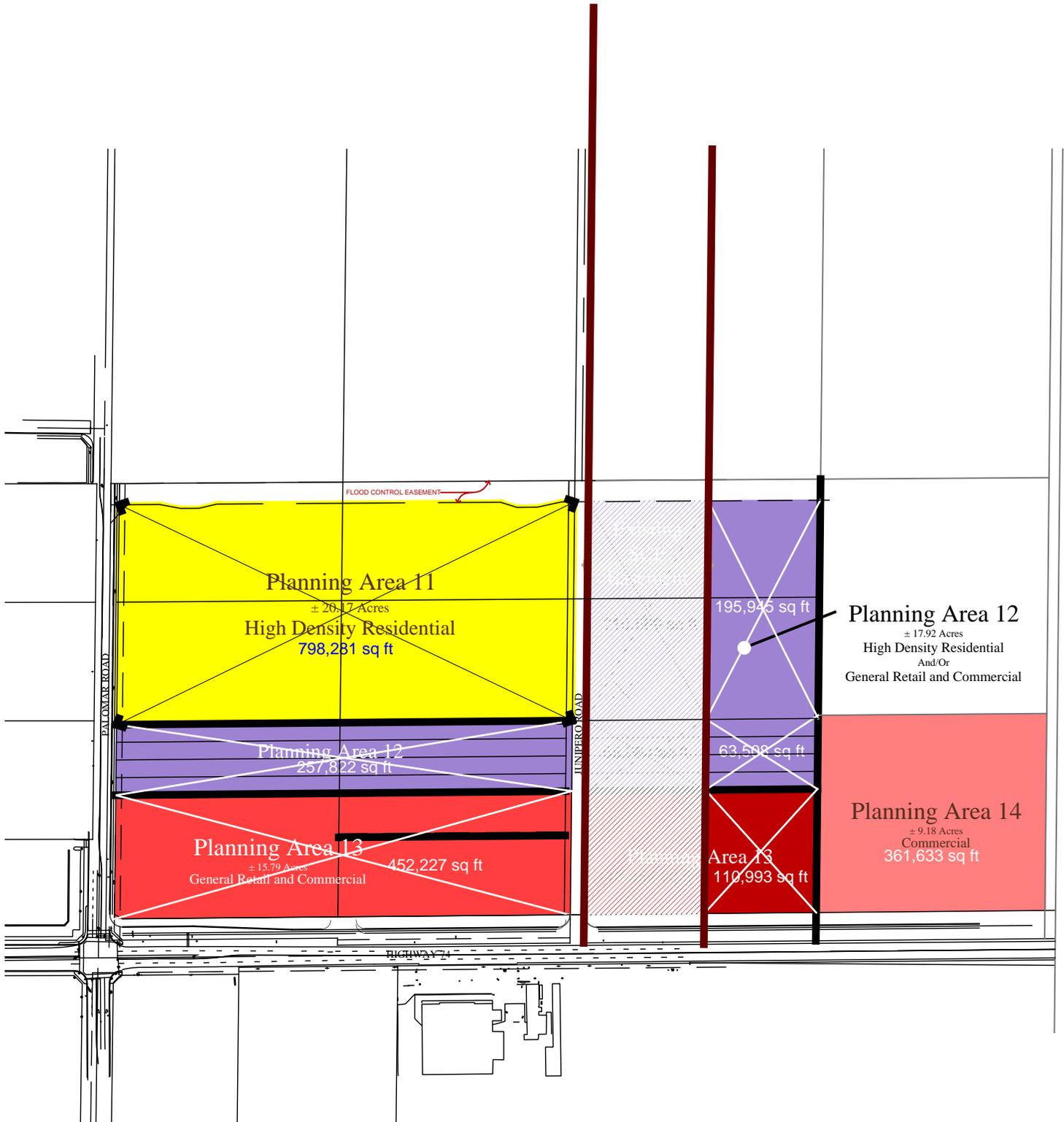


# PALOMAR CROSSING AIR QUALITY AND GREENHOUSE GAS IMPACT STUDY City of Menifee California



**PALOMAR CROSSING  
AIR QUALITY AND GHG IMPACT ANALYSIS  
City of Menifee, California**

**Prepared for:**

OPTIMUS BUILDING CORPORATION  
41391 Kalmia Street, Suite 200  
Murrieta, CA 92562

**Prepared by:**

RK ENGINEERING GROUP, INC.  
4000 Westerly Place, Suite 280  
Newport Beach, CA 92660

**Bryan Estrada, AICP, PTP**

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## **1.0 Introduction**

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The purpose of this air quality and greenhouse gas (GHG) impact study is to evaluate whether the estimated criteria air pollutant and greenhouse gas emissions generated from the construction and operation of the proposed Palomar Crossing (project) would cause significant impacts to air resources. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the California Air Resources Board (CARB) and the South Coast Air Quality Management District (SCAQMD) recommendations for quantification of emissions and evaluation of potential impacts.

### **1.1 Site Location**

The project site is located at the northeast corner of Highway 74 and Palomar Road in the City of Menifee, County of Riverside, as indicated in Exhibit A. The project site is approximately 43 acres in size and is currently vacant. The project site is located within the Menifee North Specific Plan area and the land use designations for the site include Commercial Retail (CR) 0.20-0.35 FAR, Commercial Office (CO) 0.25-1.0 FAR, and Public Utility Corridor (PUC).

Land uses surrounding the site include single-family detached residential dwelling uses and vacant land zoned for residential and recreational uses to the north, single-family detached residential dwelling units and vacant land zoned for commercial uses to the east, commercial, business park, and public facilities uses to the south, and commercial uses, single-family residential uses, and vacant land zoned for residential use to the west.

The project site is located within the South Coast Air Basin (SCAB), the SCAQMD Hemet/Elsinore General Forecast Area, and the Perris Valley Air Monitoring Area-24.

### **1.2 Project Description**

The project will consist of amending three (3) planning areas within the Menifee North Specific Plan. The specific plan amendment would change the allowable development on the project site from business park and general commercial land uses to high density residential and general commercial land uses.

The total potential development of the project would consist of constructing and operating 637 high-density residential apartment dwelling units and 246,312 square feet of general retail and commercial (shopping center) uses.

The proposed project site is split into three planning areas (PAs), PA 11, PA 12, and PA 13. PA 11 would allow up to 484 high density residential apartment dwelling units. PA 12 would allow up to 153 high density residential apartment dwelling units and approximately 77,347 square feet of general retail and commercial uses. PA 13 would allow approximately 168,965 square feet of general retail and commercial uses.

As this is a plan level analysis, it has been estimated that the commercial portion of the proposed project would include a total of 574,727 square feet of parking areas and approximately fifteen percent of each PA would be landscaped. The site plan used in this analysis is illustrated in Exhibit B.

The proposed project land uses are shown in Table 1.

**Table 1  
Land Use Summary**

Land Use	Quantity	Metric <sup>1</sup>
High Density Residential (Apartment)	637	DU
General Retail and Commercial (Shopping Center)	246.312	TSF
Commercial Parking Area	574.727	TSF
Landscaping (PA11, PA 12, & PA13)	6.5	AC

<sup>1</sup> DU = Dwelling Unit  
 TSF = Square Feet  
 AC = Acre

Construction of the project is estimated to begin in approximately one year with the project expected to be operational in 2023. Therefore, construction has been modeled as beginning in early 2019 and being completed by 2023. Construction activities are expected to consist of site preparation, grading, building construction, paving, and architectural coating.

### **1.3 Sensitive Receptors**

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24-hours or longer, such as residences, hospitals, and schools (etc), as described in the Localized Significance Threshold Methodology (SCAQMD 2008a, page 3-2).

The nearest existing sensitive receptors are the existing single-family detached residential dwelling units located adjacent to the eastern property line of the site, existing single-family detached residential dwelling units located approximately 150 feet (46 meters) northeast of the site (across Palomar Road), and existing single-family detached residential dwelling units located approximately 300 feet north of the site. Potential future sensitive receptors include properties zoned for residential land uses that may be located adjacent to the north and approximately 50 feet (15 meters) west of the project site.

#### 1.4 Summary of Analysis Results

Table 2 provides a summary of the CEQA air quality impact analysis results.

**Table 2  
CEQA Air Quality Impact Criteria**

Air Quality Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Conflict with, or obstruct implementation of, the applicable air quality plan?	X			
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	X			
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	X			
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	

Table 3 provides a summary of the CEQA GHG impact criteria analysis results.

**Table 3  
CEQA GHG Impact Criteria**

GHG Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Result in the generation of greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?		X		
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases?		X		

**1.5 Construction and Operational Mitigations Measures (MM)**

The following mitigation measures are recommended for the project:

The project applicant shall require recycling programs that reduces waste to landfills by a minimum 75 percent per AB 341.

Construction Mitigation Measures:

**MM-1.** Architectural coatings applied to project buildings are to be limited to 10 grams per liter VOC and traffic paints shall be limited to 100g/L VOC content.

Operational Mitigation Measures:

**MM-2.** The project applicant shall require that high-efficiency lighting be installed that is at least 30% more efficient than standard lighting.

**MM-3.** The project applicant shall provide sidewalks within the project boundary and connecting off-site.

- MM-4.** The project applicant shall require that all faucets, toilets and showers installed in the proposed structures utilize low-flow fixtures that would reduce indoor water demand by 20% per CalGreen Standards.
- MM-5.** The project applicant shall require that a water-efficient irrigation system be installed that conforms to the requirements of City codes.
- MM-6.** The project applicant shall require recycling programs that reduces waste to landfills by a minimum 75 percent per AB 341.
- MM-7.** The project applicant shall require that ENERGY STAR-compliant appliances are installed on-site.
- MM-8.** The project applicant shall plant at least 130 new trees on-site.

#### **1.6 Recommended Project Design Features (DF)**

- DF-1.** Construction equipment shall be maintained in proper tune.
- DF-2.** Gasoline or electricity-powered equipment shall be utilized instead of diesel equipment whenever possible.
- DF-3.** The use of heavy construction equipment shall be suspended during first stage smog alerts.
- DF-4.** All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five minutes or longer.
- DF-5.** "Clean diesel" equipment shall be used when modified engines (catalyst equipped or newer Moyer Program retrofit) are available at a reasonable cost.
- DF-6.** The project must follow SCAQMD rules and requirements with regards to fugitive dust control, which include but are not limited to the following:
- i. All active construction areas shall be watered two (2) times daily.
  - ii. All haul trucks shall be covered or shall maintain at least two (2) feet of freeboard.

- iii. All unpaved parking or staging areas shall be paved or watered a minimum of two (2) times daily.
- iv. Speed on unpaved roads shall be reduced to less than 15 mph.
- v. Any visible dirt deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
- vi. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
- vii. All operations on any unpaved surface shall be suspended if winds exceed 25 mph.

**DF-7.** Carpooling shall be encouraged for construction workers.

**DF-8.** Any dirt hauled off-site shall be wet down or covered.

**DF-9.** Access points shall be washed or swept daily.

**DF-10.** Construction sites shall be sandbagged for erosion control.

**DF-11.** The project shall comply with current California Title 24 standards.

## **2.0 Air Quality Setting**

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The Federal Clean Air Act (§ 7602) defines an air pollution as any agent or combination of such agents, including any physical, chemical, biological, or radioactive substance which is emitted into or otherwise enters the ambient air. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution. Air pollution can cause disease, allergies and death. It affects soil, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate. It can also cause damage to and deterioration of property, present hazards to transportation, and negatively impact the economy.

This section provides background information on criteria air pollutants, the applicable federal, state and local regulations concerning air pollution, and the existing physical setting of the project within the context of local air quality.

### **2.1 Description of Air Pollutants**

The following section describes the air pollutants of concern related to the project. Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. The following descriptions of criteria air pollutants have been provided by the SCAQMD.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, and competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs in the body. The ambient air quality standard for carbon monoxide is intended to protect persons whose medical condition already compromises their circulatory system's ability to deliver oxygen. These medical conditions include certain heart ailments, chronic lung diseases, and anemia. Persons with these conditions have reduced exercise capacity even when exposed to relatively low levels of CO. Fetuses are at risk because their blood has an even greater affinity to bind with CO. Smokers are also at risk from ambient CO levels because smoking increases the background level of CO in their blood. The South Coast basin is has recently achieved attainment status for carbon monoxide by both USEPA and CARB.

- **Nitrogen Dioxide (NO<sub>2</sub>)** is a byproduct of fuel combustion. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts quickly to form NO<sub>2</sub>, creating the mixture of NO and NO<sub>2</sub> commonly called NO<sub>x</sub>. NO<sub>2</sub> acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO<sub>2</sub> is only potentially irritating. There is some indication of a relationship between NO<sub>2</sub> and chronic pulmonary fibrosis. Some increase in bronchitis in young children has also been observed at concentrations below 0.3 parts per million (ppm). NO<sub>2</sub> absorbs blue light which results in a brownish red cast to the atmosphere and reduced visibility. Although NO<sub>2</sub> concentrations have not exceeded national standards since 1991 and the state hourly standard since 1993, NO<sub>x</sub> emissions remain of concern because of their contribution to the formation of O<sub>3</sub> and particulate matter.
- **Ozone (O<sub>3</sub>)** is one of a number of substances called photochemical oxidants that are formed when volatile organic compounds (VOC) and NO<sub>x</sub> react in the presence of ultraviolet sunlight. O<sub>3</sub> concentrations in the South Coast basin are typically among the highest in the nation, and the damaging effects of photochemical smog, which is a popular name for a number of oxidants in combination, are generally related to the concentrations of O<sub>3</sub>. Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the subgroups most susceptible to O<sub>3</sub> effects. Short-term exposures (lasting for a few hours) to O<sub>3</sub> at levels typically observed in southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. In recent years, a correlation between elevated ambient O<sub>3</sub> levels and increases in daily hospital admission rates, as well as mortality, has also been reported. The South Coast Air Basin is designated by the USEPA as an extreme non-attainment area for ozone. Although O<sub>3</sub> concentrations have declined substantially since the early 1990s, the South Coast basin continues to have peak O<sub>3</sub> levels that exceed both state and federal standards.
- **Fine Particulate Matter (PM<sub>10</sub>)** consists of extremely small suspended particles or droplets 10 microns or smaller in diameter that can lodge in the lungs, contributing to respiratory problems. PM<sub>10</sub> arises from such sources as re-entrained road dust, diesel soot, combustion products, tire and brake abrasion, construction operations, and fires. It is also formed in the atmosphere from NO<sub>x</sub> and SO<sub>2</sub> reactions with ammonia. PM<sub>10</sub> scatters light and significantly reduces visibility. Inhalable particulates pose a serious health hazard, alone or in combination with other pollutants. More

than half of the smallest particles inhaled will be deposited in the lungs and can cause permanent lung damage. Inhalable particulates can also have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance. The South Coast basin has recently achieved federal attainment status for PM<sub>10</sub>, but is non-attainment based on state requirements.

- **Ultra-Fine Particulate Matter (PM<sub>2.5</sub>)** is defined as particulate matter with a diameter less than 2.5 microns and is a subset of PM<sub>10</sub>. PM<sub>2.5</sub> consists mostly of products from the reaction of NO<sub>x</sub> and SO<sub>2</sub> with ammonia, secondary organics, finer dust particles, and the combustion of fuels, including diesel soot. PM<sub>2.5</sub> can cause exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease, declines in pulmonary function growth in children, and increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in PM<sub>2.5</sub> levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma. The South Coast basin is designated as non-attainment for PM<sub>2.5</sub> by both federal and state standards.
- **Sulfur dioxide (SO<sub>2</sub>)** is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children. Individuals with asthma may experience constriction of airways with exposure to SO<sub>2</sub>. Though SO<sub>2</sub> concentrations have been reduced to levels well below state and federal standards, further reductions in SO<sub>2</sub> emissions are needed because SO<sub>2</sub> is a precursor to sulfate and PM<sub>10</sub>. The South Coast basin is considered a SO<sub>2</sub> attainment area by USEPA and CARB.
- **Lead (Pb)** concentrations once exceeded the state and federal air quality standards by a wide margin, but have not exceeded state or federal air quality standards at any regular monitoring station since 1982. Though special monitoring sites immediately downwind of lead sources recorded localized violations of the state standard in 1994, no violations have been recorded since. Consequently, the South Coast basin is designated as an attainment area for lead by both the USEPA and CARB. This report does not analyze lead emissions from the project, as it is not expected to emit lead in any significant measurable quantity.
- **Volatile Organic Compounds (VOC)**, although not actually a criteria air pollutant, VOCs are regulated by the SCAQMD because they cause chemical reactions which contribute to the formation of ozone. VOCs are also transformed into organic

aerosols in the atmosphere, contributing to higher PM<sub>10</sub> and lower visibility levels. Sources of VOCs include combustion engines, and evaporative emissions associated with fuel, paints and solvents, asphalt paving, and the use of household consumer products such as aerosols. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOC. Some hydrocarbon components classified as VOC emissions are hazardous air pollutants. Benzene, for example, is a hydrocarbon component of VOC emissions that is known to be a human carcinogen. The term reactive organic gases (ROG) are often used interchangeably with VOC.

- **Toxic Air Contaminants (TACs)** are defined as air pollutants which may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, and for which there is no concentration that does not present some risk. This contrasts with the criteria pollutants, in that there is no threshold level for TAC exposure below which adverse health impacts are not expected to occur. The majority of the estimated health risk from TACs can be attributed to a relatively few compounds, the most common being diesel particulate matter (DPM). In addition to DPM, benzene and 1,3-butadiene are also significant contributors to overall ambient public health risk in California.

## **2.2 Federal and State Ambient Air Quality Standards**

The Federal Clean Air Act, which was last amended in 1990, requires the EPA to set National Ambient Air Quality Standards (NAAQS) for criteria pollutants considered harmful to public health and the environment. The State of California has also established additional and more stringent California Ambient Air Quality Standards (CAAQS) in addition to the seven criteria pollutants designated by the federal government.

AAQS are designed to protect the health and welfare of the populace with a reasonable margin of safety. The standards are divided into two categories, primary standards and secondary standards. Primary standards are implemented to provide protection for the “sensitive” populations such as those with asthma, or the children and elderly. Secondary standards are to provide protection against visible pollution as well as damage to the surrounding environment, including animals, crops, and buildings.

Table 4 shows the Federal and State Ambient Air Quality Standards.

**Table 4  
Federal and State Ambient Air Quality Standards (AAQS)<sup>1</sup>**

Air Pollutant	Averaging Time	Federal Standard (NAAQS) <sup>2</sup>	California Standard (CAAQS) <sup>2</sup>
Ozone	1 Hour	--	0.09 ppm
	8 Hour	0.070 ppm <sup>4</sup>	0.070 ppm
Carbon Monoxide (CO)	1 Hour	35 ppm	20 ppm
	8 Hour	9 ppm	9 ppm
Nitrogen Dioxide (NO <sub>2</sub> )	1 Hour	0.100 ppm	0.18 ppm
	Annual	0.053 ppm	0.030 ppm
Sulfur Dioxide (SO <sub>2</sub> )	1 Hour	0.075 ppm	0.25 ppm
	3 Hour	0.5 ppm <sup>3</sup>	--
	24 Hour	--	0.04 ppm
Particulate Matter (PM <sub>10</sub> )	24 Hour	150 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
	Mean	--	20 µg/m <sup>3</sup>
Particulate Matter (PM <sub>2.5</sub> )	24 Hour	35 µg/m <sup>3</sup>	--
	Annual	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>
Lead <sup>4</sup>	30-day	--	1.5 µg/m
	Quarter	1.5 µg/m	--
	3-month average	0.15 µg/m	--
Visibility reducing particles	8 Hour	--	0.23/km extinction coefficient. (10-mile visibility standard)
Sulfates	24 Hour	--	25 µg/m
Vinyl chloride <sup>4</sup>	24 Hour	--	0.01 ppm
Hydrogen sulfide	24 Hour	--	0.03 ppm

<sup>1</sup> Source: USEPA and California Air Resources Board (CARB).

<sup>2</sup> ppm = parts per million of air, by volume; µg/m<sup>3</sup> = micrograms per cubic meter; Annual = Annual Arithmetic Mean; 30-day = 30-day average; Quarter = Calendar quarter.

<sup>3</sup> Secondary standard

<sup>4</sup> The CARB 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.

Several pollutants listed in Table 4 are not addressed in this analysis. Lead is not included because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

In addition to setting out primary and secondary AAQS, the State has established a set of episode criteria for O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, and PM<sub>10</sub>. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health, as required in the California Air Pollution Emergency Plan and Title 40 of the U.S. Code of Federal Regulations. Health effects are progressively more severe as pollutant levels increases from Stage One to Stage Three. An alert level is that concentration of pollutants at which initial stage control actions are to begin. An alert will be declared when any one of the pollutant concentrations can be expected to remain at these levels for 12 or more hours or to increase or, in the case of oxidants, the situation is likely to recur within the next 24 hours, unless control actions are taken.

Pollutant alert levels:

- O<sub>3</sub>: 392 micrograms per cubic meter (μg/m<sup>3</sup>) (0.20 parts per million [ppm]), 1-hour average
- CO: 17 milligrams per cubic meter (mg/m<sup>3</sup>) (15 ppm), 8-hour average
- NO<sub>2</sub>: 1,130 μg/m<sup>3</sup> (0.6 ppm) 1-hour average; 282 μg/m<sup>3</sup> (0.15 ppm) 24-hour average

### **2.3 Attainment Status**

The Clean Air Act requires states to prepare a State Implementation Plan (SIP) to ensure air quality meets the NAAQS. The California Air Resources Board (CARB) provides designations of attainment for air basins where AAQS are either met or exceeded. If the AAQS are met, the area is designated as being in “attainment”, if the air pollutant concentrations exceed the AAQS, than the area is designated as being “nonattainment”. If there is inadequate or inconclusive data to make a definitive attainment designation, the area is considered “unclassified.”

National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different

definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM<sub>2.5</sub> standard is met if the three-year average of the annual average PM<sub>2.5</sub> concentration is less than or equal to the standard.

When a state submits a request to the EPA to re-designate a nonattainment area to attainment, the Clean Air Act (CAA) section 175A(a) requires that the state (or states, if the area is a multi-state area) submit a maintenance plan ensuring the area can maintain the air quality standard for which the area is to be re-designated for at least 10 years following the effective date of re-designation. Table 5 lists the attainment status for the criteria pollutants in the South Coast Air Basin (SCAB).

**Table 5  
South Coast Air Basin Attainment Status<sup>1</sup>**

<b>Pollutant</b>	<b>State Status</b>	<b>National Status</b>
Ozone	Nonattainment	Nonattainment (Extreme)
Carbon monoxide	Attainment	Attainment (Maintenance)
Nitrogen dioxide (annual)	Attainment	Attainment (Maintenance)
Nitrogen dioxide (1-hour)	Attainment	Attainment
Total	Attainment	Attainment
PM <sub>10</sub>	Nonattainment	Attainment
PM <sub>2.5</sub>	Nonattainment	Nonattainment
Lead	Attainment	Nonattainment (Partial) <sup>2</sup>

<sup>1</sup> Source: California Air Resources Board. <http://www.arb.ca.gov/desig/adm/adm.htm>

<sup>2</sup> Partial Nonattainment designation – Los Angeles County portion of Basin only.

## **2.4 South Coast Air Quality Management District (SCAQMD)**

The agency responsible for air pollution control for the South Coast Air Basin (SCAB) is the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the SCAB. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and

implementing the Air Quality Management Plan (AQMP) for the SCAB. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air SCAB where one or more ambient air quality standards are exceeded.

Every three (3) years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The latest version is the 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air. While air quality has dramatically improved over the years, the SCAB still exceeds federal public health standards for both ozone and particulate matter (PM) and experiences some of the worst air pollution in the nation. The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time.

The most significant air quality challenge in the SCAB is to reduce nitrogen oxide (NO<sub>x</sub>) emissions sufficiently to meet the upcoming ozone standard deadlines. Based on the inventory and modeling results, 522 tons per day (tpd) of total SCAB NO<sub>x</sub> 2012 emissions are projected to drop to 255 tpd and 214 tpd in the 8-hour ozone attainment years of 2023 and 2031 respectively, due to continued implementation of already adopted regulatory actions ("baseline emissions"). The analysis suggests that total SCAB emissions of NO<sub>x</sub> must be reduced to approximately 141 tpd in 2023 and 96 tpd in 2031 to attain the 8-hour ozone standards. This represents an additional 45 percent reduction in NO<sub>x</sub> in 2023, and an additional 55 percent NO<sub>x</sub> reduction beyond 2031 levels.

The SCAQMD establishes a program of rules and regulations to obtain attainment of the state and federal standards in conjunction with the AQMP. Several of the rules and regulations that may be applicable to this project include, but are not limited to, the following:

**SCAQMD Rule 402** prohibits a person from discharging 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.

**SCAQMD Rule 403** governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

**SCAQMD Rule 445** restricts wood burning devices from being installed into any new development and is intended to reduce the emissions of particulate matter for wood burning devices.

**SCAQMD Rule 1113** governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of project must comply with Rule 1113.

**SCAQMD Rule 1143** governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

**SCAQMD Rule 1186** limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

**SCAQMD Rule 1303** governs the permitting of re-located or new major emission sources, requiring Best Available Control Measures and setting significance limits for PM10 among other pollutants.

**SCAQMD Rule 2202** On-Road Motor Vehicle Mitigation Options, is to provide employers with a menu of options to reduce mobile source emissions generated from employee commutes, to comply with federal and state Clean Air Act requirements, Health & Safety Code Section 40458, and Section 182(d)(1)(B) of the federal Clean Air Act. It applies to any employer who employs 250 or more employees on a full or part-time basis at a worksite for a consecutive six-month period calculated as a monthly average.

## **2.5 South Coast Air Basin**

The project is located within the South Coast Air SCAB (SCAB). To the west of the SCAB is the Pacific Ocean. To the north and east are the San Gabriel, San Bernardino, and San Jacinto mountains, while the southern limit of the SCAB is the San Diego County line. The SCAB consists of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County.

The local dominant wind blows predominantly from the south-southwest with relatively low velocities. The annual average annual wind speed is about 10 miles per hour. Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion limit the vertical dispersion of air pollutants throughout the SCAB.

The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the SCAB, ranging from the low to middle 60s (°F). With more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal regions and Los Angeles metropolitan area are transported inland until reaching the mountains, where the combination of mountains and temperature inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas of the SCAB. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows.

Temperature inversions are an important feature that limits the vertical depth through which pollution can be mixed. During the summer, coastal areas are characterized by a sharp discontinuity between the cool marine air at the surface and the warm, sinking air aloft within the high-pressure cell over the ocean to the west. This marine/subsidence inversion allows for good local mixing, but acts like a giant lid over the SCAB. The air

remains stagnant, as the average wind speed in downtown Los Angeles becomes less than five mph.

A second type of inversion forms on clear winter nights when cold air off the mountains sinks to the valley floor while the air aloft over the valley remains warm. This forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants such as those from automobile exhaust near their source. They lead to air pollution “hotspots” in heavily developed coastal areas of the SCAB, although onshore breezes often push the pollutants along canyons into the inland valleys. Summers are often periods of hazy visibility and occasionally unhealthy air, while winter air quality impacts tend to be highly localized and can consist of elevated levels of nitrogen dioxide and fine particulate matter.

## 2.6 Local Climate and Meteorology

The weather station closest to the project site is a National Weather Service Cooperative weather station located at SUN CITY STATION (ID: 048655). Climatological data from the National Weather Service at this station is summarized in Table 6.

**Table 6  
Meteorological Summary<sup>1</sup>**

Month	Temperature (°F)			Mean Precipitation (inches)
	Mean	Mean Max.	Mean Min.	
January	51.8	68.5	35.1	2.24
February	53.0	68.9	37.1	3.29
March	56.3	72.1	40.5	1.65
April	61.3	78.9	43.7	0.90
May	67.4	85.1	49.7	0.32
June	73.1	92.4	53.8	0.04
July	78.9	99.5	58.4	0.04
August	79.7	100.3	59.2	0.22
September	76.1	94.8	57.5	0.10
October	67.2	85.4	48.9	0.42
November	57.8	75.9	39.7	0.59
December	51.4	68.7	34.0	1.30
<b>Annual</b>	<b>64.6</b>	<b>82.6</b>	<b>46.5</b>	<b>11.11</b>

<sup>1</sup> Source: Western Regional Climate Center 2016. Averages derived from measurements recorded between 1981 and 2010 at Sun City Station No. 048655.

## 2.7 Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin provided in the Final 2016 Air Quality Management Plan, prepared by SCAQMD, March 2017, indicate that collectively, mobile sources account for 60 percent of the VOC, 90 percent of the NO<sub>x</sub> emissions, 95 percent of the CO emissions and 34 percent of directly emitted PM<sub>2.5</sub>, with another 13 percent of PM<sub>2.5</sub> from road dust.

The SCAQMD has divided the SCAB into fourteen general forecasting areas and thirty six Source Receptor Areas (SRA) for monitoring and reporting local air quality. The SCAQMD provides daily reports of the current air quality conditions in each general forecast area and SRA. The monitoring areas provide a general representation of the local meteorological, terrain, and air quality conditions within the SCAB.

The project is located within the Hemet/Elsinore general forecasting area and Perris Valley SRA-24 locations. SCAQMD operates the Perris air monitoring station (Perris Station) at 237 ½ N. D Street, Perris, approximately 4.71 miles northwest of the project site. Since not all the monitoring stations monitor for all pollutants, the next nearest stations, Lake Elsinore-W Flint Street (Lake Elsinore Station), located approximately 10.66 miles southwest of the site at 506 W. Flint Street, Lake Elsinore, and Riverside-Rubidoux (Riverside Station), located at 5888 Mission Boulevard, Rubidoux, were used to complete the air pollutants concentration profiles.

O<sub>3</sub> and PM<sub>10</sub> are monitored at the Perris Station. The Elsinore station is referenced for CO and NO<sub>2</sub>. The Riverside Station was referenced for PM<sub>2.5</sub>. These pollutant levels were used to comprise a “background” for the project location and existing local air quality.

Table 7 summarizes the published air quality monitoring data from 2015 through 2017, which is the most recent 3-year period available. The data shows that during the past few years, the project area has exceeded ozone and Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>).

**Table 7  
Local Air Quality<sup>1</sup>**

Air Pollutant Location	Averaging Time	Item	2015	2016	2017
Carbon Monoxide from Lake Elsinore	8 Hour	Max 8 Hour (ppm)	0.099	0.094	0.098
		Days > State Standard (9 ppm)	35	45	56

**Table 7  
Local Air Quality<sup>1</sup>**

Air Pollutant Location	Averaging Time	Item	2015	2016	2017
<b>Station</b>		Days > National Standard (9 ppm)	31	44	54
<b>Ozone from Perris Station</b>	1 Hour	Max 1-Hour (ppm)	0.124	0.131	0.120
		Days > State Standard (0.09 ppm)	25	23	33
	8 Hour	Max 8 Hour (ppm)	0.103	0.099	0.106
		Days > State Standard (0.07 ppm)	50	56	86
		Days > National Standard (0.075 ppm) <sup>1</sup>	31	30	52
		Days > National Standard (0.070 ppm)	49	55	80
<b>Coarse Particles (PM10) from Perris Station</b>	24 Hour	Max 24-Hour ( $\mu\text{g}/\text{m}^3$ )	188.0	76.0	75.4
		Days > State Standard ( $50 \mu\text{g}/\text{m}^3$ )	4	*	*
		Days > National Standard ( $150 \mu\text{g}/\text{m}^3$ )	1	0	0
	Annual	Annual Average ( $\mu\text{g}/\text{m}^3$ )	33.1	32.2	32.6
		Exceeded > State Standard ( $20 \mu\text{g}/\text{m}^3$ )	YES	YES	YES
<b>Fine Particulates (PM2.5) from Riverside Station</b>	24 Hour	Max 24-Hour ( $\mu\text{g}/\text{m}^3$ )	61.1	60.8	50.3
		Days > National Standard ( $35 \mu\text{g}/\text{m}^3$ )	9	5	7
	Annual	Annual Average ( $\mu\text{g}/\text{m}^3$ )	11.8	12.5	12.2
		Exceeded > State Standard ( $12 \mu\text{g}/\text{m}^3$ )	NO	YES	YES
		Exceeded > National Standard ( $15 \mu\text{g}/\text{m}^3$ )	NO	NO	NO
<b>Nitrogen Dioxide from Elsinore Station</b>	1 Hour	Max 1-Hour (ppm)	0.0472	0.0513	0.049
		Days > State Standard (0.18 ppm)	0	0	0
	Annual	Annual Average (ppm)	0.008	0.008	0.008
		Exceeded > State Standard (0.030 ppm)	NO	NO	NO
		Exceeded > National Standard (0.053 ppm)	NO	NO	NO

Source: ARB website [www.arb.ca.gov/adam/welcome.html](http://www.arb.ca.gov/adam/welcome.html)

$\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

ARB = California Air Resource Board

ppm = part per million

<sup>1</sup> = 2008 National Standards

\* means there was insufficient data available to determine the value

## **3.0 Global Climate Change Setting**

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Global climate change is the change in the average weather of the earth that is measured by such things as alterations in temperature, wind patterns, storms, and precipitation. Current data shows that the current period of warming is occurring more rapidly than past geological events. The average global surface temperature has increased approximately 1.4° Fahrenheit since the early 20<sup>th</sup> Century. 1.4° Fahrenheit may seem like a small change, but it's an unusual event in Earth's recent history, and small changes in temperature correspond to enormous changes in the environment.

The planet's climate record, preserved in tree rings, ice cores, and coral reefs, shows that the global average temperature has been stable over long periods of time. For example, at the end of the last ice age, when the Northeast United States was covered by more than 3,000 feet of ice, average global temperatures were only 5° to 9° Fahrenheit cooler than today. The Intergovernmental Panel on Climate Change (IPCC), which includes more than 1,300 scientists from the United States and other countries, forecasts a temperature rise of 2.5° to 10° Fahrenheit over the next century. Therefore, significant changes to the environment are expected in the near future.

The consequences of global climate change include more frequent and severe weather, worsening air pollution by increasing ground level ozone, higher rates of plant and animal extinction, more acidic and oxygen depleted oceans, strain on food and water resources, and threats to densely populated coastal and low lying areas from sea level rise.

The impacts of climate change are already visible in the Southwest United States. In California, the consequences of climate change include;

- A rise in sea levels resulting in displacement of costal businesses and residencies
- A reduction in the quality and supply of water from the Sierra snowpack
- Increased risk of large wildfires
- Exacerbation of air quality problems
- Reductions in the quality and quantity of agricultural products
- An increase temperature and extreme weather events
- A decrease in the health and productivity of California's forests

### **3.1 Greenhouse Gases**

Most scientists agree the main cause of the current global warming trend is anthropogenic (human-induced) augmentation of the greenhouse effect. The greenhouse effect refers to

the way gases in the earth's atmosphere trap and re-emits long wave infrared radiation, acting like a blanket insulating the earth. Activities such as fossil fuel combustion, industrial processes, agriculture, and waste decomposition have elevated the concentration of greenhouse gases in the atmosphere beyond the level of naturally occurring concentrations.

GHGs comprise less than 0.1 percent of the total atmospheric composition, yet they play an essential role in influencing climate. Greenhouse gases include naturally occurring compounds such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), water vapor (H<sub>2</sub>O), and nitrous oxide (N<sub>2</sub>O), while others are synthetic. Man-made GHGs include the chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs), as well as sulfur hexafluoride (SF<sub>6</sub>). Different GHGs have different effects on the Earth's warming. GHGs differ from each other in their ability to absorb energy (their "radiative efficiency") and how long they stay in the atmosphere, also known as the "lifetime".

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO<sub>2</sub>. The larger the GWP, the more that a given gas warms the Earth compared to CO<sub>2</sub> over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases, and allows policymakers to compare emissions reduction opportunities across sectors and gases.

Table 8 lists the 100-year GWP of GHGs from the Intergovernmental Panel on Climate Change (IPCC) fourth assessment report (AR4).

**Table 8**  
**Global Warming Potential of Greenhouse Gases<sup>1, 2</sup>**

Gas Name	Formula	Lifetime (years)	GWP
Carbon Dioxide	CO <sub>2</sub>		1
Methane	CH <sub>4</sub>	12	25
Nitrous Oxide	N <sub>2</sub> O	114	298
Sulphur Hexafluoride	SF <sub>6</sub>	3200	22,800
Nitrogen Trifluoride	NF <sub>3</sub>	740	17,200
Hexafluoroethane (PFC-116)	C <sub>2</sub> F <sub>6</sub>	10,000	12,200
Octafluoropropane (PFC-218)	C <sub>3</sub> F <sub>8</sub>	2,600	8,830
Octafluorocyclobutane (PFC-318)	C <sub>4</sub> F <sub>8</sub>	3,200	10,300
Tetrafluoromethane (PFC-14)	CF <sub>4</sub>	50,000	7,390
Hydrofluorocarbon 125	HFC-125	29	3,500
Hydrofluorocarbon 134a	HFC-134a	14	1,430
Hydrofluorocarbon 143a	HFC-143a	52	4,470
Hydrofluorocarbon 152a	HFC-152a	1	124
Hydrofluorocarbon 227ea	HFC-227ea	34	3,220
Hydrofluorocarbon 23	HFC-23	270	14,800
Hydrofluorocarbon 236fa	HFC-236fa	240	9,810
Hydrofluorocarbon 245fa	HFC-245fa	8	1,030
Hydrofluorocarbon 32	HFC-32	5	675
Hydrofluorocarbon 365mfc	HFC-365mfc	9	794
Hydrofluorocarbon 43-10mee	HFC-43-10mee	16	1,640

<sup>1</sup> Source: IPCC Fourth Assessment Report (AR4)

<sup>2</sup> GWPs are used to convert GHG emission values to "carbon dioxide equivalent" (CO<sub>2</sub>e) units

### **3.2 GHG Regulatory Setting - International**

**Intergovernmental Panel on Climate Change.** In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

**United Nations.** The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change. The 2014 UN Climate Change Conference in Lima Peru provided a unique opportunity to engage all countries to assess how developed countries are implementing actions to reduce emissions.

**Kyoto Protocol.** The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008 – 2012 (UNFCCC 1997). On December 8, 2012, the Doha Amendment to the Kyoto Protocol was adopted. The amendment includes: New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 2013 – 2020, a revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period, and Amendments to several articles of the Kyoto Protocol, which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period.

**The Paris Agreement.** The Paris agreement is the first comprehensive global climate agreement to be ratified by the United States, United Nations, China, and India; the largest producers of greenhouse gas emissions in the world. The agreement was negotiated by a total of 195 nations, and entered into force on November 4, 2016. The central aim is to strengthen the global response to the threat of climate change by keeping the global temperature rise this century well below 2 degrees Celsius compared to pre-industrial levels, and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. Currently 122 parties have ratified the agreement. The

Trump administration has recently indicated the United States federal government will no longer participate in the Paris agreement.

### **3.3 GHG Regulatory Setting – National**

**Greenhouse Gas Endangerment.** On December 2, 2009, the EPA announced that GHGs threaten the public health and welfare of the American people. The EPA also states that GHG emissions from on-road vehicles contribute to that threat. The decision was based on *Massachusetts v. EPA* (Supreme Court Case 05-1120) which argued that GHGs are air pollutants covered by the Clean Air Act and that the EPA has authority to regulate those emissions.

**Clean Vehicles.** Congress first passed the Corporate Average Fuel Economy (CAFE) law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The second phase of the national program would involve proposing new fuel economy and greenhouse gas standards for model years 2017 – 2025 by September 1, 2011.

On October 25, 2010, the EPA and the U.S. Department of Transportation proposed the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of heavy-duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively, if accounting for air conditioning

leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

**Mandatory Reporting of Greenhouse Gases.** On January 1, 2010, the EPA started requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

**Climate Adaption Plan.** The EPA Plan identifies priority actions the Agency will take to incorporate considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions. The Plan reflects input received from States, Tribes and municipal and county officials during development, as well as comments received during a formal Tribal consultation process and a 60 day public comment period during the Winter of 2013.

EPA is also releasing final Climate Change Adaptation Implementation Plans from its National Environmental Program Offices and all 10 Regional Offices. The Implementation Plans, which also reflect responses to public comment, provide more detail on how EPA Programs and Regions will carry out the work called for in the agency wide Plan in partnership with states, tribes, and local governments.

### 3.4 GHG Regulatory Setting – State of California

**Table 9  
California Climate Change Legislation<sup>1</sup>**

Date	Legislation	Description
July 26, 2017	Assembly Bill 617 (Christina Garcia, Chapter 136, Statutes of 2017)	<b>Companion to Cap-and-Trade.</b> Extension Establishes a groundbreaking program to measure and reduce air pollution from mobile and stationary sources at the neighborhood level in the communities most impacted by air pollutants. Requires the Air Resources Board to work closely with local air districts and communities to establish neighborhood air quality monitoring networks and to develop and implement plans to reduce emissions. The focus on community-based air monitoring and emission reductions will provide a national model for enhanced community protection.

**Table 9  
California Climate Change Legislation<sup>1</sup>**

Date	Legislation	Description
July 25, 2017	Assembly Bill 398 (Eduardo Garcia, Chapter 135, Statutes of 2017)	<b>Cap-and-Trade Extension.</b> Extends and improves the Cap and Trade Program, which will enable the state to meet its 2030 emission reduction goals in the most cost-effective manner. Furthermore, extending the Cap and Trade Program will provide billions of dollars in auction proceeds to invest in communities.
September 19, 2016	Senate Bill 1383 (Lara, Chapter 395, Statutes of 2016)	<b>Short-lived Climate Pollutants</b> Establishes statewide reduction targets for short-lived climate pollutants.
September 8, 2016	Assembly Bill 197 (Eduardo Garcia, Chapter 250, Statutes of 2016)	<b>Greenhouse gas regulations</b> Prioritizes direct emission reductions from large stationary sources and mobile sources.
September 8, 2016	Senate Bill 32 (Pavley, Chapter 249, Statutes of 2016)	<b>Greenhouse Gas emission reduction target for 2030</b> Establishes a statewide greenhouse gas (GHG) emission reduction target of 40 percent below 1990 levels by 2030.
October 7, 2015	Senate Bill 350 (De León, Chapter 547, Statutes of 2015)	<b>Clean Energy and Pollution Reduction Act of 2015</b> Establishes targets to increase retail sales of renewable electricity to 50 percent by 2030 and double the energy efficiency savings in electricity and natural gas end uses by 2030.
September 21, 2014	Senate Bill 605 (Lara, Chapter 523, Statutes of 2014)	<b>Short-lived climate pollutants</b> Requires the State Air Resources Board to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants by January 1, 2016.
September 21, 2014	Senate Bill 1275 (De León, Chapter 530, Statutes of 2014)	<b>Charge Ahead California Initiative</b> Establishes a state goal of 1 million zero-emission and near-zero-emission vehicles in service by 2020. Amends the enhanced fleet modernization program to provide a mobility option. Establishes the Charge Ahead California Initiative requiring planning and reporting on vehicle incentive programs, and increasing access to and benefits from zero-emission vehicles for disadvantaged, low-income, and moderate-income communities and consumers.

**Table 9  
California Climate Change Legislation<sup>1</sup>**

Date	Legislation	Description
September 21, 2014	Senate Bill 1204 (Lara, Chapter 524, Statutes of 2014)	<p><b>California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program</b></p> <p>Creates the California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program funded by the Greenhouse Gas Reduction Fund for development, demonstration, precommercial pilot, and early commercial deployment of zero- and near-zero emission truck, bus, and off-road vehicle and equipment technologies, with priority given to projects benefiting disadvantaged communities.</p>
September 28, 2013	Assembly Bill 8 (Perea, Chapter 401, Statutes of 2013)	<p><b>Alternative fuel and vehicle technologies: funding programs</b></p> <p>Extends until January 1, 2024, extra fees on vehicle registrations, boat registrations, and tire sales in order to fund the AB 118, Carl Moyer, and AB 923 programs that support the production, distribution, and sale of alternative fuels and vehicle technologies and air emissions reduction efforts. The bill suspends until 2024 ARB's regulation requiring gasoline refiners to provide hydrogen fueling stations and appropriates up to \$220 million, of AB 118 money to create a hydrogen fueling infrastructure in the state.</p>
September 28, 2013	Assembly Bill 1092 (Levine, Chapter 410, Statutes of 2013)	<p><b>Building standards: electric vehicle charging infrastructure</b></p> <p>Requires the Building Standards Commission to adopt mandatory building standards for the installation of future electric vehicle charging infrastructure for parking spaces in multifamily dwellings and nonresidential development.</p>
September 30, 2012	Senate Bill 535 (De León, Chapter 830, Statutes of 2012)	<p><b>Greenhouse Gas Reduction Fund and Disadvantaged Communities</b></p> <p>Requires the California Environmental Protection Agency to identify disadvantaged communities; requires that 25% of all funds allocated pursuant to an investment plan for the use of moneys collected through a cap-and-trade program be allocated to projects that benefit disadvantaged communities and 10 those 25% be use within disadvantaged communities; and requires the Department of Finance to include a description of how these requirements are fulfilled in an annual report.</p>
September 30, 2012	Assembly Bill 1532 (J. Perez, Chapter 807, Statutes of 2012)	<p><b>Greenhouse Gas Reduction Fund in the Budget</b></p> <p>Requires the Dept. of Finance to develop and submit to the Legislature an investment plan every 3 years for the use of the Reduction Fund; requires revenue collected pursuant to a market-based compliance mechanism to be appropriated in the Annual Budget Act; requires the dept. to report annually to the Legislature on the status of projects funded; and specifies that findings issued by the Governor related to "linkage" as part of a market-base compliance are not subject to judicial review.</p>

**Table 9  
California Climate Change Legislation<sup>1</sup>**

Date	Legislation	Description
April 12, 2011	Senate Bill X1-2 (Simitian, Chapter 1, Statutes of 2011)	Governor Edmund G. Brown, Jr. signed Senate Bill X1-2 into law to codify the ambitious 33 percent by 2020 goal. SBX1-2 directs California Public Utilities Commission's Renewable Energy Resources Program to increase the amount of electricity generated from eligible renewable energy resources per year to an amount that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2013, 25% by December 31, 2016 and 33% by December 31, 2020. The new RPS goals applies to all electricity retailers in the state including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. This new RPS preempts the California Air Resources Boards' 33 percent Renewable Electricity Standard.
September 29, 2011	Assembly Bill 1504 (Skinner, Chapter 534, Statutes of 2010)	Forest resources and carbon sequestration. Bill requires Department of Forestry and Fire Protection and Air Resources Board to assess the capacity of its forest and rangeland regulations to meet or exceed the state's greenhouse goals, pursuant to AB 32.
September 30, 2008	Senate Bill 375 (Steinberg, Chapter 728, Statutes of 2008)	Sustainable Communities & Climate Protection Act of 2008 requires Air Resources Board to develop regional greenhouse gas emission reduction targets for passenger vehicles. ARB is to establish targets for 2020 and 2035 for each region covered by one of the State's 18 metropolitan planning organizations.
October 14, 2007	Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007)	<b>Alternative Fuels and Vehicles Technologies</b> The bill would create the Alternative and Renewable Fuel and Vehicle Technology Program, to be administered by the Energy Commission, to provide funding to public projects to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies.
August 24, 2007	Senate Bill 97 (Dutton, Chapter 187, Statutes of 2007)	Directs Governor's Office of Planning and Research to develop CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions."
July 18. 2006	Assembly Bill 1803 (Committee on Budget, Chapter 77, Statutes of 2006)	Greenhouse gas inventory transferred to Air Resources Board from the Energy Commission.
August 21, 2006	Senate Bill 1 (Murray, Chapter 132, Statutes of 2006)	California's Million Solar Roofs plan is enhanced by PUC and CEC's adoption of the California Solar Initiative. SB1 directs PUC and CEC to expand this program to more customers, and requiring the state's municipal utilities to create their own solar rebate programs. This bill would require beginning January 1, 2011, a seller of new homes to offer the option of a solar energy system to all customers negotiating to purchase a new home constructed on land meeting certain criteria and to disclose certain information.

**Table 9**  
**California Climate Change Legislation<sup>1</sup>**

Date	Legislation	Description
September 26, 2006	Senate Bill 107 (Simitian, Chapter 464, Statutes of 2006)	SB 107 directs California Public Utilities Commission's Renewable Energy Resources Program to increase the amount of renewable electricity (Renewable Portfolio Standard) generated per year, from 17% to an amount that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2010.
September 27, 2006	Assembly Bill 32 (Núñez, Chapter 488, Statutes of 2006)	California Global Warming Solutions Act of 2006. This bill would require Air Resources Board (ARB) to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020. ARB shall adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with this program. AB 32 directs Climate Action Team established by the Governor to coordinate the efforts set forth under Executive Order S-3-05 to continue its role in coordinating overall climate policy.
September 12, 2002	Senate Bill 1078 (Sher, Chapter 516, Statutes of 2002)	This bill establishes the California Renewables Portfolio Standard Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission to meet 20% of their renewable power by December 31, 2017 for the purposes of increasing the diversity, reliability, public health and environmental benefits of the energy mix.
September 7, 2002	Senate Bill 812 (Sher, Chapter 423, Statutes of 2002)	This bill added forest management practices to the California Climate Action Registry members' reportable emissions actions and directed the Registry to adopt forestry procedures and protocols to monitor, estimate, calculate, report and certify carbon stores and carbon dioxide emissions that resulted from the conservation-based management of forests in California.
July 22, 2002	Assembly Bill 1493 (Pavley, Chapter 200, Statutes of 2002)	The "Pavley" bill requires the registry, in consultation with the State Air Resources Board, to adopt procedures and protocols for the reporting and certification of reductions in greenhouse gas emissions from mobile sources for use by the state board in granting the emission reduction credits. This bill requires the state board to develop and adopt, by January 1, 2005, regulations that achieve the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO <sub>2</sub> and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request.

**Table 9  
California Climate Change Legislation<sup>1</sup>**

Date	Legislation	Description
October 11, 2001	Senate Bill 527 (Sher, Chapter 769, Statutes of 2001)	This bill revises the functions and duties of the California Climate Action Registry and requires the Registry, in coordination with CEC to adopt third-party verification metrics, developing GHG emissions protocols and qualifying third-party organizations to provide technical assistance and certification of emissions baselines and inventories. SB 527 amended SB 1771 to emphasize third-party verification.
September 30, 2000	Senate Bill 1771 (Sher, Chapter 1018, Statutes of 2000)	SB 1771 establishes the creation of the non-profit organization, the California Climate Action Registry and specifies functions and responsibilities to develop a process to identify and qualify third-party organizations approved to provide technical assistance and advice in monitoring greenhouse gas emissions, and setting greenhouse gas (GHG) emissions baselines in coordination with CEC. Also, the bill directs the Registry to enable participating entities to voluntarily record their annual GHG emissions inventories. Also, SB 1771 directs CEC to update the state's greenhouse gas inventory from an existing 1998 report and continuing to update it every five years.
September 28, 1988	Assembly Bill 4420 (Sher, Chapter 1506, Statutes of 1988)	The California Energy Commission (CEC) was statutorily directed to prepare and maintain the inventory of greenhouse gas emissions (GHG) and to study the effects of GHGs and the climate change impacts on the state's energy supply and demand, economy, environment, agriculture, and water supplies. The study also required recommendations for avoiding, reducing, and addressing related impacts - and required the CEC to coordinate the study and any research with federal, state, academic, and industry research projects.

<sup>1</sup> Source: <http://www.climatechange.ca.gov/state/legislation.html>

**Table 10**  
**California Climate Change Executive Orders<sup>1</sup>**

<b>Date</b>	<b>Governor's Executive Order</b>	<b>Description</b>
July 17, 2015	Executive Order # B-32-15	EO-B-32-15 directs State agencies to develop an integrated freight action plan by July 2016. Among other things, the plan calls for targets for transportation efficiency and a transition to near-zero-emission technologies.
April 29, 2015	Executive Order # B-30-15	EO-B-30-15 sets a greenhouse gas (GHG) emissions target for 2030 at 40 percent below 1990 levels.
April 25, 2012	Executive Order # B-18-12	EO-B-18-12 calls for significant reductions in state agencies' energy purchases and GHG emissions. The Executive Order included a Green Building Action Plan, which provided additional details and specific requirements for the implementation of the Executive Order
March 23, 2012	Executive Order # B-16-12	EO-B-16-12 orders State agencies to facilitate the rapid commercialization of zero-emission vehicles (ZEVs). The Executive Order sets a target for the number of 1.5 million ZEVs in California by 2025. Also the Executive Order sets as a target for 2050 a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels.
November 14, 2008	Executive Order # S-13-08	EO-S-13-08 directs state agencies to plan for sea level rise and climate impacts through coordination of the state Climate Adaptation Strategy.
January 18, 2007	Executive Order # S-01-07	EO-S-01-07 establishes the 2020 target and Low Carbon Fuel Standard. The EO directs the Secretary of Cal/EPA as coordinator of 2020 target activities and requires the Secretary to report back to the Governor and Legislature biannually on progress toward meeting the 2020 target.
October 18, 2006	Executive Order # S-20-06	EO-S-20-06 establishes responsibilities and roles of the Secretary of Cal/EPA and state agencies in climate change.
April 25, 2006	Executive Order # S-06-06	EO-S-06-06 directs Secretary of Cal/EPA to participate in the Bio-Energy Interagency Working Group and addresses biofuels and bioenergy from renewable resources.
June 1, 2005	Executive Order # S-03-05	EO-S-3-05 establishes greenhouse gas emission reduction targets, creates the Climate Action Team and directs the Secretary of Cal/EPA to coordinate efforts with meeting the targets with the heads of other state agencies. The EO requires the Secretary to report back to the Governor and Legislature biannually on progress toward meeting the GHG targets, GHG impacts to California, Mitigation and Adaptation Plans.
December 14, 2004	Executive Order # S-20-04	EO-S-20-04 (Green Buildings) directs state agencies to reduce energy use in state owned buildings by 20% by 2015 and increase energy efficiency.

<sup>1</sup> Source: [http://www.climatechange.ca.gov/state/executive\\_orders.html](http://www.climatechange.ca.gov/state/executive_orders.html)

### 3.5 GHG Emissions Inventory

**National.** The US EPA has previously prepared an annual report called the Inventory of U.S. Greenhouse Gas Emissions and Sinks (Inventory). This report tracks total annual U.S. emissions and removals by source, economic sector, and greenhouse gas going back to 1990. The EPA is currently undergoing changes that reflect the agency's new direction under President Donald Trump and Administrator Scott Pruitt, and as of this time, GHG inventory is not currently being reported.

- The most recent national Inventory report, from year 2014, shows that national net GHG emissions (sources and sinks) were **6,108.0 MMTCO<sub>2</sub>e**. (MMTCO<sub>2</sub>e = million metric tons of CO<sub>2</sub> equivalents)

**State of California.** The CARB is responsible for maintaining and updating California's annual GHG Inventory per California Global Warming Solutions Act (AB 32) and H&SC §39607.4. The GHG inventory is a critical piece in demonstrating the state's progress in achieving the statewide GHG target. An updated emission inventory is published annually to include additional years and improved estimation methods.

- The most recent state inventory data, from year 2015, shows that the total GHG emissions in the State of California for year 2015 were **440.4 MMTCO<sub>2</sub>e**.

**Southern California Association of Governments.** The Southern California Association of Governments (SCAG) Regional Greenhouse Gas Emissions Inventory and Reference Case Projections, 1990-2035, was completed in May 2012 for SCAG by the Center for Climate Strategies. The final report presents an assessment of the region's anthropogenic GHG emissions and sinks from 1990 to 2035.

- The most recent regional estimates from SCAG are from year 2008. In 2008, the total GHG emissions in the SCAG region were estimated to be **230.7 MMTCO<sub>2</sub>e**.

## **4.0 Modeling Parameters and Assumptions**

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The California Emissions Estimator Model Version 2016.3.2 (CalEEMod) was used to calculate criteria air pollutants and GHG emissions from the construction and operation of the project.

CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify criteria air pollutant and GHG emissions. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from off-site energy generation, solid waste disposal, vegetation planting and/or removal, and water use. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts.

### **4.1 Construction Assumptions**

Construction of the project is assumed to begin no sooner than early 2019 and last until 2023. Construction activity will consist of site preparation, grading, building construction, paving, and architectural coating. This analysis assumes the earthworks for the site will balance.

The CalEEMod default construction equipment list is based on survey data and the size of the site. The parameters used to estimate construction emissions, such as the worker and vendor trips and trip lengths, utilize the CalEEMod defaults. The construction equipment list is shown in Table 11.

The quantity of fugitive dust estimated by CalEEMod is based on the number of equipment used during grading. CalEEMod estimates the worst case fugitive dust impacts will occur during the grading phase. The total disturbance footprint would be 5 acres per 8 hour day with all equipment in use. The disturbance rate is based on the SCAQMD Fact Sheet for Applying CalEEMod to Localized Significance Thresholds.

The project will be required to follow SCAQMD Rule 403 regarding fugitive dust; which requires dust generating activities to follow best available control measures to reduce particulate emissions.

**Table 11  
Construction Equipment Assumptions <sup>1</sup>**

Phase	Equipment	Amount	Hours Per Day	Soil Disturbance Rate (Acres/8hr-Day) <sup>2</sup>	Equipment Daily Disturbance Footprint (Acres)	Total Phase Daily Disturbance Footprint (Acres)
<b>Site Preparation</b>	Rubber Tired Dozers	3	8	0.5	1.5	3.5
	Tractors/Loaders/Backhoes	4	8	0.5	2.0	
<b>Grading</b>	Excavator	2	8	0.5	1.0	5.0
	Grader	1	8	0.5	0.5	
	Rubber Tired Dozers	1	8	0.5	0.5	
	Scrapers	2	8	1.0	2.0	
	Tractors/Loaders/Backhoes	2	8	0.5	1.0	
<b>Building Construction</b>	Cranes	1	7	0.0	0.0	1.3
	Forklifts	3	8	0.0	0.0	
	Generator Sets	1	8	0.0	0.0	
	Tractors/Loaders/Backhoes	3	7	0.5	1.3	
	Welders	1	8	0.0	0.0	
<b>Paving</b>	Pavers	2	8	0.0	0.0	0.0
	Paving Equipment	2	8	0.0	0.0	
	Rollers	2	8	0.0	0.0	
<b>Architectural Coating</b>	Air Compressors	1	6	0.0	0.0	0.0

<sup>1</sup> CalEEMod Defaults

<sup>2</sup> Soil disturbance rate is based on the SCAQMD Fact Sheet for Applying CalEEMod to Localized Significance Thresholds.

#### **4.2 Localized Construction Analysis Modeling Parameters**

CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. This report identifies the following parameters in the project design or applicable mitigation measures in order to compare CalEEMod reported emissions against the localized significance threshold lookup tables:

- 1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.

- 2) The maximum number of acres disturbed on the peak day.
- 3) Any emission control devices added onto off-road equipment.
- 4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

### 4.3 Operational Assumptions

Operational emissions occur over the life of the Project and are considered “long-term” sources of emissions. Operational emissions include both direct and indirect sources. This section briefly describes the operational sources of emissions analyzed for the project.

#### 4.3.1 Mobile Source Emissions

Mobile source emissions are the largest source of long-term air pollutants from the operation of the project. Mobile sources are direct sources of project emissions that are primarily attributed to tailpipe exhaust and road dust (tire, brake, clutch, and road surface wear) from motor vehicle usage.

Estimates of motor vehicle emissions require information on four parameters: trip generation, trip length, vehicle/fleet mix, and emission factors (quantity of emission for each mile traveled or time spent idling by each vehicle).

The trip generation rates for this project are based on the assumptions in the Palomar Crossing Traffic Impact Study, prepared by RK Engineering Group, Inc. (March 2018). Trip summary information is shown in Table 12.

**Table 12**  
**Trip Generation Rates**

Land Use	ITE Code	Amount	Units <sup>1</sup>	Daily Trip Rate <sup>2,3</sup>
High Density Residential (Apartment) <sup>3</sup>	221	637	DU	7.06
General Retail and Commercial (Shopping Center) <sup>4</sup>	820	246.312	TSF	27.82

<sup>1</sup> DU = Dwelling Unit

TSF = Thousand Square Feet

<sup>2</sup> Trip rates based on the Palomar Crossing Traffic Impact Study, prepared by RK Engineering Group, Inc. (March 2018).

<sup>3</sup> Residential trip rates include 3 percent internal capture reduction identified in the Palomar

Crossing Traffic Impact Study.

<sup>4</sup> Commercial trip rates include 2 percent internal capture and 25 percent pass-by reduction identified in the Palomar Crossing Traffic Impact Study.

CalEEMod defaults for trip types, trip lengths, and diverted/pass-by trips are shown in Table 13. Table 13 also shows the diverted/pass-by trips. The pass-by trips were adjusted to zero in the model as the trip generation rate from the Traffic Impact Analysis already incorporates pass-by trips. The operational vehicle mix is shown in Table 14 and is based on CalEEMod defaults of regional averages. The Emission Factors (EMFAC) 2014 model is used to estimate the mobile source emissions are embedded in the CalEEMod emissions model. No adjustments have been made to default emission factors.

**Table 13  
Operational Vehicle Trip Assumptions<sup>1</sup>**

Land Use	Non-Residential Trips <sup>2</sup>								
	Trip Length (miles)			Trip Percent (%)			Trip Type (%) <sup>3</sup>		
	C-C	C-W	C-NW	C-C	C-W	C-NW	Primary	Divert	Pass-By
High Density Residential (Apartment)	5.9	14.7	8.7	19.2	40.2	40.6	87	13	0
General Retail and Commercial (Shopping Center)	8.4	16.6	6.9	64.7	16.3	19	60	41	0

<sup>1</sup> CalEEMod Defaults unless otherwise noted.

<sup>2</sup> Non-Residential Trips:

C-C = commercial-customer; C-W = commercial-work; C-NW = commercial-non-work

<sup>3</sup> Pass-by trips changed to 0 and split between primary and divert. Pass-by accounted for in revised trip generation rate.

**Table 14  
Vehicle Mix for Trips<sup>1</sup>**

<b>Vehicle Class</b>	<b>Vehicle Mix (%)</b>
Light Duty Automobile (LDA)	54.86%
Light Duty Truck (LDT1)	3.63%
Light Duty Truck (LDT2)	18.69%
Medium Duty Truck (MDV)	11.25%
Light Heavy Truck (LHD1)	1.43%
Light Heavy Truck (LHD2)	0.48%
Medium Heavy Truck (MHD)	1.76%
Heavy Heavy Truck (HHD)	7.01%
Other Bus (OBUS)	0.14%
Urban Bus (UBUS)	0.11%
Motorcycle (MCY)	0.45%
School Bus (SBUS)	0.09%
Motor Home (MH)	0.09%
<b>Total</b>	<b>100.0%</b>

<sup>1</sup> CalEEMod defaults

### 4.3.2 Energy Source Emissions

Energy usage includes both direct and indirect sources of emissions. Direct sources of emissions include on-site natural gas usage (non-hearth) for heating, while indirect emissions include electricity generated by offsite power plants. Natural gas use is measured in units of a thousand British Thermal Units (kBtu) per size metric for each land use subtype and electricity use is measured in kilowatt hours (kWh) per size metric for each land use subtype.

CalEEMod categorizes building electricity and natural gas use into uses that are subject to Title 24 standards and those that are not. Lighting electricity usage is also calculated as a separate category in CalEEMod. For electricity, Title 24 uses include the major building envelope systems covered by Part 6 (California Energy Code) of Title 24 such as space heating, space cooling, water heating, and ventilation. Non-Title 24 uses include all other end uses, such as appliances, electronics, and other miscellaneous plug-in uses. Because some lighting is not considered as part of the building envelope energy budget, and since a separate mitigation measure is applicable to this end use, CalEEMod makes lighting a separate category.

For natural gas, uses are likewise categorized as Title 24 or Non-Title 24. Title 24 uses including building heating and hot water end uses. Non-Title 24 natural gas uses include cooking and appliances (including pool/spa heaters).

The baseline values are based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

#### **4.3.3 Area Source Emissions**

Area source emissions are direct sources of emissions that fall under four categories; hearths, consumer products, architectural coatings, and landscaping equipment. Per SCAQMD rule 445, no wood burning devices are allowed in developments; therefore no wood burning fireplaces or woodstoves are included in this project. Consumer products include various solvents used in non-industrial applications which emit ROG's during their product use. These typically include cleaning supplies, kitchen aerosols, cosmetics and toiletries.

#### **4.3.4 Other Sources of Operational Emissions**

**Water.** Greenhouse gas emissions are generated from the upstream energy required to supply and treat the water used on the project site. Indirect emissions from water usage are counted as part of the project's overall impact. The estimated water usage for the project is reported in Table 15 and recommendations to reduce water usage are discussed in Section 6.0.

**Waste.** CalEEMod calculates the indirect GHG emissions associated with waste that is disposed of at a landfill. The program uses annual waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for individual land uses. The program quantifies the GHG emissions associated with the decomposition of the waste which generates methane based on the total amount of degradable organic carbon. The estimated waste generation by the project is reported in Table 15 and recommendations to reduce waste generation in landfills are discussed in Section 6.0

**Table 15  
Operational Water Usage and Waste Generation**

Land Use	Water Usage (gallons/year)			Waste Generation (tons/year) <sup>1</sup>
	Indoor	Outdoor	Total	
High Density Residential (Apartment)	41,503,114	26,165,007	67,668,212	293.02
General Retail and Commercial (Shopping Center)	18,244,803	11,182,298	29,427,101	258.63
Total	59,747,917	40,935,165	100,683,082	563.1

<sup>1</sup> CalEEMod default estimates.

## 5.0 Significance Thresholds

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### 5.1 Air Quality Regional Significance Thresholds

The SCAQMD has established air quality emissions thresholds for criteria air pollutants for the purposes of determining whether a project may have a significant effect on the environment per Section 15002(g) of the Guidelines for implementing CEQA. By complying with the thresholds of significance, the project would be in compliance with the SCAQMD Air Quality Management Plan (AQMP) and the federal and state air quality standards.

Table 16 lists the air quality significance thresholds for the six criteria air pollutants analyzed in this report. Lead is not included as part of this analysis as the project is not expected to emit lead in any significant measurable quantity.

**Table 16**  
**SCAQMD Regional Significance Thresholds<sup>1</sup>**

<b>Pollutant</b>	<b>Construction (lbs/day)</b>	<b>Operation (lbs/day)</b>
<b>NO<sub>x</sub></b>	100	55
<b>VOC</b>	75	55
<b>PM<sub>10</sub></b>	150	150
<b>PM<sub>2.5</sub></b>	55	55
<b>SO<sub>x</sub></b>	150	150
<b>CO</b>	550	550

<sup>1</sup> Source: SCAQMD CEQA Handbook, 1993

### 5.2 Air Quality Localized Significance Thresholds

The SCAQMD has published the "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (SCAQMD 2011b) and air quality emissions were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold (LST) Look-up Tables.

Table 17 lists the Localized Significance Thresholds (LST) used to determine whether a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard.

LSTs are developed based on the ambient concentrations of four applicable air pollutants for source receptor area (SRA) 24 – Perris Valley. The nearest existing sensitive receptors are located adjacent to the eastern property line. Potential future residential sensitive receptors may be located adjacent to the northern property line. According to LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25 meter thresholds. Therefore, the sensitive receptor distance from the site boundary is assumed to be 25 meters and the daily disturbance area is calculated to be 5 acres.

**Table 17**  
**SCAQMD Localized Significance Thresholds<sup>1</sup> (LST)**

<b>Pollutant</b>	<b>Construction (lbs/day)</b>	<b>Operational (lbs/day)</b>
<b>NO<sub>x</sub></b>	270	270
<b>CO</b>	1,577	1,577
<b>PM<sub>10</sub></b>	13	4
<b>PM<sub>2.5</sub></b>	8	2

<sup>1</sup> Source: SCAQMD Mass Rate Localized Significance Thresholds for 5 acre site in SRA-24 at 25 meters

### **5.3 Microscale CO Concentration Standards**

The significance of localized CO impacts depends on whether ambient CO levels in the vicinity of the project are above or below federal or state standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of the AAQS. If ambient levels already exceed State or federal standards, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more.

Current CO levels in the SCAB are in attainment of both federal and state standards, and local air quality monitoring data indicates there have not been any localized exceedances of CO over the past three years. Therefore, the project must not contribute to an exceedance of a federal or state ambient air quality standard.

### **5.4 GHG Significance Thresholds**

In the absence of a formal GHG threshold established by the State, the SCAQMD has published the *Interim CEQA Greenhouse Gas (GHG) Significance Thresholds, December 2008* (GHG Significance Thresholds) to assist local agencies with determining the impact of a project for CEQA. SCAQMD's objective in providing the GHG guidelines is to establish a performance standard that will ultimately contribute to reducing GHG emissions below 1990 levels, and thus achieve the requirements of the California Global Warming Solutions

Act (AB 32). The SCAQMD has held several GHG Significance Thresholds Stakeholder Working Group meetings where staff has presented updated recommendations that serve in addendum to the interim document.

The SCAQMD describes a five-tiered approach for determining GHG Significance Thresholds.

- **Tier 1** - If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.
- **Tier 2** - If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project’s geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment based on the following tiers.

- **Tier 3** - Consists of screening values that are intended to capture 90 percent of the GHG emissions from projects. If a project’s emissions are under the screening thresholds, then the project is less than significant. SCAQMD has presented two options that lead agencies could choose for screening values. Option #1 sets the thresholds for residential projects to 3,500 MTCO<sub>2</sub>e/year, commercial projects to 1,400 MTCO<sub>2</sub>e/year), and the mixed use to 3,000 MTCO<sub>2</sub>e/year. Option #2 sets a single numerical threshold for all non-industrial projects of 3,000 MTCO<sub>2</sub>e/year. The current staff recommendation is to use option #2, but allows lead agencies to choose option #1 if they prefer. Regardless of which option a lead agency chooses to follow, it is recommended that the same option is consistently uses for all projects.

Table 18 shows the screening levels described in option #2, which has been used previously in the City of Menifee.

**Table 18**  
**SCAQMD Tier 3 GHG Screening Values**

Land Use	Screening Value
Industrial Projects	10,000 MTCO <sub>2</sub> e/Yr
Residential/Commercial Projects	3,000 MTCO <sub>2</sub> e/Yr

- **Tier 4** - includes three performance standard compliance options to demonstrate the project in significant for GHG emissions.

**Compliance Option 1** consists of achieving a target percentage reduction in emission compared to the business as usual (BAU) methodology. The project proponent would need to incorporate design features into the project and/or implement GHG mitigation measures to demonstrate a 30 percent reduction in GHG emissions below BAU that is consistent with the current applicable goals of AB 32 in the State of the California.

**Compliance Option 2** consists of early compliance with AB 32 through early implementation of CARB’s Scoping Plan Measures. This option is intended for projects in sectors subject to the Scoping Plan Measures.

**Compliance Option 3** consists of establishing efficiency-based performance standards at the plan level (program-level projects such as general plans) and project level. Efficiency standards are based on the amount of GHG emissions (MTCO<sub>2</sub>e/year) per Service Population (SP). SP is defined as the sum of the residential and employment populations provided by a project.

**Table 19**  
**SCAQMD Tier 4 Efficiency Thresholds**

Project Type	Efficiency Thresholds <sup>1</sup>	
	Target Year 2020	Target Year 2035
Plan (Program) Level	6.6 MTCO <sub>2</sub> e/yr/SP	4.1 MTCO <sub>2</sub> e/yr/SP
Project Level	4.8 MTCO <sub>2</sub> e/yr/SP	3.0 MTCO <sub>2</sub> e/yr/SP

- **Tier 5** – involves implementing off-site mitigation or the purchasing of offsets to reduce GHG emissions to less than the proposed screening level. The project proponent would be required to provide offsets for the life of the project, which is defined as 30 years.

By complying with the SCAQMD GHG thresholds of significance, the project is considered to be in compliance with the applicable State GHG legislation.

### **5.5 City of Menifee General Plan**

In addition to the SCAQMD significance thresholds, the project is required to comply with the adopted air quality and GHG goals and policies from the City of Menifee General Plan Open Space and Conservation Element. The City has goals to reduce impacts to air quality

at the local level by minimizing pollution and particulate matter (General Plan Goal OSC-9).  
Policies to meet these goals include:

- OSC-9.1            Meet State and federal clean air standards by minimizing particulate matter emissions from construction activities.
- OSC-9.2            Buffer sensitive land uses, such as residences, schools, care facilities, and recreation areas from major air pollutant emission sources, including freeways, manufacturing, hazardous materials storage, wastewater treatment, and similar uses.
- OSC-9.3            Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.
- OSC-9.4            Support Riverside County Regional Air Quality Task Force, Southern California Association of Government's Regional Transportation Plan/Sustainable Communities Strategy, and SCAQMD's Air Quality Management Plan to reduce air pollution at the regional level.
- OSC-9.5            Comply with the mandatory requirements of Title 24 Part 1 of the California Building Standards Code and Title 24 Part 6 Building and Energy Efficiency Standards.

The City's Open Space and Conservation Element also includes goals to have efficient and environmentally appropriate use and management of energy and mineral resources to ensure their availability for future generations (General Plan Goal OSC-4) as well as an environmentally aware community that is responsive to changing climate conditions and actively seeks to reduce local greenhouse gas emissions (General Plan Goal OSC-10). Policies to meet these goals include:

- OSC-4.1            Apply energy efficiency and conservation practices in land use, transportation demand management, and subdivision and building design.
- OSC-4.2            Evaluate public and private efforts to develop and operate alternative systems of energy production, including solar, wind, and fuel cell.
- OSC-7.2            Encourage water conservation as a means of preserving water resources.

- OSC-7.4 Encourage the use of reclaimed water for the irrigation of parks, golf courses, public landscaped areas, and other feasible applications as service becomes available from the Eastern Municipal Water District.
- OSC-10.1 Align the City's local GHG reduction targets to be consistent with the statewide GHG reduction target of AB 32.
- OSC-10.2 Align the City's long-term GHG reduction goal consistent with the statewide GHG reduction goal of Executive Order S-03-05.
- OSC-10.3 Participate in regional greenhouse gas emission reduction initiatives.
- OSC-10.4 Consider impacts to climate change as a factor in evaluation of policies, strategies, and projects.

## **6.0 Air Quality Impact Analysis**

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Consistent with CEQA and the State CEQA Guidelines, a significant impact related to air quality would occur if the proposed project is determined to:

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

### **6.1 Short Term Air Quality Impacts**

#### **6.1.1 Regional Construction Emissions**

Regional air quality emissions include both on-site and off-site emissions associated with construction of the project. Regional daily emissions of criteria pollutants are compared to the SCAQMD regional thresholds of significance.

As shown in Table 20, regional daily emissions of criteria pollutants are expected to be below the allowable thresholds of significance with recommended mitigation measures. Additionally, the project must follow all standard SCAQMD rules and requirements with regards to fugitive dust control, as described in Section 6.1.3. Compliance with the dust control is considered a standard requirement and included as part of the project's design features, not mitigation.

By incorporating the recommended design features and mitigation of architectural coatings to 10 g/L VOC for buildings and 100 g/L VOC for parking lot striping, the daily regional emissions will be below the SCAQMD thresholds of significance. **Therefore, with incorporation of mitigation, the project's short term construction impact to regional air resources is less than significant.**

CalEEMod daily emissions outputs are provided in Appendix A.

**Table 20  
Regional Construction Emissions**

Maximum Daily Emissions (lbs/day) <sup>1</sup>						
Activity	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Site Preparation	4.43	45.64	22.86	0.04	9.94	6.16
Grading	4.85	54.59	34.27	0.06	5.99	3.66
Building Construction	8.13	52.5	62.37	0.20	13.20	4.6
Paving	1.8	11.16	15.09	0.02	0.74	0.57
Architectural Coating <sup>3</sup>	23.99	1.86	7.95	0.02	2.11	0.63
Overlapping Construction Phases <sup>2</sup>	33.92	65.52	85.41	0.24	16.04	5.79
Maximum <sup>1</sup>	33.92	65.52	85.41	0.24	16.04	6.16
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold (?)	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>1</sup> Maximum daily emissions during summer or winter.

<sup>2</sup> Construction, painting, and paving phases may overlap.

<sup>3</sup> Architectural coating includes mitigation of 10 g/L VOC for buildings and 100 g/L VOC for parking lot striping.

The following recommended mitigation measures are provided to reduce the project's regional VOC emissions:

- MM-1.** Architectural coatings applied to project buildings are to be limited to 10 grams per liter VOC and traffic paints shall be limited to 100g/L VOC content.

### 6.1.2 Localized Construction Emissions

Table 21 illustrates the construction related localized emissions and compares the results to SCAQMD LST thresholds. As shown in Table 21, the emissions will be below the SCAQMD thresholds of significance for localized construction emissions. The project must follow all standard SCAQMD rules and requirements with regards to fugitive dust control, as described in Section 6.1.3. Compliance with the dust control is considered a standard requirement and included as part of the project's design features, not mitigation. **The project's short term construction impact to localized air resources is less than significant.**

**Table 21  
Localized Construction Emissions**

<b>Maximum Daily Emissions (lbs/day)<sup>1</sup></b>				
<b>Activity</b>	<b>NOx</b>	<b>CO</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
On-site Emissions	54.52	33.38	9.73	6.1
SCAQMD Construction Threshold <sup>2</sup>	270	1,577	13	8
Exceeds Threshold (?)	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>1</sup> Maximum daily emissions during summer or winter

<sup>2</sup> Reference LST thresholds are from 2006-2008 SCAQMD Mass rate Localized Significant Thresholds for construction and operation Tables C-1 through C-6 for a disturbance area of 5 acres and at a receptor distance of 25 meters. Source Receptor Area 24 (Perris Valley) Thresholds.

### 6.1.3 Fugitive Dust

The Project is required to comply with regional rules that assist in reducing short-term air pollutant emissions associated with suspended particulate matter, also known as fugitive dust. Fugitive dust emissions are commonly associated with land clearing activities, cut-and-fill grading operations, and exposure of soils to the air and wind. SCAQMD Rule 403 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rules 402 and 403 require implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site.

Applicable suppression techniques are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least two times daily.
- Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Pave or gravel construction access roads at least 100 feet onto the site from the main road and use gravel aprons at truck exits.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Replace ground cover of disturbed areas as quickly possible.
- A fugitive dust control plan should be prepared and submitted to SCAQMD prior to the start of construction.

Localized construction emissions, shown in Section 6.1.2, indicate daily construction emissions, with standard control measures, would be below the applicable thresholds established by the SCAQMD. **The proposed project's short term construction activities would cause less than significant Fugitive Dust impacts.**

#### **6.1.4 Odors**

Heavy-duty equipment in the project area during construction will emit odors; however, the construction activity would cease to occur after individual construction is completed. The project is required to comply with Rule 402 during construction, which 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. No other sources of objectionable odors have been identified for the proposed Project. **Therefore, the project impact from odor emissions is less than significant.**

#### **6.1.5 Naturally Occurring Asbestos**

The proposed Project is located in Riverside County, CA, which is not among the California counties that are found to have serpentine and ultramafic rock in their soils. Therefore, the potential risk for uncovering naturally occurring asbestos (NOA) during project construction is small. However, in the event asbestos is found on the site, the project will be required to comply with the National Emissions Standards for Hazardous Air Pollutants (NESHAP) Asbestos Program. An Asbestos NESHAP Notification Form shall be completed and submitted to the California Air Resources Board (CARB) immediately upon discovery of the contaminant. The project will be required to follow NESHAP standards for emissions control during site renovation, waste transport and waste disposal. A person certified in asbestos removal procedures will be required to supervise on-site activities. By following the required asbestos abatement protocols, **the project impact is less than significant.**

#### **6.1.6 Construction Traffic**

Construction traffic is evaluated with regards to air quality and greenhouse gas related emissions. Construction traffic is expected to be heaviest during the grading phase. CalEEMod estimates emission levels during all phases of construction related to both on-road and off-road mobile sources. As shown in Tables 20 and 21, emission levels

associated with on-site and off-site construction traffic will be below the applicable thresholds set forth by the State of California and the SCAQMD. **The project impact is considered less than significant.**

## 6.2 Long Terms Air Quality Impacts

### 6.2.1 Regional Operational Emissions

Long-term operational air pollutant impacts from the project are shown in Table 22. The project is not expected to exceed any of the allowable daily emissions thresholds for criteria pollutants at the regional level, with the exception of NO<sub>x</sub>. NO<sub>x</sub> emissions are primarily associated with motor vehicle traffic and are expected to exceed the daily regional significance thresholds.

**Table 22**  
**Regional Operational Emissions - Unmitigated**

Maximum Daily Emissions (lbs/day) <sup>1</sup>						
Activity	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Mobile Sources	18.21	108.23	201.12	0.91	68.80	18.73
Energy Sources	0.31	2.65	1.19	0.02	0.21	0.21
Area Sources	22.28	10.12	56.70	0.06	1.06	1.06
<b>Total<sup>1</sup></b>	40.80	121.00	259.00	0.99	70.08	20.00
SCAQMD Threshold <sup>2</sup>	55	55	550	150	150	55
Exceeds Threshold (?)	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>1</sup> Maximum daily emissions during summer or winter.

Table 23 shows the project's opening year operational emissions with all reasonably feasible mitigation measures. While some trip reduction strategies can be imposed on employees, the project cannot reasonably impose mitigation on private customers and their vehicles to the extent that would fully mitigate the impact. Even with the implementation of all reasonable measures, the NO<sub>x</sub> emissions still exceed thresholds. **Thus, project related long-term air quality impacts would be potentially significant and unavoidable.**

**Table 23  
Regional Operational Emissions - Mitigated**

Maximum Daily Emissions (lbs/day) <sup>1</sup>						
Activity	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Mobile Sources	15.33	90.12	108.79	0.47	30.44	8.31
Energy Sources	0.31	2.65	1.19	0.02	0.21	0.21
Area Sources	22.28	10.12	56.70	0.06	1.06	1.06
<b>Total<sup>1</sup></b>	37.92	102.89	166.68	0.55	31.71	9.58
SCAQMD Threshold <sup>2</sup>	55	55	550	150	150	55
Exceeds Threshold (?)	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>1</sup> Maximum daily emissions during summer or winter.

CalEEMod daily emissions outputs are provