

TABLE 8
MAXIMUM UNMITIGATED LOCALIZED CONSTRUCTION EMISSIONS (POUNDS PER DAY) [A]

Source	NO_X	CO	PM10 [b]	PM2.5 [b]
Project Construction (On-Site Emissions)				
Demolition	27	16	3	2
Site Preparation	18	9	3	2
Grading and Excavation	24	13	3	2
Building Construction, Architectural Coating, and Paving	29	23	2	2
Maximum Localized Emissions	**29**	**23**	**3**	**2**
SCAQMD Significance Thresholds	58	503	4	2
Over (Under)	(29)	(480)	(1)	(0)
Exceeds Indicator?	No	No	No	No

NOTES:
[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix B**.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

SOURCE: ESA, 2017.

TABLE 9
MAXIMUM UNMITIGATED REGIONAL OPERATIONAL EMISSIONS (POUNDS PER DAY) [A]

Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Project Operations				
Area (Consumer Products, Landscaping)	<1	<1	<0.1	<0.1
Energy (Natural Gas)	<1	<1	<0.1	<0.1
Total Project Operational Emissions	**<1**	**<1**	**<0.1**	**<0.1**
Existing Project Site Emissions	<1	<1	<0.1	<0.1
Net Project Operational Emissions	**<1**	**<1**	**<0.1**	**<0.1**
SCAQMD Significance Thresholds	58	503	2.0	0.5
Over/(Under)	(58)	(503)	(2.0)	(0.5)
Exceeds Thresholds?	No	No	No	No

NOTES:
[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix C**.

SOURCE: ESA 2017.

Carbon Monoxide Hotspots

As shown previously in **Table 3**, CO levels in the Project area are substantially below the federal and state standards. Maximum CO levels in recent years are approximately 3 ppm (one-hour

average and eight-hour average) compared to the thresholds of 20 ppm (one-hour average) and 9.0 ppm (eight-hour average). Carbon monoxide decreased dramatically in the Air Basin with the introduction of the catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Air Basin for some time and the Air Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. Thus, it is not reasonable to expect that CO levels at Project-impacted intersections would rise to the level of an exceedance of these standards.

Additionally, the SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin. These include: (a) Wilshire Boulevard and Veteran Avenue; (b) Sunset Boulevard and Highland Avenue; (c) La Cienega Boulevard and Century Boulevard; (d) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP CO attainment demonstration, the SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day (SCAQMD 2003, pg. V-4-24). The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (one-hour average) and 3.2 (eight-hour average) at Wilshire Boulevard and Veteran Avenue.

Based on the Project traffic impact analysis prepared by LLG for the Project (LLG 2017), the studied roadway intersections would have much less than 100,000 ADT under future plus Project conditions. As a result, CO concentrations would be less than 7.6 ppm (one-hour average) and 6.2 (eight-hour average). Total traffic volumes at the maximum impacted intersection would likely have to more than double or triple to cause or contribute to a CO hotspot impact given that vehicles operating today have reduced CO emissions as compared to vehicles operating in year 2003 when the SCAQMD conducted the AQMP attainment demonstration modeling. This comparison demonstrates that the Project would not contribute to the formation of CO hotspots and that no further CO analysis is required. The Project would result in less than significant impacts with respect to CO hotspots.

Toxic Air Contaminants

Project construction would result in short-term emissions of diesel particulate matter, which is a TAC. Diesel particulate matter poses a carcinogenic health risk that is generally measured using an exposure period of 30 years for sensitive residential receptors. Off-road heavy-duty diesel equipment would emit diesel particulate matter over the course of the construction period. Sensitive receptors are located adjacent to the Project site. Localized diesel particulate matter emissions (strongly correlated with PM2.5 emissions) would be minimal and would be substantially below localized thresholds as presented in **Table 8**. Nonetheless, while the Project would result in generally low level of diesel particulate matter emissions, it is potentially possible that the Project could result in health impacts to sensitive receptors in the immediate vicinity of the Project site given the updated health risk assessment guideline and age sensitive factors. Therefore, the impact is conservatively considered potentially significant and mitigation measures are recommended. It is noted that the Project would comply with the CARB ATCM anti-idling

measure, which limits idling to no more than five minutes at any location for diesel-fueled commercial vehicles, would further minimize diesel particulate matter emissions in the Project area. The Project would also utilize a construction contractor(s) that complies with required and applicable BACT and the In-Use Off-Road Diesel Vehicle Regulation.

Project operations would generate only minor amounts of diesel emissions from residential delivery trucks and incidental maintenance activities. Trucks would comply with the applicable provisions of the CARB Truck and Bus regulation to minimize and reduce emissions from existing diesel trucks. Therefore, the Project operations would not be considered a substantial source of diesel particulates. In addition, Project operations would only result in minimal emissions of air toxics from maintenance or other ongoing activities, such as from the use of architectural coatings and other household cleaning products. As a result, toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed residential uses within the Project site. Based on the uses expected on the Project site, potential long-term operational impacts associated with the release of TACs would be minimal and would not be expected to exceed the SCAQMD thresholds of significance. Therefore, operational impacts would be less than significant.

Mitigation Measure

Construction-related TAC emissions have the potential to result in a potentially significant air quality impact at sensitive receptor locations in the immediate vicinity of the Project site. Thus, the following mitigation measure is prescribed to reduce construction-related TAC impacts.

> **Mitigation Measure AIR-1:** Off-road diesel-fueled heavy-duty construction equipment greater than 50 horsepower (hp) used for this Project and located on the Project site for a total of five (5) days or more shall meet at a minimum the United States Environmental Protection Agency (USEPA) Tier 3 emissions standards and the equipment shall be outfitted with Best Available Control Technology (BACT) devices including a CARB certified Level 3 Diesel Particulate Filter or equivalent control device.

Mitigation Measure AIR-1 requires the use of equipment that meet the USEPA Tier 3 emissions standards and are equipped with CARB certified Level 3 Diesel Particulate Filter or equivalent control device. The measure would be expected to reduce diesel particulate matter by approximately 85 percent or more. This would reduce construction-related diesel particulate matter emissions to less than one-half pound per day during the short-term and temporary construction period. According to the SCAQMD, health risk impacts from construction could potentially occur from construction of a one-acre project with one pound per day of diesel particulate matter emissions, based on the updated OEHHA guidelines and age sensitivity factors. Because **Mitigation Measure AIR-1** would reduce the diesel particulate matter emissions to substantially less than one pound per day, and given the relatively short-term and temporary duration of construction, it is reasonably concluded that impacts would be mitigated to less than significant.

Impact Threshold AIR-5: A significant impact would occur if the Project would create objectionable odors affecting a substantial number of people.

Impact Statement: The Project would not locate new substantial sources of odors to the area and would not create objectionable odors affecting a substantial number of people during construction and operations. Therefore, construction and operational impacts would be less than significant.

Construction

Potential activities that may emit odors during construction activities include the use of architectural coatings and solvents and the combustion of diesel fuel in on- and off-road equipment. As discussed in the Section 2.1, Regulatory Setting, SCAQMD Rule 1113 would limit the amount of VOCs in architectural coatings and solvents. In addition, the Project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. Through mandatory compliance with SCAQMD Rules, no construction activities or materials are expected to create objectionable odors affecting a substantial number of people. Therefore, construction of the Project would result in less than significant impacts.

Operation

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). The Project does not include any uses identified by the SCAQMD as being associated with substantial odors. As a result, the Project is not expected to discharge contaminants into the air in quantities that would cause a nuisance, injury, or annoyance to the public or property pursuant to SCAQMD Rule 402. Therefore, the Project would not create adverse odors affecting a substantial number of people and impacts would be less than significant.

Impact Threshold GHG-1: A significant impact would occur if the Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact Statement: The Project would generate construction and operational GHG emissions less than the significance threshold. Therefore, construction and operational GHG emission impacts would be less than significant.

Due to the potential persistence of GHGs in the environment, impacts are based on annual emissions and, in accordance with SCAQMD methodology, construction-period impacts are not assessed independent of operational-period impacts.

The emissions of GHGs associated with construction of the Project were calculated for all phases of construction activity. The SCAQMD recommends that construction-related GHG emissions be amortized over a project's 30-year lifetime in order to include these emissions as part of a project's annualized lifetime total emissions, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies. In accordance with this methodology, the estimated Project's construction GHG emissions have been amortized over a 30-year period and are included in the annualized operational GHG emissions.

The Project's maximum annual net GHG emissions resulting from motor vehicles, energy (i.e., electricity, natural gas), water conveyance, and waste sources were calculated for the expected opening year. The maximum opening year GHG emissions from operation of the Project are shown in **Table 10**, *Annual Greenhouse Gas Emissions*. Project operational-related GHG emissions would decline in future years as emissions reductions from the state regulations are realized. For example, emissions from electricity would decline as utility providers, including the Los Department of Water and Power (LADWP)—the utility provided for the Project—meet their renewable energy obligations of 33 percent renewable electricity by 2020. Future regulations would also be implemented to increase the percentage of renewable electricity to 50 percent by 2030, which would achieve additional reductions in emissions from electricity demand. Emissions from mobile sources would also decline in future year as older vehicles are replaced with newer vehicles resulting in a greater percentage of the vehicle fleet meeting more stringent combustion emissions standards, such as the model year 2017-2025 Pavley Phase II standards.

As shown in **Table 10**, the Project would generate net GHG emissions much less than the significance threshold. Therefore, the Project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment. GHG emission impacts would be less than significant.

TABLE 10
ANNUAL GREENHOUSE GAS EMISSIONS [A]

Emissions Source	CO_2e (Metric Tons per Year)
Project Construction	449
Project Operational	
Amortized Project Construction	15
Area	<1
Electricity	480
Natural Gas	88

Emissions Source	CO_2e (Metric Tons per Year)
Motor Vehicles	850
Water Conveyance	21
Waste	7
Project Total GHG Emissions	**1,461**
Existing Site GHG Emissions	345
Net Project GHG Emissions	**1,116**
Significance Threshold	3,000
Over/(Under)	(1,884)
Exceeds Threshold?	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix B and C**.

SOURCE: ESA 2017.

Impact Threshold GHG-2: A significant impact would occur if the Project would conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact Statement: The Project would not would conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, construction and operational GHG impacts would be less than significant.

In support of HSC Division 25.5, the State has promulgated specific laws aimed at GHG reductions that are applicable to the Project. The Project is committed to meeting and exceeding the requirements of the CALGreen Code by incorporating strategies such as low-flow toilets, low-flow faucets, low-flow showers, and other energy and resource conservation measures. The Project would comply with the Green Building Standards, which are more stringent that the CALGreen code, to maximize energy efficiency.

Furthermore, the Project site is located in an established residential and commercial area with nearby access to public transportation and off-site destinations, which minimizes trips and trip lengths reducing mobile source emissions. Therefore, the Project would be consistent with State efforts to reduce motor vehicle emissions and congestion, including SB 375 and the SCAG 2016-2040 RTP/SCS. The SCAG RTP/SCS seeks improved "mobility and access by placing destinations closer together and decreasing the time and cost of traveling between them" (SCAG 2012). According to SCAG, incorporating "smart land use strategies encourages walking, biking, and transit use, and therefore reduces vehicular demand" and associated pollutants (SCAG 2012). Additionally, the SCAG RTP/SCS seeks better "placemaking," defined as "the process of developing options for locations where [people] can live and work that include a pleasant and

convenient walking environment that reduces their reliance on their car" (SCAG 2012). As discussed previously, the Project would represent an urban infill development, since it would be undertaken on a currently developed site and would be located near existing off-site commercial and retail destinations and in close proximity to existing public transit stops, including within approximately a quarter mile of the Metro Red and Purple Line Westlake/McArthur Park Station. Proximity to off-site destinations and public transportation would result in reduced vehicle trips and VMT, and associated air pollutant and GHG emissions compared to the statewide and Air Basin average. Vehicle trips reductions are accounted for, and supported by evidence, in the Project traffic impact analysis prepared by LLG for the Project (LLG 2017).

At the state level, Executive Orders S-3-05 and B-30-15 are orders from the State's Executive Branch for the purpose of reducing GHG emissions. Executive Order S-3-05's goal is to reduce GHG emissions to 1990 levels by 2020. The Executive Orders also establish the goals to reduce GHG emissions to 40 below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Studies have shown that, in order to meet the 2030 and 2050 targets, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its *Climate Change Scoping Plan*, CARB acknowledged that the "measures needed to meet the 2050 goal are too far in the future to define in detail" (CARB 2008). In the First Update, however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately" (CARB 2014). Due to the technological shifts required and the unknown parameters of the regulatory framework in 2030 and 2050, quantitatively analyzing the Project's impacts further relative to the 2030 and 2050 goals currently is speculative for purposes of CEQA. Moreover, CARB has formally adopted the BAU emissions projections for 2030 or 2050, which are necessary data points for quantitatively analyzing a CEQA Project's consistency with these targets.

Although the Project's emissions levels in 2030 and 2050 cannot yet be reliably quantified, statewide efforts are underway to facilitate the State's achievement of those goals and it is reasonable to expect the Project's emissions level to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Project's emissions total at build-out represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project would be consistent with the Executive Orders' goals.

The Climate Change Scoping Plan recognizes that HC Division 25.5 establishes an emissions reduction trajectory that will allow California to achieve the more stringent 2050 target: "These [greenhouse gas emission reduction] measures also put the state on a path to meet the long-term 2050 goal of reducing California's greenhouse gas emissions to 80 percent below 1990 levels. This trajectory is consistent with the reductions that are needed globally to stabilize the climate"

(CARB 2008). Also, CARB's First Update provides that it "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050," and many of the emission reduction strategies recommended by CARB would serve to reduce the Project's post-2020 emissions level to the extent applicable by law (CARB 2014):

- **Energy Sector:** Continued improvements in California's appliance and building energy efficiency programs and initiatives, such as the State's zero net energy building goals, would serve to reduce the Project's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the Project's emissions level.
- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the Project's emissions level.
- **Water Sector:** The Project's emissions level will be reduced as a result of further enhancements to water conservation technologies.
- **Waste Management Sector:** Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the Project's emissions level.

In addition to CARB's First Update, in January 2015, during his inaugural address, Governor Jerry Brown expressed a commitment to achieve "three ambitious goals" that he would like to see accomplished by 2030 to reduce the State's GHG emissions: (1) increasing the State's Renewables Portfolio Standard from 33 percent in 2020 to 50 percent in 2030; (2) cutting the petroleum use in cars and trucks in half; and (3) doubling the efficiency of existing buildings and making heating fuels cleaner (CARB 2014). These expressions of Executive Branch policy may be manifested in adopted legislative or regulatory action through the state agencies and departments responsible for achieving the State's environmental policy objectives, particularly those relating to global climate change. As discussed previously, the Governor has already signed into law SB 350 (Chapter 547, Statues of 2015), which increased the Renewables Portfolio Standard to 50 percent by 2030 and included interim targets of 40 percent by 2024 and 45 percent by 2027.

Further, recent studies shows that the State's existing and proposed regulatory framework can allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study could allow the State to meet the 2030 and 2050 targets (CARB 2014).

For the reasons described above, the Project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the establishment of the 2030 and 2050 targets. Therefore, as the Project would be consistent with State applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions, impacts regarding GHG reduction plans, policies, and regulations would be less than significant.

3.4 Cumulative Impacts

3.4.1 Air Quality Construction

The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As shown in **Table 6**, regional emissions calculated for Project construction would be less than the applicable SCAQMD daily significance thresholds. The thresholds are designed to assist the region in attaining the applicable state and national ambient air quality standards. Although the Project site is located in a region that is in non-attainment for O_3, PM10, and PM2.5, the emissions associated with the Project would not be cumulatively considerable as the emissions would fall below SCAQMD daily significance thresholds. Therefore, construction of the Project would result in cumulative impacts that would be less than significant.

3.4.2 Air Quality Operations

The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As shown in **Table 7**, regional emissions calculated for Project operations would be less than the applicable SCAQMD daily significance thresholds. The thresholds are designed to assist the region in attaining the applicable state and national ambient air quality standards. Although the Project site is located in a region that is in non-attainment for O_3, PM10, and PM2.5, the emissions associated with the Project would not be cumulatively considerable as the emissions would fall below SCAQMD daily significance thresholds. Therefore, operation of the Project would result in cumulative impacts that would be less than significant.

3.4.3 Greenhouse Gases

According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective" (CAPCOA 2008). As shown in **Table 10**, the Project would generate GHG emissions that would be less than significant. In addition, as discussed previously, the Project would be consistent with State applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions and would result in less than significant impacts regarding GHG reduction plans, policies, and regulations. Thus, as GHG impacts are exclusively cumulative in nature, cumulative impacts would be less than significant.

4.0
Summary of Results

4.1 Air Quality Construction

Construction of the Project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project site. In addition, fugitive dust emissions would result from grading and construction activities. However, compliance with SCAQMD Rule 403 fugitive dust control requirements and CARB regulations restricting unnecessary idling and implementation of on- and off-road emissions standards, would minimize air pollutant emissions.

The Project would not conflict with implementation of applicable AQMP strategies. The Project would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment. The Project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403.

As shown in **Table 6**, regional construction emissions would not exceed the SCAQMD numeric indicators. Therefore, impacts related to regional construction emissions would be less than significant. As shown in **Table 8**, localized emissions would not exceed the SCAQMD numeric indicators. Therefore, impacts related to localized construction emissions would be less than significant. As a result, Project-related construction emissions impacts would be less than significant.

Project construction would result in short-term emissions of diesel particulate matter, which is a TAC. While the Project would result in generally low level of diesel particulate matter emissions, it is potentially possible that the Project could result in health impacts to sensitive receptors in the immediate vicinity of the Project site given the updated OEHHA health risk assessment guideline and age sensitive factors. Therefore, the impact is conservatively considered potentially significant and mitigation measures are recommended. **Mitigation Measure AIR-1** would reduce the diesel particulate matter emissions to substantially less than one pound per day, and given the relatively short-term and temporary duration of construction, it is reasonably concluded that impacts would be mitigated to less than significant.

The Project would not generate construction-related odors that would affect a substantial number of people. Therefore odor impacts would be less than significant.

4.2 Air Quality Operations

The Project would replace existing commercial/retail uses with a hotel use. As a result, the Project would not result in a substantial change in long-term operational population or employment growth that exceeds planned growth projections. As the Project would not conflict with the growth projections in the AQMP, impacts would be less than significant.

Air pollutant emissions associated with Project operations would be generated by the consumption of natural gas and by the operation of on-road vehicles. As shown in **Table 7** and **Table 9**, regional and localized operational emissions associated with the Project would not exceed the SCAQMD daily significance thresholds. In addition, the Project would not result in a CO hotspot, or emit unhealthy levels of TACs and odiferous emissions. Therefore, impacts related to Project operational emissions and consistency with applicable air quality management plans, policies, or regulations would be less than significant.

4.3 Greenhouse Gases

The Project's maximum annual net GHG emissions resulting from motor vehicles, energy (i.e., electricity, natural gas), water conveyance, and waste sources were calculated for the expected opening year. As shown in **Table 10**, the Project would generate net GHG emissions much less than the significance threshold. Therefore, the Project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment. GHG emission impacts would be less than significant.

In support of HSC Division 25.5, the State has promulgated specific laws aimed at GHG reductions that are applicable to the Project. The Project is committed to meeting and exceeding the requirements of the CALGreen Code by incorporating strategies such as low-flow toilets, low-flow faucets, low-flow showers, and other energy and resource conservation measures. The Project would comply with the Green Building Standards, which are more stringent that the CALGreen code, to maximize energy efficiency. In addition, the Project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the establishment of the 2030 and 2050 targets. Therefore, as the Project would be consistent with State applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions, impacts regarding GHG reduction plans, policies, and regulations would be less than significant.

5.0
References

California Air Pollution Control Officers Association (CAPCOA), 2008. CEQA and Climate Change, (2008). Available: http://capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf. Accessed February 2017.

California Air Resources Board (CARB), 1998. Report to the Air Resources Board on the Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant, Part A Exposure Assessment, Approved by the Scientific Review Panel, (1998).

CARB, 2003. OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment, (6/13/2003). Available: http://www.arb.ca.gov/msei/2001_residential_lawn_and_garden_changes_in_eqpt_pop_and_ act.pdf. Accessed November 2013.

CARB, 2005a. Air Quality and Land Use Handbook: A Community Health Perspective, (2005). Available: https://www.arb.ca.gov/ch/landuse.htm. Accessed February 2017.

CARB, 2005b. Particulate Matter - Overview, (2005). Available: https://www.arb.ca.gov/research/aaqs/caaqs/pm/pm.htm. Accessed February 2017.

CARB, 2008. Climate Change Scoping Plan, (2008).

CARB, 2009a. Carbon Monoxide, (2009). Available: https://www.arb.ca.gov/research/aaqs/caaqs/co/co.htm. Accessed February 2017.

CARB, 2009b. History of Sulfur Dioxide Air Quality Standard, (2009). Available: https://www.arb.ca.gov/research/aaqs/caaqs/so2-1/so2-1.htm. Accessed: February 2017.

CARB, 2011. Nitrogen Dioxide – Overview, (2011). Available: http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm. Accessed February 2017.

CARB, 2014. First Update to the Climate Change Scoping Plan: Building on the Framework, (2014).

CARB, 2015. Ozone and Ambient Air Quality Standards. Available: https://www.arb.ca.gov/research/aaqs/caaqs/ozone/ozone.htm. Accessed February 2017.

CARB, 2016. California Greenhouse Gas Emission Inventory - 2016 Edition. Available: https://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed February 2017.

California Building Standards Commission (CBSC), 2010. 2010 California Green Building Standards Code, (2010). Available: http://www.bsc.ca.gov/Codes.aspx. Accessed February 2017.

CBSC, 2016. 2016 California Green Building Standards Code, (2016). Available: http://www.bsc.ca.gov/Codes.aspx. Accessed February 2017.

City of Los Angeles (City of LA), 2013. Zero Waste Program Progress Report, (March 2013). Available: http://www.forester.net/pdfs/City_of_LA_Zero_Waste_Progress_Report.pdf. Accessed February 2017.

Intergovernmental Panel on Climate Change (IPCC), 2014. Fifth Assessment Report Synthesis Report, (2014). Available: http://ipcc.ch/report/ar5/syr/. Accessed February 2017.

Linscott, Law & Greenspan Engineers (LLG), 2017. Traffic Impact Study, 2005 James M Wood Blvd Hotel Project, (2017).

Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (2015). Available: http://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0. Accessed February 2017.

PBL Netherlands Environmental Assessment Agency and the European Commission Joint Research Center (PBL), 2014. Trends in Global CO_2 Emissions 2014 Report, (2014). Accessed: http://www.pbl.nl/en/publications/trends-in-global-co2-emissions-2014-report. Accessed February 2017.

Southern California Association of Governments (SCAG), 2012. Final 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy, (2012). Available: http://rtpscs.scag.ca.gov/Pages/2012-2035-RTP-SCS.aspx. Accessed February 2017.

SCAG, 2016. Final 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, (2016). Available: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. Accessed February 2017.

South Coast Air Quality Management District (SCAQMD), 1993. California Environmental Quality Act (CEQA) Air Quality Handbook, (1993).

SCAQMD, 2003. 2003 Air Quality Management Plan, Appendix V: Modeling and Attainment Demonstrations, (2003). Available: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/2003-aqmp. Accessed February 2017.

SCAQMD, 2006. Final Methodology to Calculate Particulate Matter (PM)2.5 and PM2.5 Significance Thresholds, (2006).

SCAQMD, 2008a. Final Localized Significance Threshold Methodology, (2008). Available: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed February 2017.

SCAQMD, 2008b. Board Meeting, December 5, 2008, Agenda No. 31, Interim GHG Significance Threshold Proposal – Key Issues/Comments Attachment D. Available:

http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2. Accessed February 2017.

SCAQMD, 2011-2015. Historical Data by Year, (2011-2015). Available: http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. Accessed February 2017.

SCAQMD, 2012a. Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012. Available: http://www3.aqmd.gov/hb/attachments/2011-2015/2012May/2012-May4-030.pdf. Accessed February 2017.

SCAQMD, 2012b. 2012 Air Quality Management Plan. Available: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan. Accessed February 2017.

SCAQMD, 2015a. Final Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2015). Available: http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iv. Accessed February 2017.

SCAQMD, 2015b. SCAQMD Air Quality Significance Thresholds, (March 2015). Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed February 2017.

SCAQMD, 2016a. Draft 2016 Air Quality Management Plan, (2016). Available: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/Draft2016AQMP. Accessed February 2017.

SCAQMD, 2016b. Draft Final 2016 Air Quality Management Plan, (2016). Available: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-draft-2016-aqmp. Accessed February 2017.

SCAQMD, 2016c. Notice of Public Hearing Proposed 2016 Air Quality Management Plan for the South Coast Air Quality Management District, (2016). Available: http://www.aqmd.gov/docs/default-source/public-notices/notice-of-public-hearing/2016aqmppubhear020317.pdf?sfvrsn=4. Accessed February 2017.

Appendix A

Existing Site Operational Emissions Worksheets

ESA

2005 James M Wood - Existing Operational

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	8.23	1000sqft	0.19	8,228.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Trip Generation Rates in Linscott, Law, & Greenspan Traffic Report

Energy Use -

Waste Mitigation - Based on City of LA's 2011 waste diversion rate of 76%. http://www.forester.net/pdfs/City_of_LA_Zero_Waste_Progress_Report.pdf

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	15.00	50.00
tblVehicleTrips	PR_TP	45.00	50.00
tblVehicleTrips	ST_TR	42.04	37.25
tblVehicleTrips	SU_TR	20.43	37.25
tblVehicleTrips	WD_TR	44.32	37.25

2.0 Emissions Summary

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	0.1839	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Energy	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
Mobile	0.6007	2.3413	6.2418	0.0162	1.1361	0.0193	1.1554	0.3041	0.0182	0.3223		1,642.6188	1,642.6188	0.1069		1,645.2913
Total	**0.7850**	**2.3454**	**6.2460**	**0.0162**	**1.1361**	**0.0196**	**1.1557**	**0.3041**	**0.0185**	**0.3226**		**1,647.4473**	**1,647.4473**	**0.1070**	**9.0000e-005**	**1,650.1486**

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	0.1839	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Energy	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
Mobile	0.6007	2.3413	6.2418	0.0162	1.1361	0.0193	1.1554	0.3041	0.0182	0.3223		1,642.6188	1,642.6188	0.1069		1,645.2913
Total	**0.7850**	**2.3454**	**6.2460**	**0.0162**	**1.1361**	**0.0196**	**1.1557**	**0.3041**	**0.0185**	**0.3226**		**1,647.4473**	**1,647.4473**	**0.1070**	**9.0000e-005**	**1,650.1486**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6007	2.3413	6.2418	0.0162	1.1361	0.0193	1.1554	0.3041	0.0182	0.3223		1,642.6188	1,642.6188	0.1069		1,645.2913
Unmitigated	0.6007	2.3413	6.2418	0.0162	1.1361	0.0193	1.1554	0.3041	0.0182	0.3223		1,642.6188	1,642.6188	0.1069		1,645.2913

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	306.49	306.49	306.49	534,177	534,177
Total	306.49	306.49	306.49	534,177	534,177

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	50	0	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

5.0 Energy Detail

Historical Energy Use: Y

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	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
NaturalGas Unmitigated	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	41.0273	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
Total		**4.4000e-004**	**4.0200e-003**	**3.3800e-003**	**2.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**4.8267**	**4.8267**	**9.0000e-005**	**9.0000e-005**	**4.8554**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	0.0410273	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
Total		**4.4000e-004**	**4.0200e-003**	**3.3800e-003**	**2.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**4.8267**	**4.8267**	**9.0000e-005**	**9.0000e-005**	**4.8554**

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	0.1839	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Unmitigated	0.1839	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003

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	0.0209					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Total	**0.1839**	**1.0000e-005**	**8.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.8000e-003**	**1.8000e-003**	**0.0000**		**1.9200e-003**

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	0.0209					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Total	**0.1839**	**1.0000e-005**	**8.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.8000e-003**	**1.8000e-003**	**0.0000**		**1.9200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

2005 James M Wood - Existing Operational

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	8.23	1000sqft	0.19	8,228.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Trip Generation Rates in Linscott, Law, & Greenspan Traffic Report

Energy Use -

Waste Mitigation - Based on City of LA's 2011 waste diversion rate of 76%. http://www.forester.net/pdfs/City_of_LA_Zero_Waste_Progress_Report.pdf

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	15.00	50.00
tblVehicleTrips	PR_TP	45.00	50.00
tblVehicleTrips	ST_TR	42.04	37.25
tblVehicleTrips	SU_TR	20.43	37.25
tblVehicleTrips	WD_TR	44.32	37.25

2.0 Emissions Summary

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	0.1839	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Energy	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
Mobile	0.5874	2.3863	6.1341	0.0154	1.1361	0.0195	1.1556	0.3041	0.0184	0.3225		1,559.3901	1,559.3901	0.1078		1,562.0845
Total	**0.7717**	**2.3904**	**6.1383**	**0.0154**	**1.1361**	**0.0199**	**1.1559**	**0.3041**	**0.0187**	**0.3228**		**1,564.2186**	**1,564.2186**	**0.1079**	**9.0000e-005**	**1,566.9419**

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	0.1839	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Energy	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
Mobile	0.5874	2.3863	6.1341	0.0154	1.1361	0.0195	1.1556	0.3041	0.0184	0.3225		1,559.3901	1,559.3901	0.1078		1,562.0845
Total	**0.7717**	**2.3904**	**6.1383**	**0.0154**	**1.1361**	**0.0199**	**1.1559**	**0.3041**	**0.0187**	**0.3228**		**1,564.2186**	**1,564.2186**	**0.1079**	**9.0000e-005**	**1,566.9419**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5874	2.3863	6.1341	0.0154	1.1361	0.0195	1.1556	0.3041	0.0184	0.3225		1,559.3901	1,559.3901	0.1078		1,562.0845
Unmitigated	0.5874	2.3863	6.1341	0.0154	1.1361	0.0195	1.1556	0.3041	0.0184	0.3225		1,559.3901	1,559.3901	0.1078		1,562.0845

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	306.49	306.49	306.49	534,177	534,177
Total	306.49	306.49	306.49	534,177	534,177

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	50	0	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

5.0 Energy Detail

Historical Energy Use: Y

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	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
NaturalGas Unmitigated	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	41.0273	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
Total		**4.4000e-004**	**4.0200e-003**	**3.3800e-003**	**2.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**4.8267**	**4.8267**	**9.0000e-005**	**9.0000e-005**	**4.8554**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	0.0410273	4.4000e-004	4.0200e-003	3.3800e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		4.8267	4.8267	9.0000e-005	9.0000e-005	4.8554
Total		**4.4000e-004**	**4.0200e-003**	**3.3800e-003**	**2.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**4.8267**	**4.8267**	**9.0000e-005**	**9.0000e-005**	**4.8554**

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	0.1839	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Unmitigated	0.1839	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003

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	0.0209					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Total	**0.1839**	**1.0000e-005**	**8.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.8000e-003**	**1.8000e-003**	**0.0000**		**1.9200e-003**

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	0.0209					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8000e-003	1.8000e-003	0.0000		1.9200e-003
Total	**0.1839**	**1.0000e-005**	**8.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.8000e-003**	**1.8000e-003**	**0.0000**		**1.9200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

2005 James M Wood - Existing Operational

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	8.23	1000sqft	0.19	8,228.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Trip Generation Rates in Linscott, Law, & Greenspan Traffic Report

Energy Use -

Waste Mitigation - Based on City of LA's 2011 waste diversion rate of 76%. http://www.forester.net/pdfs/City_of_LA_Zero_Waste_Progress_Report.pdf

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	15.00	50.00
tblVehicleTrips	PR_TP	45.00	50.00
tblVehicleTrips	ST_TR	42.04	37.25
tblVehicleTrips	SU_TR	20.43	37.25
tblVehicleTrips	WD_TR	44.32	37.25

2.0 Emissions Summary

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	0.0336	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Energy	8.0000e-005	7.3000e-004	6.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	73.9387	73.9387	1.7400e-003	3.7000e-004	74.0931
Mobile	0.1033	0.4424	1.1232	2.8400e-003	0.2028	3.5300e-003	0.2063	0.0544	3.3200e-003	0.0577	0.0000	261.4959	261.4959	0.0177	0.0000	261.9373
Waste						0.0000	0.0000		0.0000	0.0000	1.7538	0.0000	1.7538	0.1037	0.0000	4.3451
Water						0.0000	0.0000		0.0000	0.0000	0.1934	6.7331	6.9265	0.0200	5.0000e-004	7.5766
Total	**0.1370**	**0.4431**	**1.1239**	**2.8400e-003**	**0.2028**	**3.5900e-003**	**0.2064**	**0.0544**	**3.3800e-003**	**0.0578**	**1.9472**	**342.1678**	**344.1151**	**0.1431**	**8.7000e-004**	**347.9523**

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	0.0336	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Energy	8.0000e-005	7.3000e-004	6.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	73.9387	73.9387	1.7400e-003	3.7000e-004	74.0931
Mobile	0.1033	0.4424	1.1232	2.8400e-003	0.2028	3.5300e-003	0.2063	0.0544	3.3200e-003	0.0577	0.0000	261.4959	261.4959	0.0177	0.0000	261.9373
Waste						0.0000	0.0000		0.0000	0.0000	0.4209	0.0000	0.4209	0.0249	0.0000	1.0428
Water						0.0000	0.0000		0.0000	0.0000	0.1934	6.7331	6.9265	0.0200	5.0000e-004	7.5766
Total	**0.1370**	**0.4431**	**1.1239**	**2.8400e-003**	**0.2028**	**3.5900e-003**	**0.2064**	**0.0544**	**3.3800e-003**	**0.0578**	**0.6143**	**342.1678**	**342.7822**	**0.0643**	**8.7000e-004**	**344.6500**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**68.45**	**0.00**	**0.39**	**55.06**	**0.00**	**0.95**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1033	0.4424	1.1232	2.8400e-003	0.2028	3.5300e-003	0.2063	0.0544	3.3200e-003	0.0577	0.0000	261.4959	261.4959	0.0177	0.0000	261.9373
Unmitigated	0.1033	0.4424	1.1232	2.8400e-003	0.2028	3.5300e-003	0.2063	0.0544	3.3200e-003	0.0577	0.0000	261.4959	261.4959	0.0177	0.0000	261.9373

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	306.49	306.49	306.49	534,177	534,177
Total	306.49	306.49	306.49	534,177	534,177

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	50	0	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	73.1396	73.1396	1.7300e-003	3.6000e-004	73.2893
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	73.1396	73.1396	1.7300e-003	3.6000e-004	73.2893
NaturalGas Mitigated	8.0000e-005	7.3000e-004	6.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7991	0.7991	2.0000e-005	1.0000e-005	0.8039
NaturalGas Unmitigated	8.0000e-005	7.3000e-004	6.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7991	0.7991	2.0000e-005	1.0000e-005	0.8039

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	14975	8.0000e-005	7.3000e-004	6.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7991	0.7991	2.0000e-005	1.0000e-005	0.8039
Total		**8.0000e-005**	**7.3000e-004**	**6.2000e-004**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.7991**	**0.7991**	**2.0000e-005**	**1.0000e-005**	**0.8039**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	14975	8.0000e-005	7.3000e-004	6.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7991	0.7991	2.0000e-005	1.0000e-005	0.8039
Total		**8.0000e-005**	**7.3000e-004**	**6.2000e-004**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.7991**	**0.7991**	**2.0000e-005**	**1.0000e-005**	**0.8039**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	131319	73.1396	1.7300e-003	3.6000e-004	73.2893
Total		**73.1396**	**1.7300e-003**	**3.6000e-004**	**73.2893**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	131319	73.1396	1.7300e-003	3.6000e-004	73.2893
Total		**73.1396**	**1.7300e-003**	**3.6000e-004**	**73.2893**

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	0.0336	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Unmitigated	0.0336	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004

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	3.8100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0297					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Total	**0.0336**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.2000e-004**

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	3.8100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0297					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Total	**0.0336**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.9265	0.0200	5.0000e-004	7.5766
Unmitigated	6.9265	0.0200	5.0000e-004	7.5766

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	0.609617 / 0.373636	6.9265	0.0200	5.0000e-004	7.5766
Total		**6.9265**	**0.0200**	**5.0000e-004**	**7.5766**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	0.609617 / 0.373636	6.9265	0.0200	5.0000e-004	7.5766
Total		**6.9265**	**0.0200**	**5.0000e-004**	**7.5766**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.4209	0.0249	0.0000	1.0428
Unmitigated	1.7538	0.1037	0.0000	4.3451

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	8.64	1.7538	0.1037	0.0000	4.3451
Total		**1.7538**	**0.1037**	**0.0000**	**4.3451**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	2.0736	0.4209	0.0249	0.0000	1.0428
Total		**0.4209**	**0.0249**	**0.0000**	**1.0428**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Project Construction Emissions Worksheets

ESA

2005 James M Wood last update: 2/14/2017
Air Quality and Greenhouse Gas Assessment

CalEEMod Land Use Inputs

Land Use	CalEEMod Land Use Type	Units			
Existing Uses					
Retail	Strip Mall			8,228	sf
Project					
Six-story Hotel Building	**Hotel**	**110**	**rooms**	**66,029**	**sf**
1st floor				6,341	sf
2nd floor		22	rooms	11,697	sf
3rd floor		22	rooms	11,998	sf
4th floor		22	rooms	11,998	sf
5th floor		22	rooms	11,998	sf
6th floor		22	rooms	11,998	sf
Parking	Enclosed parking w/elevator	110	spaces	**40,722**	**sf**
Basement Level 1				20,361	sf
Basement Level 2				20,361	sf
Lot Area		0.52	acres	-	sf

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

CalEEMod Construction Phase	Start Date	End Date	No. Work Days	Site Prep/ Demo (CY)	Truck Capacity (CY)	Truck Total One-Way Trips	Truck Daily One-Way Trips	Soil Export [a] (CY)	Soil Import (CY)	Soil Haul Truck Capacity (CY)	Soil Haul Truck Total One-Way Trips	Soil Haul Truck Daily One-Way Trips
Project												
Demolition	7/3/2017	7/11/2017	7	940	14	140	20					
Site Preparation	7/12/2017	7/14/2017	3									
Grading/Excavation	7/17/2017	8/25/2017	30					16,590	-	14	2,371	79
Building Construction	8/28/2017	6/1/2018	200									
Architectural Coating	5/4/2018	6/15/2018	31									
Paving	5/4/2018	6/15/2018	31									

2005 James M Wood

Air Quality and Greenhouse Gas Assessment

Construction Assumptions - Demolition

Description: Surface parking and two-story multi-family structure

Demolition Schedule				**Notes**
Start Date	7/3/2017			
End Date	7/11/2017			
Work Days	7			

Demolition Quantities				**Notes**
Land Use	**Amount**	***Units***		
Retail Strip Mall	8.2	*KSF*		Given sf
Hardscape Demo	9.1	*KSF*		Estimated from review of site plans and aerial imagery

Hardscape Demolition Volume				**Notes**
Total Area(KSF)	9.1			
Thickness (ft)	0.5	*feet*		
Debris Volume (CY)	170			

Building Demolition Volume				**Notes**
Total Area (KSF)	8.2			
Floor Height (ft)	10			Assumed
Building Volume (ft3)	82,280			
Building Volume (CY)	3,050			
Debris Volume (CY)	770	*(rounded, estimated)*		Rounded, 1 CY building volume = 0.25 CY waste volume

Total Debris (CY)	940			
Effective Building Floor Area (KSF)	**11.0**		<-------	**ENTER VALUE INTO CALEEMOD**
Truck Size (CY)	14			
Total Trucks	70	*total trucks*		
Daily Trucks	10	*trucks/day*		
Total One-Way Trips	**140**	*total trips*	<-------	**ENTER VALUE INTO CALEEMOD**
Daily One-Way Trips	20	*trips/day*		

2005 James M Wood - Construction

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	110.00	Room	0.39	66,029.00	0
Enclosed Parking with Elevator	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client given square footage. Acreage determined by lot size (0.52) x project lot coverage (75%)

Construction Phase - Construction schedule is best estimate based on CalEEMod defaults and similar previous projects.

Off-road Equipment - Best estimate based on scale of excavation for basement levels.

Off-road Equipment - Paving overlaps with building construction; no additional tractors needed

Off-road Equipment - No graders needed; additional tractor needed.

Off-road Equipment -

Grading - Grading of area and excavation for basement levels.

Demolition -

Trips and VMT - Assumed 14 cubic yard truck capacity for haul trucks

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	20.00	7.00
tblConstructionPhase	NumDays	4.00	30.00
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	PhaseEndDate	7/2/2017	6/15/2018
tblConstructionPhase	PhaseEndDate	7/2/2017	6/1/2018
tblConstructionPhase	PhaseEndDate	7/2/2017	7/11/2017
tblConstructionPhase	PhaseEndDate	7/2/2017	8/25/2017
tblConstructionPhase	PhaseEndDate	7/2/2017	6/15/2018
tblConstructionPhase	PhaseEndDate	7/2/2017	7/14/2017
tblConstructionPhase	PhaseStartDate	7/3/2017	5/4/2018
tblConstructionPhase	PhaseStartDate	7/3/2017	8/28/2017
tblConstructionPhase	PhaseStartDate	7/3/2017	7/17/2017
tblConstructionPhase	PhaseStartDate	7/3/2017	5/4/2018
tblConstructionPhase	PhaseStartDate	7/3/2017	7/12/2017
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	MaterialExported	0.00	16,590.00
tblLandUse	BuildingSpaceSquareFeet	159,720.00	66,029.00
tblLandUse	LandUseSquareFeet	159,720.00	66,029.00
tblLandUse	LotAcreage	3.67	0.39
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripNumber	130.00	140.00
tblTripsAndVMT	HaulingTripNumber	2,074.00	2,371.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	3.3296	51.1469	19.0660	0.0917	6.1579	1.6858	7.5321	2.9202	1.5768	4.1843	0.0000	9,737.1088	9,737.1088	1.3369	0.0000	9,770.5301
2018	24.2070	29.6937	26.1937	0.0481	0.8417	1.6538	2.4955	0.2258	1.5832	1.8091	0.0000	4,636.7321	4,636.7321	0.8110	0.0000	4,657.0075
Maximum	**24.2070**	**51.1469**	**26.1937**	**0.0917**	**6.1579**	**1.6858**	**7.5321**	**2.9202**	**1.5832**	**4.1843**	**0.0000**	**9,737.1088**	**9,737.1088**	**1.3369**	**0.0000**	**9,770.5301**

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					
2017	3.3296	51.1469	19.0660	0.0917	3.3323	1.6858	4.7065	1.3910	1.5768	2.6606	0.0000	9,737.1088	9,737.1088	1.3369	0.0000	9,770.5301
2018	24.2070	29.6937	26.1937	0.0481	0.8417	1.6538	2.4955	0.2258	1.5832	1.8091	0.0000	4,636.7321	4,636.7321	0.8110	0.0000	4,657.0075
Maximum	**24.2070**	**51.1469**	**26.1937**	**0.0917**	**3.3323**	**1.6858**	**4.7065**	**1.3910**	**1.5832**	**2.6606**	**0.0000**	**9,737.1088**	**9,737.1088**	**1.3369**	**0.0000**	**9,770.5301**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.37**	**0.00**	**28.18**	**48.61**	**0.00**	**25.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	5/4/2018	6/15/2018	5	31	
2	Building Construction	Building Construction	8/28/2017	6/1/2018	5	200	
3	Demolition	Demolition	7/3/2017	7/11/2017	5	7	
4	Grading	Grading	7/17/2017	8/25/2017	5	30	
5	Paving	Paving	5/4/2018	6/15/2018	5	31	
6	Site Preparation	Site Preparation	7/12/2017	7/14/2017	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0.99

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 99,044; Non-Residential Outdoor: 33,015; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40

Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Graders	0	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	1	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	46.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	140.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	2,371.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.1397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**20.4383**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0481	0.0347	0.4503	1.1000e-003	0.1006	8.1000e-004	0.1014	0.0267	7.4000e-004	0.0274		109.6848	109.6848	3.7500e-003		109.7785
Total	**0.0481**	**0.0347**	**0.4503**	**1.1000e-003**	**0.1006**	**8.1000e-004**	**0.1014**	**0.0267**	**7.4000e-004**	**0.0274**		**109.6848**	**109.6848**	**3.7500e-003**		**109.7785**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.1397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**20.4383**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0481	0.0347	0.4503	1.1000e-003	0.1006	8.1000e-004	0.1014	0.0267	7.4000e-004	0.0274		109.6848	109.6848	3.7500e-003		109.7785
Total	**0.0481**	**0.0347**	**0.4503**	**1.1000e-003**	**0.1006**	**8.1000e-004**	**0.1014**	**0.0267**	**7.4000e-004**	**0.0274**		**109.6848**	**109.6848**	**3.7500e-003**		**109.7785**

3.3 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085
Total	**2.9653**	**19.2365**	**14.3568**	**0.0220**		**1.2313**	**1.2313**		**1.1875**	**1.1875**		**2,043.8641**	**2,043.8641**	**0.4298**		**2,054.6085**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0881	2.3291	0.6162	4.6900e-003	0.1152	0.0202	0.1354	0.0332	0.0193	0.0525		500.1435	500.1435	0.0362		501.0494
Worker	0.2762	0.2034	2.6139	5.8000e-003	0.5142	4.2700e-003	0.5184	0.1364	3.9400e-003	0.1403		576.6923	576.6923	0.0218		577.2367
Total	**0.3643**	**2.5325**	**3.2301**	**0.0105**	**0.6294**	**0.0245**	**0.6538**	**0.1695**	**0.0232**	**0.1928**		**1,076.8358**	**1,076.8358**	**0.0580**		**1,078.2861**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085
Total	**2.9653**	**19.2365**	**14.3568**	**0.0220**		**1.2313**	**1.2313**		**1.1875**	**1.1875**	**0.0000**	**2,043.8641**	**2,043.8641**	**0.4298**		**2,054.6085**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0881	2.3291	0.6162	4.6900e-003	0.1152	0.0202	0.1354	0.0332	0.0193	0.0525		500.1435	500.1435	0.0362		501.0494
Worker	0.2762	0.2034	2.6139	5.8000e-003	0.5142	4.2700e-003	0.5184	0.1364	3.9400e-003	0.1403		576.6923	576.6923	0.0218		577.2367
Total	**0.3643**	**2.5325**	**3.2301**	**0.0105**	**0.6294**	**0.0245**	**0.6538**	**0.1695**	**0.0232**	**0.1928**		**1,076.8358**	**1,076.8358**	**0.0580**		**1,078.2861**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216		2,030.8389	2,030.8389	0.4088		2,041.0596
Total	**2.5919**	**17.4280**	**13.8766**	**0.0220**		**1.0580**	**1.0580**		**1.0216**	**1.0216**		**2,030.8389**	**2,030.8389**	**0.4088**		**2,041.0596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0774	2.1869	0.5551	4.6700e-003	0.1152	0.0160	0.1312	0.0332	0.0153	0.0485		498.6166	498.6166	0.0344		499.4775
Worker	0.2458	0.1772	2.3014	5.6300e-003	0.5142	4.1200e-003	0.5183	0.1364	3.8000e-003	0.1402		560.6112	560.6112	0.0192		561.0903
Total	**0.3232**	**2.3640**	**2.8565**	**0.0103**	**0.6294**	**0.0201**	**0.6495**	**0.1695**	**0.0191**	**0.1886**		**1,059.2278**	**1,059.2278**	**0.0536**		**1,060.5678**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216	0.0000	2,030.8389	2,030.8389	0.4088		2,041.0596
Total	**2.5919**	**17.4280**	**13.8766**	**0.0220**		**1.0580**	**1.0580**		**1.0216**	**1.0216**	**0.0000**	**2,030.8389**	**2,030.8389**	**0.4088**		**2,041.0596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0774	2.1869	0.5551	4.6700e-003	0.1152	0.0160	0.1312	0.0332	0.0153	0.0485		498.6166	498.6166	0.0344		499.4775
Worker	0.2458	0.1772	2.3014	5.6300e-003	0.5142	4.1200e-003	0.5183	0.1364	3.8000e-003	0.1402		560.6112	560.6112	0.0192		561.0903
Total	**0.3232**	**2.3640**	**2.8565**	**0.0103**	**0.6294**	**0.0201**	**0.6495**	**0.1695**	**0.0191**	**0.1886**		**1,059.2278**	**1,059.2278**	**0.0536**		**1,060.5678**

3.4 Demolition - 2017

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					4.0230	0.0000	4.0230	0.6091	0.0000	0.6091			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
Total	**2.7625**	**26.7594**	**15.5573**	**0.0241**	**4.0230**	**1.6477**	**5.6707**	**0.6091**	**1.5404**	**2.1495**		**2,421.4229**	**2,421.4229**	**0.6125**		**2,436.7347**

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	0.2088	6.7976	1.3048	0.0161	0.3493	0.0369	0.3863	0.0957	0.0353	0.1311		1,736.8174	1,736.8174	0.1266		1,739.9813
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0575	0.7387	1.6400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		162.9783	162.9783	6.1500e-003		163.1321
Total	**0.2868**	**6.8550**	**2.0435**	**0.0177**	**0.4947**	**0.0381**	**0.5328**	**0.1343**	**0.0365**	**0.1707**		**1,899.7957**	**1,899.7957**	**0.1327**		**1,903.1134**

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					1.5690	0.0000	1.5690	0.2376	0.0000	0.2376			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
Total	**2.7625**	**26.7594**	**15.5573**	**0.0241**	**1.5690**	**1.6477**	**3.2166**	**0.2376**	**1.5404**	**1.7779**	**0.0000**	**2,421.4229**	**2,421.4229**	**0.6125**		**2,436.7347**

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	0.2088	6.7976	1.3048	0.0161	0.3493	0.0369	0.3863	0.0957	0.0353	0.1311		1,736.8174	1,736.8174	0.1266		1,739.9813
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0575	0.7387	1.6400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		162.9783	162.9783	6.1500e-003		163.1321
Total	**0.2868**	**6.8550**	**2.0435**	**0.0177**	**0.4947**	**0.0381**	**0.5328**	**0.1343**	**0.0365**	**0.1707**		**1,899.7957**	**1,899.7957**	**0.1327**		**1,903.1134**

3.5 Grading - 2017

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					4.6321	0.0000	4.6321	2.4979	0.0000	2.4979			0.0000			0.0000
Off-Road	2.1726	24.2277	13.1711	0.0265		1.2270	1.2270		1.1289	1.1289		2,710.8071	2,710.8071	0.8306		2,731.5718
Total	**2.1726**	**24.2277**	**13.1711**	**0.0265**	**4.6321**	**1.2270**	**5.8591**	**2.4979**	**1.1289**	**3.6267**		**2,710.8071**	**2,710.8071**	**0.8306**		**2,731.5718**

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	0.8250	26.8617	5.1562	0.0636	1.3805	0.1460	1.5264	0.3783	0.1396	0.5179		6,863.3234	6,863.3234	0.5001		6,875.8262
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0575	0.7387	1.6400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		162.9783	162.9783	6.1500e-003		163.1321
Total	**0.9031**	**26.9192**	**5.8949**	**0.0652**	**1.5258**	**0.1472**	**1.6730**	**0.4168**	**0.1407**	**0.5576**		**7,026.3017**	**7,026.3017**	**0.5063**		**7,038.9583**

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					1.8065	0.0000	1.8065	0.9742	0.0000	0.9742			0.0000			0.0000
Off-Road	2.1726	24.2277	13.1711	0.0265		1.2270	1.2270		1.1289	1.1289	0.0000	2,710.8071	2,710.8071	0.8306		2,731.5718
Total	**2.1726**	**24.2277**	**13.1711**	**0.0265**	**1.8065**	**1.2270**	**3.0335**	**0.9742**	**1.1289**	**2.1030**	**0.0000**	**2,710.8071**	**2,710.8071**	**0.8306**		**2,731.5718**

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	0.8250	26.8617	5.1562	0.0636	1.3805	0.1460	1.5264	0.3783	0.1396	0.5179		6,863.3234	6,863.3234	0.5001		6,875.8262
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0575	0.7387	1.6400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		162.9783	162.9783	6.1500e-003		163.1321
Total	**0.9031**	**26.9192**	**5.8949**	**0.0652**	**1.5258**	**0.1472**	**1.6730**	**0.4168**	**0.1407**	**0.5576**		**7,026.3017**	**7,026.3017**	**0.5063**		**7,038.9583**

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7521	7.8228	6.6559	0.0104		0.4234	0.4234		0.3904	0.3904		1,033.6601	1,033.6601	0.3139		1,041.5084
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7521**	**7.8228**	**6.6559**	**0.0104**		**0.4234**	**0.4234**		**0.3904**	**0.3904**		**1,033.6601**	**1,033.6601**	**0.3139**		**1,041.5084**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0534	0.0385	0.5003	1.2200e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		121.8720	121.8720	4.1700e-003		121.9761
Total	**0.0534**	**0.0385**	**0.5003**	**1.2200e-003**	**0.1118**	**9.0000e-004**	**0.1127**	**0.0296**	**8.3000e-004**	**0.0305**		**121.8720**	**121.8720**	**4.1700e-003**		**121.9761**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7521	7.8228	6.6559	0.0104		0.4234	0.4234		0.3904	0.3904	0.0000	1,033.6601	1,033.6601	0.3139		1,041.5084
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7521**	**7.8228**	**6.6559**	**0.0104**		**0.4234**	**0.4234**		**0.3904**	**0.3904**	**0.0000**	**1,033.6601**	**1,033.6601**	**0.3139**		**1,041.5084**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0534	0.0385	0.5003	1.2200e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		121.8720	121.8720	4.1700e-003		121.9761
Total	**0.0534**	**0.0385**	**0.5003**	**1.2200e-003**	**0.1118**	**9.0000e-004**	**0.1127**	**0.0296**	**8.3000e-004**	**0.0305**		**121.8720**	**121.8720**	**4.1700e-003**		**121.9761**

3.7 Site Preparation - 2017

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					5.2693	0.0000	5.2693	2.8965	0.0000	2.8965			0.0000			0.0000
Off-Road	1.7109	17.7835	8.8360	0.0137		1.0303	1.0303		0.9479	0.9479		1,401.2479	1,401.2479	0.4293		1,411.9814
Total	**1.7109**	**17.7835**	**8.8360**	**0.0137**	**5.2693**	**1.0303**	**6.2997**	**2.8965**	**0.9479**	**3.8444**		**1,401.2479**	**1,401.2479**	**0.4293**		**1,411.9814**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0480	0.0354	0.4546	1.0100e-003	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		100.2943	100.2943	3.7900e-003		100.3890
Total	**0.0480**	**0.0354**	**0.4546**	**1.0100e-003**	**0.0894**	**7.4000e-004**	**0.0902**	**0.0237**	**6.8000e-004**	**0.0244**		**100.2943**	**100.2943**	**3.7900e-003**		**100.3890**

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					2.0550	0.0000	2.0550	1.1296	0.0000	1.1296			0.0000			0.0000
Off-Road	1.7109	17.7835	8.8360	0.0137		1.0303	1.0303		0.9479	0.9479	0.0000	1,401.2479	1,401.2479	0.4293		1,411.9814
Total	**1.7109**	**17.7835**	**8.8360**	**0.0137**	**2.0550**	**1.0303**	**3.0854**	**1.1296**	**0.9479**	**2.0775**	**0.0000**	**1,401.2479**	**1,401.2479**	**0.4293**		**1,411.9814**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0480	0.0354	0.4546	1.0100e-003	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		100.2943	100.2943	3.7900e-003		100.3890
Total	**0.0480**	**0.0354**	**0.4546**	**1.0100e-003**	**0.0894**	**7.4000e-004**	**0.0902**	**0.0237**	**6.8000e-004**	**0.0244**		**100.2943**	**100.2943**	**3.7900e-003**		**100.3890**

2005 James M Wood - Construction

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	110.00	Room	0.39	66,029.00	0
Enclosed Parking with Elevator	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client given square footage. Acreage determined by lot size (0.52) x project lot coverage (75%)

Construction Phase - Construction schedule is best estimate based on CalEEMod defaults and similar previous projects.

Off-road Equipment - Best estimate based on scale of excavation for basement levels.

Off-road Equipment - Paving overlaps with building construction; no additional tractors needed

Off-road Equipment - No graders needed; additional tractor needed.

Off-road Equipment -

Grading - Grading of area and excavation for basement levels.

Demolition -

Trips and VMT - Assumed 14 cubic yard truck capacity for haul trucks

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	20.00	7.00
tblConstructionPhase	NumDays	4.00	30.00
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	PhaseEndDate	7/2/2017	6/15/2018
tblConstructionPhase	PhaseEndDate	7/2/2017	6/1/2018
tblConstructionPhase	PhaseEndDate	7/2/2017	7/11/2017
tblConstructionPhase	PhaseEndDate	7/2/2017	8/25/2017
tblConstructionPhase	PhaseEndDate	7/2/2017	6/15/2018
tblConstructionPhase	PhaseEndDate	7/2/2017	7/14/2017
tblConstructionPhase	PhaseStartDate	7/3/2017	5/4/2018
tblConstructionPhase	PhaseStartDate	7/3/2017	8/28/2017
tblConstructionPhase	PhaseStartDate	7/3/2017	7/17/2017
tblConstructionPhase	PhaseStartDate	7/3/2017	5/4/2018
tblConstructionPhase	PhaseStartDate	7/3/2017	7/12/2017
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	MaterialExported	0.00	16,590.00
tblLandUse	BuildingSpaceSquareFeet	159,720.00	66,029.00
tblLandUse	LandUseSquareFeet	159,720.00	66,029.00
tblLandUse	LotAcreage	3.67	0.39
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripNumber	130.00	140.00
tblTripsAndVMT	HaulingTripNumber	2,074.00	2,371.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	3.3597	51.5587	19.3932	0.0906	6.1579	1.6864	7.5344	2.9202	1.5774	4.1865	0.0000	9,616.7688	9,616.7688	1.3574	0.0000	9,650.7039
2018	24.2439	29.7231	25.9631	0.0475	0.8417	1.6540	2.4958	0.2258	1.5835	1.8093	0.0000	4,574.4160	4,574.4160	0.8118	0.0000	4,594.7106
Maximum	**24.2439**	**51.5587**	**25.9631**	**0.0906**	**6.1579**	**1.6864**	**7.5344**	**2.9202**	**1.5835**	**4.1865**	**0.0000**	**9,616.7688**	**9,616.7688**	**1.3574**	**0.0000**	**9,650.7039**

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					
2017	3.3597	51.5587	19.3932	0.0906	3.3323	1.6864	4.7088	1.3910	1.5774	2.6628	0.0000	9,616.7688	9,616.7688	1.3574	0.0000	9,650.7039
2018	24.2439	29.7231	25.9631	0.0475	0.8417	1.6540	2.4958	0.2258	1.5835	1.8093	0.0000	4,574.4160	4,574.4160	0.8118	0.0000	4,594.7106
Maximum	**24.2439**	**51.5587**	**25.9631**	**0.0906**	**3.3323**	**1.6864**	**4.7088**	**1.3910**	**1.5835**	**2.6628**	**0.0000**	**9,616.7688**	**9,616.7688**	**1.3574**	**0.0000**	**9,650.7039**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.37**	**0.00**	**28.17**	**48.61**	**0.00**	**25.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	5/4/2018	6/15/2018	5	31	
2	Building Construction	Building Construction	8/28/2017	6/1/2018	5	200	
3	Demolition	Demolition	7/3/2017	7/11/2017	5	7	
4	Grading	Grading	7/17/2017	8/25/2017	5	30	
5	Paving	Paving	5/4/2018	6/15/2018	5	31	
6	Site Preparation	Site Preparation	7/12/2017	7/14/2017	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0.99

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 99,044; Non-Residential Outdoor: 33,015; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40

Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Graders	0	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	1	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	46.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	140.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	2,371.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.1397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**20.4383**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0527	0.0381	0.4103	1.0300e-003	0.1006	8.1000e-004	0.1014	0.0267	7.4000e-004	0.0274		102.8927	102.8927	3.5200e-003		102.9808
Total	**0.0527**	**0.0381**	**0.4103**	**1.0300e-003**	**0.1006**	**8.1000e-004**	**0.1014**	**0.0267**	**7.4000e-004**	**0.0274**		**102.8927**	**102.8927**	**3.5200e-003**		**102.9808**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.1397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**20.4383**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0527	0.0381	0.4103	1.0300e-003	0.1006	8.1000e-004	0.1014	0.0267	7.4000e-004	0.0274		102.8927	102.8927	3.5200e-003		102.9808
Total	**0.0527**	**0.0381**	**0.4103**	**1.0300e-003**	**0.1006**	**8.1000e-004**	**0.1014**	**0.0267**	**7.4000e-004**	**0.0274**		**102.8927**	**102.8927**	**3.5200e-003**		**102.9808**

3.3 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085
Total	**2.9653**	**19.2365**	**14.3568**	**0.0220**		**1.2313**	**1.2313**		**1.1875**	**1.1875**		**2,043.8641**	**2,043.8641**	**0.4298**		**2,054.6085**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0917	2.3371	0.6780	4.5700e-003	0.1152	0.0205	0.1357	0.0332	0.0196	0.0528		487.2005	487.2005	0.0387		488.1686
Worker	0.3026	0.2235	2.3936	5.4400e-003	0.5142	4.2700e-003	0.5184	0.1364	3.9400e-003	0.1403		541.0702	541.0702	0.0205		541.5835
Total	**0.3943**	**2.5606**	**3.0716**	**0.0100**	**0.6294**	**0.0248**	**0.6541**	**0.1695**	**0.0235**	**0.1931**		**1,028.2706**	**1,028.2706**	**0.0593**		**1,029.7520**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085
Total	**2.9653**	**19.2365**	**14.3568**	**0.0220**		**1.2313**	**1.2313**		**1.1875**	**1.1875**	**0.0000**	**2,043.8641**	**2,043.8641**	**0.4298**		**2,054.6085**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0917	2.3371	0.6780	4.5700e-003	0.1152	0.0205	0.1357	0.0332	0.0196	0.0528		487.2005	487.2005	0.0387		488.1686
Worker	0.3026	0.2235	2.3936	5.4400e-003	0.5142	4.2700e-003	0.5184	0.1364	3.9400e-003	0.1403		541.0702	541.0702	0.0205		541.5835
Total	**0.3943**	**2.5606**	**3.0716**	**0.0100**	**0.6294**	**0.0248**	**0.6541**	**0.1695**	**0.0235**	**0.1931**		**1,028.2706**	**1,028.2706**	**0.0593**		**1,029.7520**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216		2,030.8389	2,030.8389	0.4088		2,041.0596
Total	**2.5919**	**17.4280**	**13.8766**	**0.0220**		**1.0580**	**1.0580**		**1.0216**	**1.0216**		**2,030.8389**	**2,030.8389**	**0.4088**		**2,041.0596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0807	2.1915	0.6130	4.5500e-003	0.1152	0.0162	0.1314	0.0332	0.0155	0.0487		485.3544	485.3544	0.0368		486.2751
Worker	0.2695	0.1947	2.0972	5.2800e-003	0.5142	4.1200e-003	0.5183	0.1364	3.8000e-003	0.1402		525.8962	525.8962	0.0180		526.3464
Total	**0.3502**	**2.3862**	**2.7102**	**9.8300e-003**	**0.6294**	**0.0204**	**0.6497**	**0.1695**	**0.0193**	**0.1889**		**1,011.2505**	**1,011.2505**	**0.0548**		**1,012.6216**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216	0.0000	2,030.8389	2,030.8389	0.4088		2,041.0596
Total	**2.5919**	**17.4280**	**13.8766**	**0.0220**		**1.0580**	**1.0580**		**1.0216**	**1.0216**	**0.0000**	**2,030.8389**	**2,030.8389**	**0.4088**		**2,041.0596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0807	2.1915	0.6130	4.5500e-003	0.1152	0.0162	0.1314	0.0332	0.0155	0.0487		485.3544	485.3544	0.0368		486.2751
Worker	0.2695	0.1947	2.0972	5.2800e-003	0.5142	4.1200e-003	0.5183	0.1364	3.8000e-003	0.1402		525.8962	525.8962	0.0180		526.3464
Total	**0.3502**	**2.3862**	**2.7102**	**9.8300e-003**	**0.6294**	**0.0204**	**0.6497**	**0.1695**	**0.0193**	**0.1889**		**1,011.2505**	**1,011.2505**	**0.0548**		**1,012.6216**

3.4 Demolition - 2017

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					4.0230	0.0000	4.0230	0.6091	0.0000	0.6091			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
Total	**2.7625**	**26.7594**	**15.5573**	**0.0241**	**4.0230**	**1.6477**	**5.6707**	**0.6091**	**1.5404**	**2.1495**		**2,421.4229**	**2,421.4229**	**0.6125**		**2,436.7347**

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	0.2141	6.9003	1.4034	0.0158	0.3493	0.0375	0.3869	0.0957	0.0359	0.1316		1,708.9120	1,708.9120	0.1319		1,712.2082
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.2996**	**6.9635**	**2.0798**	**0.0174**	**0.4947**	**0.0387**	**0.5334**	**0.1343**	**0.0370**	**0.1713**		**1,861.8231**	**1,861.8231**	**0.1377**		**1,865.2644**

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					1.5690	0.0000	1.5690	0.2376	0.0000	0.2376			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
Total	**2.7625**	**26.7594**	**15.5573**	**0.0241**	**1.5690**	**1.6477**	**3.2166**	**0.2376**	**1.5404**	**1.7779**	**0.0000**	**2,421.4229**	**2,421.4229**	**0.6125**		**2,436.7347**

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	0.2141	6.9003	1.4034	0.0158	0.3493	0.0375	0.3869	0.0957	0.0359	0.1316		1,708.9120	1,708.9120	0.1319		1,712.2082
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.2996**	**6.9635**	**2.0798**	**0.0174**	**0.4947**	**0.0387**	**0.5334**	**0.1343**	**0.0370**	**0.1713**		**1,861.8231**	**1,861.8231**	**0.1377**		**1,865.2644**

3.5 Grading - 2017

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					4.6321	0.0000	4.6321	2.4979	0.0000	2.4979			0.0000			0.0000
Off-Road	2.1726	24.2277	13.1711	0.0265		1.2270	1.2270		1.1289	1.1289		2,710.8071	2,710.8071	0.8306		2,731.5718
Total	**2.1726**	**24.2277**	**13.1711**	**0.0265**	**4.6321**	**1.2270**	**5.8591**	**2.4979**	**1.1289**	**3.6267**		**2,710.8071**	**2,710.8071**	**0.8306**		**2,731.5718**

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	0.8460	27.2678	5.5456	0.0625	1.3805	0.1483	1.5287	0.3783	0.1418	0.5201		6,753.0506	6,753.0506	0.5210		6,766.0759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.9315**	**27.3310**	**6.2221**	**0.0641**	**1.5258**	**0.1495**	**1.6753**	**0.4168**	**0.1430**	**0.5598**		**6,905.9617**	**6,905.9617**	**0.5268**		**6,919.1321**

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					1.8065	0.0000	1.8065	0.9742	0.0000	0.9742			0.0000			0.0000
Off-Road	2.1726	24.2277	13.1711	0.0265		1.2270	1.2270		1.1289	1.1289	0.0000	2,710.8071	2,710.8071	0.8306		2,731.5718
Total	**2.1726**	**24.2277**	**13.1711**	**0.0265**	**1.8065**	**1.2270**	**3.0335**	**0.9742**	**1.1289**	**2.1030**	**0.0000**	**2,710.8071**	**2,710.8071**	**0.8306**		**2,731.5718**

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	0.8460	27.2678	5.5456	0.0625	1.3805	0.1483	1.5287	0.3783	0.1418	0.5201		6,753.0506	6,753.0506	0.5210		6,766.0759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.9315**	**27.3310**	**6.2221**	**0.0641**	**1.5258**	**0.1495**	**1.6753**	**0.4168**	**0.1430**	**0.5598**		**6,905.9617**	**6,905.9617**	**0.5268**		**6,919.1321**

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7521	7.8228	6.6559	0.0104		0.4234	0.4234		0.3904	0.3904		1,033.6601	1,033.6601	0.3139		1,041.5084
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7521**	**7.8228**	**6.6559**	**0.0104**		**0.4234**	**0.4234**		**0.3904**	**0.3904**		**1,033.6601**	**1,033.6601**	**0.3139**		**1,041.5084**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0586	0.0423	0.4559	1.1500e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		114.3253	114.3253	3.9200e-003		114.4231
Total	**0.0586**	**0.0423**	**0.4559**	**1.1500e-003**	**0.1118**	**9.0000e-004**	**0.1127**	**0.0296**	**8.3000e-004**	**0.0305**		**114.3253**	**114.3253**	**3.9200e-003**		**114.4231**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7521	7.8228	6.6559	0.0104		0.4234	0.4234		0.3904	0.3904	0.0000	1,033.6601	1,033.6601	0.3139		1,041.5084
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7521**	**7.8228**	**6.6559**	**0.0104**		**0.4234**	**0.4234**		**0.3904**	**0.3904**	**0.0000**	**1,033.6601**	**1,033.6601**	**0.3139**		**1,041.5084**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0586	0.0423	0.4559	1.1500e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		114.3253	114.3253	3.9200e-003		114.4231
Total	**0.0586**	**0.0423**	**0.4559**	**1.1500e-003**	**0.1118**	**9.0000e-004**	**0.1127**	**0.0296**	**8.3000e-004**	**0.0305**		**114.3253**	**114.3253**	**3.9200e-003**		**114.4231**

3.7 Site Preparation - 2017

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					5.2693	0.0000	5.2693	2.8965	0.0000	2.8965			0.0000			0.0000
Off-Road	1.7109	17.7835	8.8360	0.0137		1.0303	1.0303		0.9479	0.9479		1,401.2479	1,401.2479	0.4293		1,411.9814
Total	**1.7109**	**17.7835**	**8.8360**	**0.0137**	**5.2693**	**1.0303**	**6.2997**	**2.8965**	**0.9479**	**3.8444**		**1,401.2479**	**1,401.2479**	**0.4293**		**1,411.9814**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0526	0.0389	0.4163	9.5000e-004	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		94.0992	94.0992	3.5700e-003		94.1884
Total	**0.0526**	**0.0389**	**0.4163**	**9.5000e-004**	**0.0894**	**7.4000e-004**	**0.0902**	**0.0237**	**6.8000e-004**	**0.0244**		**94.0992**	**94.0992**	**3.5700e-003**		**94.1884**

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					2.0550	0.0000	2.0550	1.1296	0.0000	1.1296			0.0000			0.0000
Off-Road	1.7109	17.7835	8.8360	0.0137		1.0303	1.0303		0.9479	0.9479	0.0000	1,401.2479	1,401.2479	0.4293		1,411.9814
Total	**1.7109**	**17.7835**	**8.8360**	**0.0137**	**2.0550**	**1.0303**	**3.0854**	**1.1296**	**0.9479**	**2.0775**	**0.0000**	**1,401.2479**	**1,401.2479**	**0.4293**		**1,411.9814**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0526	0.0389	0.4163	9.5000e-004	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		94.0992	94.0992	3.5700e-003		94.1884
Total	**0.0526**	**0.0389**	**0.4163**	**9.5000e-004**	**0.0894**	**7.4000e-004**	**0.0902**	**0.0237**	**6.8000e-004**	**0.0244**		**94.0992**	**94.0992**	**3.5700e-003**		**94.1884**

2005 James M Wood - Construction

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	110.00	Room	0.39	66,029.00	0
Enclosed Parking with Elevator	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client given square footage. Acreage determined by lot size (0.52) x project lot coverage (75%)

Construction Phase - Construction schedule is best estimate based on CalEEMod defaults and similar previous projects.

Off-road Equipment - Best estimate based on scale of excavation for basement levels.

Off-road Equipment - Paving overlaps with building construction; no additional tractors needed

Off-road Equipment - No graders needed; additional tractor needed.

Off-road Equipment -

Grading - Grading of area and excavation for basement levels.

Demolition -

Trips and VMT - Assumed 14 cubic yard truck capacity for haul trucks

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	20.00	7.00
tblConstructionPhase	NumDays	4.00	30.00
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	PhaseEndDate	7/2/2017	6/15/2018
tblConstructionPhase	PhaseEndDate	7/2/2017	6/1/2018
tblConstructionPhase	PhaseEndDate	7/2/2017	7/11/2017
tblConstructionPhase	PhaseEndDate	7/2/2017	8/25/2017
tblConstructionPhase	PhaseEndDate	7/2/2017	6/15/2018
tblConstructionPhase	PhaseEndDate	7/2/2017	7/14/2017
tblConstructionPhase	PhaseStartDate	7/3/2017	5/4/2018
tblConstructionPhase	PhaseStartDate	7/3/2017	8/28/2017
tblConstructionPhase	PhaseStartDate	7/3/2017	7/17/2017
tblConstructionPhase	PhaseStartDate	7/3/2017	5/4/2018
tblConstructionPhase	PhaseStartDate	7/3/2017	7/12/2017
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	MaterialExported	0.00	16,590.00
tblLandUse	BuildingSpaceSquareFeet	159,720.00	66,029.00
tblLandUse	LandUseSquareFeet	159,720.00	66,029.00
tblLandUse	LotAcreage	3.67	0.39
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripNumber	130.00	140.00
tblTripsAndVMT	HaulingTripNumber	2,074.00	2,371.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.2094	1.9097	1.1489	2.9900e-003	0.1436	0.0846	0.2282	0.0581	0.0805	0.1386	0.0000	273.5303	273.5303	0.0412	0.0000	274.5603
2018	0.4903	1.2460	1.0593	2.0000e-003	0.0372	0.0682	0.1055	0.0100	0.0657	0.0757	0.0000	174.1777	174.1777	0.0280	0.0000	174.8772
Maximum	**0.4903**	**1.9097**	**1.1489**	**2.9900e-003**	**0.1436**	**0.0846**	**0.2282**	**0.0581**	**0.0805**	**0.1386**	**0.0000**	**273.5303**	**273.5303**	**0.0412**	**0.0000**	**274.5603**

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					
2017	0.2094	1.9097	1.1489	2.9900e-003	0.0878	0.0846	0.1724	0.0313	0.0805	0.1118	0.0000	273.5302	273.5302	0.0412	0.0000	274.5601
2018	0.4903	1.2460	1.0593	2.0000e-003	0.0372	0.0682	0.1055	0.0100	0.0657	0.0757	0.0000	174.1775	174.1775	0.0280	0.0000	174.8770
Maximum	**0.4903**	**1.9097**	**1.1489**	**2.9900e-003**	**0.0878**	**0.0846**	**0.1724**	**0.0313**	**0.0805**	**0.1118**	**0.0000**	**273.5302**	**273.5302**	**0.0412**	**0.0000**	**274.5601**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**30.85**	**0.00**	**16.72**	**39.35**	**0.00**	**12.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-3-2017	10-2-2017	1.2362	1.2362
2	10-3-2017	1-2-2018	0.8249	0.8249
3	1-3-2018	4-2-2018	0.7314	0.7314
4	4-3-2018	7-2-2018	0.9656	0.9656
		Highest	1.2362	1.2362

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	5/4/2018	6/15/2018	5	31	
2	Building Construction	Building Construction	8/28/2017	6/1/2018	5	200	
3	Demolition	Demolition	7/3/2017	7/11/2017	5	7	
4	Grading	Grading	7/17/2017	8/25/2017	5	30	
5	Paving	Paving	5/4/2018	6/15/2018	5	31	
6	Site Preparation	Site Preparation	7/12/2017	7/14/2017	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0.99

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 99,044; Non-Residential Outdoor: 33,015; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29

Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Graders	0	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	1	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	46.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	140.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	2,371.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3122					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6300e-003	0.0311	0.0287	5.0000e-005		2.3300e-003	2.3300e-003		2.3300e-003	2.3300e-003	0.0000	3.9576	3.9576	3.8000e-004	0.0000	3.9670
Total	**0.3168**	**0.0311**	**0.0287**	**5.0000e-005**		**2.3300e-003**	**2.3300e-003**		**2.3300e-003**	**2.3300e-003**	**0.0000**	**3.9576**	**3.9576**	**3.8000e-004**	**0.0000**	**3.9670**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	6.1000e-004	6.5200e-003	2.0000e-005	1.5300e-003	1.0000e-005	1.5400e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.4696	1.4696	5.0000e-005	0.0000	1.4709
Total	**7.4000e-004**	**6.1000e-004**	**6.5200e-003**	**2.0000e-005**	**1.5300e-003**	**1.0000e-005**	**1.5400e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.4696**	**1.4696**	**5.0000e-005**	**0.0000**	**1.4709**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3122					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6300e-003	0.0311	0.0287	5.0000e-005		2.3300e-003	2.3300e-003		2.3300e-003	2.3300e-003	0.0000	3.9576	3.9576	3.8000e-004	0.0000	3.9670
Total	**0.3168**	**0.0311**	**0.0287**	**5.0000e-005**		**2.3300e-003**	**2.3300e-003**		**2.3300e-003**	**2.3300e-003**	**0.0000**	**3.9576**	**3.9576**	**3.8000e-004**	**0.0000**	**3.9670**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	6.1000e-004	6.5200e-003	2.0000e-005	1.5300e-003	1.0000e-005	1.5400e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.4696	1.4696	5.0000e-005	0.0000	1.4709
Total	**7.4000e-004**	**6.1000e-004**	**6.5200e-003**	**2.0000e-005**	**1.5300e-003**	**1.0000e-005**	**1.5400e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.4696**	**1.4696**	**5.0000e-005**	**0.0000**	**1.4709**

3.3 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1334	0.8656	0.6461	9.9000e-004		0.0554	0.0554		0.0534	0.0534	0.0000	83.4373	83.4373	0.0175	0.0000	83.8759
Total	**0.1334**	**0.8656**	**0.6461**	**9.9000e-004**		**0.0554**	**0.0554**		**0.0534**	**0.0534**	**0.0000**	**83.4373**	**83.4373**	**0.0175**	**0.0000**	**83.8759**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0300e-003	0.1072	0.0292	2.1000e-004	5.1000e-003	9.1000e-004	6.0200e-003	1.4700e-003	8.7000e-004	2.3500e-003	0.0000	20.1956	20.1956	1.5300e-003	0.0000	20.2337
Worker	0.0124	0.0103	0.1104	2.5000e-004	0.0227	1.9000e-004	0.0229	6.0300e-003	1.8000e-004	6.2100e-003	0.0000	22.4358	22.4358	8.5000e-004	0.0000	22.4570
Total	**0.0164**	**0.1175**	**0.1395**	**4.6000e-004**	**0.0278**	**1.1000e-003**	**0.0289**	**7.5000e-003**	**1.0500e-003**	**8.5600e-003**	**0.0000**	**42.6314**	**42.6314**	**2.3800e-003**	**0.0000**	**42.6908**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1334	0.8656	0.6461	9.9000e-004		0.0554	0.0554		0.0534	0.0534	0.0000	83.4372	83.4372	0.0175	0.0000	83.8758
Total	**0.1334**	**0.8656**	**0.6461**	**9.9000e-004**		**0.0554**	**0.0554**		**0.0534**	**0.0534**	**0.0000**	**83.4372**	**83.4372**	**0.0175**	**0.0000**	**83.8758**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0300e-003	0.1072	0.0292	2.1000e-004	5.1000e-003	9.1000e-004	6.0200e-003	1.4700e-003	8.7000e-004	2.3500e-003	0.0000	20.1956	20.1956	1.5300e-003	0.0000	20.2337
Worker	0.0124	0.0103	0.1104	2.5000e-004	0.0227	1.9000e-004	0.0229	6.0300e-003	1.8000e-004	6.2100e-003	0.0000	22.4358	22.4358	8.5000e-004	0.0000	22.4570
Total	**0.0164**	**0.1175**	**0.1395**	**4.6000e-004**	**0.0278**	**1.1000e-003**	**0.0289**	**7.5000e-003**	**1.0500e-003**	**8.5600e-003**	**0.0000**	**42.6314**	**42.6314**	**2.3800e-003**	**0.0000**	**42.6908**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1426	0.9585	0.7632	1.2100e-003		0.0582	0.0582		0.0562	0.0562	0.0000	101.3290	101.3290	0.0204	0.0000	101.8390
Total	**0.1426**	**0.9585**	**0.7632**	**1.2100e-003**		**0.0582**	**0.0582**		**0.0562**	**0.0562**	**0.0000**	**101.3290**	**101.3290**	**0.0204**	**0.0000**	**101.8390**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3400e-003	0.1228	0.0322	2.5000e-004	6.2400e-003	8.8000e-004	7.1200e-003	1.8000e-003	8.5000e-004	2.6500e-003	0.0000	24.6006	24.6006	1.7700e-003	0.0000	24.6449
Worker	0.0134	0.0110	0.1183	3.0000e-004	0.0278	2.3000e-004	0.0280	7.3700e-003	2.1000e-004	7.5800e-003	0.0000	26.6533	26.6533	9.1000e-004	0.0000	26.6761
Total	**0.0178**	**0.1338**	**0.1505**	**5.5000e-004**	**0.0340**	**1.1100e-003**	**0.0351**	**9.1700e-003**	**1.0600e-003**	**0.0102**	**0.0000**	**51.2539**	**51.2539**	**2.6800e-003**	**0.0000**	**51.3210**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1426	0.9585	0.7632	1.2100e-003		0.0582	0.0582		0.0562	0.0562	0.0000	101.3289	101.3289	0.0204	0.0000	101.8389
Total	**0.1426**	**0.9585**	**0.7632**	**1.2100e-003**		**0.0582**	**0.0582**		**0.0562**	**0.0562**	**0.0000**	**101.3289**	**101.3289**	**0.0204**	**0.0000**	**101.8389**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3400e-003	0.1228	0.0322	2.5000e-004	6.2400e-003	8.8000e-004	7.1200e-003	1.8000e-003	8.5000e-004	2.6500e-003	0.0000	24.6006	24.6006	1.7700e-003	0.0000	24.6449
Worker	0.0134	0.0110	0.1183	3.0000e-004	0.0278	2.3000e-004	0.0280	7.3700e-003	2.1000e-004	7.5800e-003	0.0000	26.6533	26.6533	9.1000e-004	0.0000	26.6761
Total	**0.0178**	**0.1338**	**0.1505**	**5.5000e-004**	**0.0340**	**1.1100e-003**	**0.0351**	**9.1700e-003**	**1.0600e-003**	**0.0102**	**0.0000**	**51.2539**	**51.2539**	**2.6800e-003**	**0.0000**	**51.3210**

3.4 Demolition - 2017

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					0.0141	0.0000	0.0141	2.1300e-003	0.0000	2.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6700e-003	0.0937	0.0545	8.0000e-005		5.7700e-003	5.7700e-003		5.3900e-003	5.3900e-003	0.0000	7.6884	7.6884	1.9400e-003	0.0000	7.7370
Total	**9.6700e-003**	**0.0937**	**0.0545**	**8.0000e-005**	**0.0141**	**5.7700e-003**	**0.0199**	**2.1300e-003**	**5.3900e-003**	**7.5200e-003**	**0.0000**	**7.6884**	**7.6884**	**1.9400e-003**	**0.0000**	**7.7370**

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	7.4000e-004	0.0246	4.7200e-003	6.0000e-005	1.2000e-003	1.3000e-004	1.3300e-003	3.3000e-004	1.2000e-004	4.5000e-004	0.0000	5.4774	5.4774	4.1000e-004	0.0000	5.4877
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.3000e-004	2.4300e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4932	0.4932	2.0000e-005	0.0000	0.4936
Total	**1.0100e-003**	**0.0248**	**7.1500e-003**	**7.0000e-005**	**1.7000e-003**	**1.3000e-004**	**1.8300e-003**	**4.6000e-004**	**1.2000e-004**	**5.9000e-004**	**0.0000**	**5.9706**	**5.9706**	**4.3000e-004**	**0.0000**	**5.9813**

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					5.4900e-003	0.0000	5.4900e-003	8.3000e-004	0.0000	8.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6700e-003	0.0937	0.0545	8.0000e-005		5.7700e-003	5.7700e-003		5.3900e-003	5.3900e-003	0.0000	7.6884	7.6884	1.9400e-003	0.0000	7.7370
Total	**9.6700e-003**	**0.0937**	**0.0545**	**8.0000e-005**	**5.4900e-003**	**5.7700e-003**	**0.0113**	**8.3000e-004**	**5.3900e-003**	**6.2200e-003**	**0.0000**	**7.6884**	**7.6884**	**1.9400e-003**	**0.0000**	**7.7370**

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	7.4000e-004	0.0246	4.7200e-003	6.0000e-005	1.2000e-003	1.3000e-004	1.3300e-003	3.3000e-004	1.2000e-004	4.5000e-004	0.0000	5.4774	5.4774	4.1000e-004	0.0000	5.4877
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.3000e-004	2.4300e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4932	0.4932	2.0000e-005	0.0000	0.4936
Total	**1.0100e-003**	**0.0248**	**7.1500e-003**	**7.0000e-005**	**1.7000e-003**	**1.3000e-004**	**1.8300e-003**	**4.6000e-004**	**1.2000e-004**	**5.9000e-004**	**0.0000**	**5.9706**	**5.9706**	**4.3000e-004**	**0.0000**	**5.9813**

3.5 Grading - 2017

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					0.0695	0.0000	0.0695	0.0375	0.0000	0.0375	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.3634	0.1976	4.0000e-004		0.0184	0.0184		0.0169	0.0169	0.0000	36.8880	36.8880	0.0113	0.0000	37.1706
Total	**0.0326**	**0.3634**	**0.1976**	**4.0000e-004**	**0.0695**	**0.0184**	**0.0879**	**0.0375**	**0.0169**	**0.0544**	**0.0000**	**36.8880**	**36.8880**	**0.0113**	**0.0000**	**37.1706**

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	0.0125	0.4169	0.0799	9.5000e-004	0.0204	2.2000e-003	0.0226	5.5900e-003	2.1100e-003	7.7000e-003	0.0000	92.7643	92.7643	6.9300e-003	0.0000	92.9376
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1600e-003	9.7000e-004	0.0104	2.0000e-005	2.1400e-003	2.0000e-005	2.1600e-003	5.7000e-004	2.0000e-005	5.8000e-004	0.0000	2.1135	2.1135	8.0000e-005	0.0000	2.1155
Total	**0.0137**	**0.4178**	**0.0903**	**9.7000e-004**	**0.0225**	**2.2200e-003**	**0.0247**	**6.1600e-003**	**2.1300e-003**	**8.2800e-003**	**0.0000**	**94.8778**	**94.8778**	**7.0100e-003**	**0.0000**	**95.0531**

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					0.0271	0.0000	0.0271	0.0146	0.0000	0.0146	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.3634	0.1976	4.0000e-004		0.0184	0.0184		0.0169	0.0169	0.0000	36.8880	36.8880	0.0113	0.0000	37.1706
Total	**0.0326**	**0.3634**	**0.1976**	**4.0000e-004**	**0.0271**	**0.0184**	**0.0455**	**0.0146**	**0.0169**	**0.0315**	**0.0000**	**36.8880**	**36.8880**	**0.0113**	**0.0000**	**37.1706**

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	0.0125	0.4169	0.0799	9.5000e-004	0.0204	2.2000e-003	0.0226	5.5900e-003	2.1100e-003	7.7000e-003	0.0000	92.7643	92.7643	6.9300e-003	0.0000	92.9376
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1600e-003	9.7000e-004	0.0104	2.0000e-005	2.1400e-003	2.0000e-005	2.1600e-003	5.7000e-004	2.0000e-005	5.8000e-004	0.0000	2.1135	2.1135	8.0000e-005	0.0000	2.1155
Total	**0.0137**	**0.4178**	**0.0903**	**9.7000e-004**	**0.0225**	**2.2200e-003**	**0.0247**	**6.1600e-003**	**2.1300e-003**	**8.2800e-003**	**0.0000**	**94.8778**	**94.8778**	**7.0100e-003**	**0.0000**	**95.0531**

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0117	0.1213	0.1032	1.6000e-004		6.5600e-003	6.5600e-003		6.0500e-003	6.0500e-003	0.0000	14.5347	14.5347	4.4100e-003	0.0000	14.6450
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0117**	**0.1213**	**0.1032**	**1.6000e-004**		**6.5600e-003**	**6.5600e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**14.5347**	**14.5347**	**4.4100e-003**	**0.0000**	**14.6450**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.2000e-004	6.7000e-004	7.2500e-003	2.0000e-005	1.7000e-003	1.0000e-005	1.7100e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.6329	1.6329	6.0000e-005	0.0000	1.6343
Total	**8.2000e-004**	**6.7000e-004**	**7.2500e-003**	**2.0000e-005**	**1.7000e-003**	**1.0000e-005**	**1.7100e-003**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**1.6329**	**1.6329**	**6.0000e-005**	**0.0000**	**1.6343**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0117	0.1213	0.1032	1.6000e-004		6.5600e-003	6.5600e-003		6.0500e-003	6.0500e-003	0.0000	14.5347	14.5347	4.4100e-003	0.0000	14.6450
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0117**	**0.1213**	**0.1032**	**1.6000e-004**		**6.5600e-003**	**6.5600e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**14.5347**	**14.5347**	**4.4100e-003**	**0.0000**	**14.6450**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.2000e-004	6.7000e-004	7.2500e-003	2.0000e-005	1.7000e-003	1.0000e-005	1.7100e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.6329	1.6329	6.0000e-005	0.0000	1.6343
Total	**8.2000e-004**	**6.7000e-004**	**7.2500e-003**	**2.0000e-005**	**1.7000e-003**	**1.0000e-005**	**1.7100e-003**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**1.6329**	**1.6329**	**6.0000e-005**	**0.0000**	**1.6343**

3.7 Site Preparation - 2017

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					7.9000e-003	0.0000	7.9000e-003	4.3400e-003	0.0000	4.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5700e-003	0.0267	0.0133	2.0000e-005		1.5500e-003	1.5500e-003		1.4200e-003	1.4200e-003	0.0000	1.9068	1.9068	5.8000e-004	0.0000	1.9214
Total	**2.5700e-003**	**0.0267**	**0.0133**	**2.0000e-005**	**7.9000e-003**	**1.5500e-003**	**9.4500e-003**	**4.3400e-003**	**1.4200e-003**	**5.7600e-003**	**0.0000**	**1.9068**	**1.9068**	**5.8000e-004**	**0.0000**	**1.9214**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	6.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1301	0.1301	0.0000	0.0000	0.1302
Total	**7.0000e-005**	**6.0000e-005**	**6.4000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1301**	**0.1301**	**0.0000**	**0.0000**	**0.1302**

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					3.0800e-003	0.0000	3.0800e-003	1.6900e-003	0.0000	1.6900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5700e-003	0.0267	0.0133	2.0000e-005		1.5500e-003	1.5500e-003		1.4200e-003	1.4200e-003	0.0000	1.9068	1.9068	5.8000e-004	0.0000	1.9214
Total	**2.5700e-003**	**0.0267**	**0.0133**	**2.0000e-005**	**3.0800e-003**	**1.5500e-003**	**4.6300e-003**	**1.6900e-003**	**1.4200e-003**	**3.1100e-003**	**0.0000**	**1.9068**	**1.9068**	**5.8000e-004**	**0.0000**	**1.9214**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	6.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1301	0.1301	0.0000	0.0000	0.1302
Total	**7.0000e-005**	**6.0000e-005**	**6.4000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1301**	**0.1301**	**0.0000**	**0.0000**	**0.1302**

Appendix C

Project Operational Emissions Worksheets

ESA

2005 James M Wood

Air Quality and Greenhouse Gas Assessment

Title 24 Energy Savings Adjustment

Nonresidential

% savings over Title 24 (2016)	% savings over Title 24 (2013)
0%	5.0%
5%	9.8%
10%	14.5%
15%	19.3%
20%	24.0%

Residential

% savings over Title 24 (2016)	% savings over Title 24 (2013)
0%	28.0%
5%	31.6%
10%	35.2%
15%	38.8%
20%	42.4%

Project Energy Use Factors Adjustment

Nonresidential % savings over Title 24 (2013) =	5.0%
Residential % savings over Title 24 (2013) =	28.0%

	T24 Electricity	NT24 Electricity	Lighting Electricity	T24 NG	NT24 NG
Title 24 (2013 - CalEEMod Default)					
Project Nonresidential Land Uses					
Enclosed Parking with Elevator	3.92	0.19	2.63	-	-
Hotel	3.50	2.89	2.67	21.79	4.06
Title 24 (2016)					
Project Nonresidential Land Uses					
Enclosed Parking with Elevator	3.72	0.19	2.50	-	-
Hotel	3.33	2.89	2.54	20.70	4.06

Sources:

California Emissions Estimator Model (CalEEMod), version 2016.3.1.

California Energy Commission, Adoption Hearing, 2016 Building Energy Efficiency Standards, June 10, 2015. Available: http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2015-06-10_hearing/2015-06-10_Adoption_Hearing_Presentation.pdf. Accessed December 2016.

2005 James M Wood - Operational

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	110.00	Room	0.37	66,029.00	0
Enclosed Parking with Elevator	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client provided square footage.

Vehicle Trips - Trip generation calculated using Linscott, Law, and Greenspan's Trip Generation Table

Energy Use - Refer to "Title 24 Energy Savings" Workbook for Calculations

Construction Off-road Equipment Mitigation -

Water Mitigation -

Waste Mitigation - See City of LA Zero Waste Program Progress http://www.forester.net/pdfs/City_of_LA_Zero_Waste_Progress_Report.pdf

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	LightingElect	2.20	2.54
tblEnergyUse	T24E	3.92	3.72
tblEnergyUse	T24E	2.68	3.33
tblEnergyUse	T24NG	20.02	20.70
tblLandUse	BuildingSpaceSquareFeet	159,720.00	66,029.00
tblLandUse	LandUseSquareFeet	159,720.00	66,029.00
tblLandUse	LotAcreage	3.67	0.37
tblVehicleTrips	ST_TR	8.19	6.94
tblVehicleTrips	SU_TR	5.95	6.94
tblVehicleTrips	WD_TR	8.17	6.94

2.0 Emissions Summary

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	1.4962	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Energy	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
Mobile	1.5938	6.8637	18.6368	0.0528	3.8719	0.0619	3.9338	1.0361	0.0583	1.0944		5,351.8848	5,351.8848	0.3057		5,359.5279
Total	**3.1383**	**7.3030**	**19.0285**	**0.0554**	**3.8719**	**0.0954**	**3.9672**	**1.0361**	**0.0918**	**1.1278**		**5,878.8880**	**5,878.8880**	**0.3160**	**9.6600e-003**	**5,889.6659**

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	1.4962	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Energy	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
Mobile	1.5938	6.8637	18.6368	0.0528	3.8719	0.0619	3.9338	1.0361	0.0583	1.0944		5,351.8848	5,351.8848	0.3057		5,359.5279
Total	**3.1383**	**7.3030**	**19.0285**	**0.0554**	**3.8719**	**0.0954**	**3.9672**	**1.0361**	**0.0918**	**1.1278**		**5,878.8880**	**5,878.8880**	**0.3160**	**9.6600e-003**	**5,889.6659**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5938	6.8637	18.6368	0.0528	3.8719	0.0619	3.9338	1.0361	0.0583	1.0944		5,351.8848	5,351.8848	0.3057		5,359.5279
Unmitigated	1.5938	6.8637	18.6368	0.0528	3.8719	0.0619	3.9338	1.0361	0.0583	1.0944		5,351.8848	5,351.8848	0.3057		5,359.5279

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hotel	763.40	763.40	763.40	1,821,603	1,821,603
Total	763.40	763.40	763.40	1,821,603	1,821,603

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
Enclosed Parking with Elevator	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
NaturalGas Unmitigated	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	4479.12	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
Total		**0.0483**	**0.4391**	**0.3689**	**2.6300e-003**		**0.0334**	**0.0334**		**0.0334**	**0.0334**		**526.9551**	**526.9551**	**0.0101**	**9.6600e-003**	**530.0865**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	4.47912	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
Total		**0.0483**	**0.4391**	**0.3689**	**2.6300e-003**		**0.0334**	**0.0334**		**0.0334**	**0.0334**		**526.9551**	**526.9551**	**0.0101**	**9.6600e-003**	**530.0865**

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	1.4962	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Unmitigated	1.4962	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515

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	0.1711					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3230					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1800e-003	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Total	**1.4962**	**2.1000e-004**	**0.0228**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0482**	**0.0482**	**1.3000e-004**		**0.0515**

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	0.1711					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3230					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1800e-003	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Total	**1.4962**	**2.1000e-004**	**0.0228**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0482**	**0.0482**	**1.3000e-004**		**0.0515**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

2005 James M Wood - Operational

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	110.00	Room	0.37	66,029.00	0
Enclosed Parking with Elevator	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client provided square footage.

Vehicle Trips - Trip generation calculated using Linscott, Law, and Greenspan's Trip Generation Table

Energy Use - Refer to "Title 24 Energy Savings" Workbook for Calculations

Construction Off-road Equipment Mitigation -

Water Mitigation -

Waste Mitigation - See City of LA Zero Waste Program Progress http://www.forester.net/pdfs/City_of_LA_Zero_Waste_Progress_Report.pdf

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	LightingElect	2.20	2.54
tblEnergyUse	T24E	3.92	3.72
tblEnergyUse	T24E	2.68	3.33
tblEnergyUse	T24NG	20.02	20.70
tblLandUse	BuildingSpaceSquareFeet	159,720.00	66,029.00
tblLandUse	LandUseSquareFeet	159,720.00	66,029.00
tblLandUse	LotAcreage	3.67	0.37
tblVehicleTrips	ST_TR	8.19	6.94
tblVehicleTrips	SU_TR	5.95	6.94
tblVehicleTrips	WD_TR	8.17	6.94

2.0 Emissions Summary

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	1.4962	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Energy	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
Mobile	1.5407	7.0197	17.8700	0.0500	3.8719	0.0625	3.9344	1.0361	0.0589	1.0949		5,071.5889	5,071.5889	0.3063		5,079.2454
Total	**3.0852**	**7.4590**	**18.2617**	**0.0526**	**3.8719**	**0.0960**	**3.9678**	**1.0361**	**0.0923**	**1.1284**		**5,598.5921**	**5,598.5921**	**0.3165**	**9.6600e-003**	**5,609.3834**

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	1.4962	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Energy	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
Mobile	1.5407	7.0197	17.8700	0.0500	3.8719	0.0625	3.9344	1.0361	0.0589	1.0949		5,071.5889	5,071.5889	0.3063		5,079.2454
Total	**3.0852**	**7.4590**	**18.2617**	**0.0526**	**3.8719**	**0.0960**	**3.9678**	**1.0361**	**0.0923**	**1.1284**		**5,598.5921**	**5,598.5921**	**0.3165**	**9.6600e-003**	**5,609.3834**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5407	7.0197	17.8700	0.0500	3.8719	0.0625	3.9344	1.0361	0.0589	1.0949		5,071.5889	5,071.5889	0.3063		5,079.2454
Unmitigated	1.5407	7.0197	17.8700	0.0500	3.8719	0.0625	3.9344	1.0361	0.0589	1.0949		5,071.5889	5,071.5889	0.3063		5,079.2454

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hotel	763.40	763.40	763.40	1,821,603	1,821,603
Total	763.40	763.40	763.40	1,821,603	1,821,603

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
Enclosed Parking with Elevator	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
NaturalGas Unmitigated	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	4479.12	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
Total		**0.0483**	**0.4391**	**0.3689**	**2.6300e-003**		**0.0334**	**0.0334**		**0.0334**	**0.0334**		**526.9551**	**526.9551**	**0.0101**	**9.6600e-003**	**530.0865**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	4.47912	0.0483	0.4391	0.3689	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.9551	526.9551	0.0101	9.6600e-003	530.0865
Total		**0.0483**	**0.4391**	**0.3689**	**2.6300e-003**		**0.0334**	**0.0334**		**0.0334**	**0.0334**		**526.9551**	**526.9551**	**0.0101**	**9.6600e-003**	**530.0865**

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	1.4962	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Unmitigated	1.4962	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515

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	0.1711					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3230					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1800e-003	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Total	**1.4962**	**2.1000e-004**	**0.0228**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0482**	**0.0482**	**1.3000e-004**		**0.0515**

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	0.1711					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3230					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1800e-003	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0482	0.0482	1.3000e-004		0.0515
Total	**1.4962**	**2.1000e-004**	**0.0228**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0482**	**0.0482**	**1.3000e-004**		**0.0515**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

2005 James M Wood - Operational

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	110.00	Room	0.37	66,029.00	0
Enclosed Parking with Elevator	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client provided square footage.

Vehicle Trips - Trip generation calculated using Linscott, Law, and Greenspan's Trip Generation Table

Energy Use - Refer to "Title 24 Energy Savings" Workbook for Calculations

Construction Off-road Equipment Mitigation -

Water Mitigation -

Waste Mitigation - See City of LA Zero Waste Program Progress http://www.forester.net/pdfs/City_of_LA_Zero_Waste_Progress_Report.pdf

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	LightingElect	2.20	2.54
tblEnergyUse	T24E	3.92	3.72
tblEnergyUse	T24E	2.68	3.33
tblEnergyUse	T24NG	20.02	20.70
tblLandUse	BuildingSpaceSquareFeet	159,720.00	66,029.00
tblLandUse	LandUseSquareFeet	159,720.00	66,029.00
tblLandUse	LotAcreage	3.67	0.37
tblVehicleTrips	ST_TR	8.19	6.94
tblVehicleTrips	SU_TR	5.95	6.94
tblVehicleTrips	WD_TR	8.17	6.94

2.0 Emissions Summary

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	0.2729	3.0000e-005	2.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4600e-003	5.4600e-003	1.0000e-005	0.0000	5.8300e-003
Energy	8.8200e-003	0.0801	0.0673	4.8000e-004		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	566.4831	566.4831	0.0130	3.9400e-003	567.9824
Mobile	0.2717	1.3018	3.2880	9.2300e-003	0.6919	0.0113	0.7032	0.1854	0.0106	0.1961	0.0000	849.1311	849.1311	0.0502	0.0000	850.3870
Waste						0.0000	0.0000		0.0000	0.0000	12.2262	0.0000	12.2262	0.7225	0.0000	30.2898
Water						0.0000	0.0000		0.0000	0.0000	0.8853	22.1546	23.0398	0.0915	2.2600e-003	25.9981
Total	**0.5534**	**1.3820**	**3.3581**	**9.7100e-003**	**0.6919**	**0.0174**	**0.7093**	**0.1854**	**0.0167**	**0.2022**	**13.1114**	**1,437.7743**	**1,450.8857**	**0.8772**	**6.2000e-003**	**1,474.6630**

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	0.2729	3.0000e-005	2.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4600e-003	5.4600e-003	1.0000e-005	0.0000	5.8300e-003
Energy	8.8200e-003	0.0801	0.0673	4.8000e-004		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	566.4831	566.4831	0.0130	3.9400e-003	567.9824
Mobile	0.2717	1.3018	3.2880	9.2300e-003	0.6919	0.0113	0.7032	0.1854	0.0106	0.1961	0.0000	849.1311	849.1311	0.0502	0.0000	850.3870
Waste						0.0000	0.0000		0.0000	0.0000	2.9343	0.0000	2.9343	0.1734	0.0000	7.2695
Water						0.0000	0.0000		0.0000	0.0000	0.7082	17.9903	18.6985	0.0732	1.8100e-003	21.0657
Total	**0.5534**	**1.3820**	**3.3581**	**9.7100e-003**	**0.6919**	**0.0174**	**0.7093**	**0.1854**	**0.0167**	**0.2022**	**3.6425**	**1,433.6100**	**1,437.2525**	**0.3098**	**5.7500e-003**	**1,446.7104**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**72.22**	**0.29**	**0.94**	**64.68**	**7.26**	**1.90**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2717	1.3018	3.2880	9.2300e-003	0.6919	0.0113	0.7032	0.1854	0.0106	0.1961	0.0000	849.1311	849.1311	0.0502	0.0000	850.3870
Unmitigated	0.2717	1.3018	3.2880	9.2300e-003	0.6919	0.0113	0.7032	0.1854	0.0106	0.1961	0.0000	849.1311	849.1311	0.0502	0.0000	850.3870

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hotel	763.40	763.40	763.40	1,821,603	1,821,603
Total	763.40	763.40	763.40	1,821,603	1,821,603

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
Enclosed Parking with Elevator	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	479.2398	479.2398	0.0113	2.3400e-003	480.2206
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	479.2398	479.2398	0.0113	2.3400e-003	480.2206
NaturalGas Mitigated	8.8200e-003	0.0801	0.0673	4.8000e-004		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	87.2433	87.2433	1.6700e-003	1.6000e-003	87.7618
NaturalGas Unmitigated	8.8200e-003	0.0801	0.0673	4.8000e-004		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	87.2433	87.2433	1.6700e-003	1.6000e-003	87.7618

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	1.63488e+006	8.8200e-003	0.0801	0.0673	4.8000e-004		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	87.2433	87.2433	1.6700e-003	1.6000e-003	87.7618
Total		**8.8200e-003**	**0.0801**	**0.0673**	**4.8000e-004**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**87.2433**	**87.2433**	**1.6700e-003**	**1.6000e-003**	**87.7618**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	1.63488e+006	8.8200e-003	0.0801	0.0673	4.8000e-004		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	87.2433	87.2433	1.6700e-003	1.6000e-003	87.7618
Total		**8.8200e-003**	**0.0801**	**0.0673**	**4.8000e-004**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**87.2433**	**87.2433**	**1.6700e-003**	**1.6000e-003**	**87.7618**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	282040	157.0854	3.7100e-003	7.7000e-004	157.4069
Hotel	578414	322.1544	7.6100e-003	1.5700e-003	322.8137
Total		**479.2398**	**0.0113**	**2.3400e-003**	**480.2206**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	282040	157.0854	3.7100e-003	7.7000e-004	157.4069
Hotel	578414	322.1544	7.6100e-003	1.5700e-003	322.8137
Total		**479.2398**	**0.0113**	**2.3400e-003**	**480.2206**

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	0.2729	3.0000e-005	2.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4600e-003	5.4600e-003	1.0000e-005	0.0000	5.8300e-003
Unmitigated	0.2729	3.0000e-005	2.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4600e-003	5.4600e-003	1.0000e-005	0.0000	5.8300e-003

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	0.0312					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2414					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4600e-003	5.4600e-003	1.0000e-005	0.0000	5.8300e-003
Total	**0.2729**	**3.0000e-005**	**2.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.4600e-003**	**5.4600e-003**	**1.0000e-005**	**0.0000**	**5.8300e-003**

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	0.0312					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2414					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4600e-003	5.4600e-003	1.0000e-005	0.0000	5.8300e-003
Total	**0.2729**	**3.0000e-005**	**2.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.4600e-003**	**5.4600e-003**	**1.0000e-005**	**0.0000**	**5.8300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	18.6985	0.0732	1.8100e-003	21.0657
Unmitigated	23.0398	0.0915	2.2600e-003	25.9981

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	2.79034 / 0.310038	23.0398	0.0915	2.2600e-003	25.9981
Total		**23.0398**	**0.0915**	**2.2600e-003**	**25.9981**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	2.23228 / 0.291126	18.6985	0.0732	1.8100e-003	21.0657
Total		**18.6985**	**0.0732**	**1.8100e-003**	**21.0657**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.9343	0.1734	0.0000	7.2695
Unmitigated	12.2262	0.7225	0.0000	30.2898

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	60.23	12.2262	0.7225	0.0000	30.2898
Total		**12.2262**	**0.7225**	**0.0000**	**30.2898**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	14.4552	2.9343	0.1734	0.0000	7.2695
Total		**2.9343**	**0.1734**	**0.0000**	**7.2695**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation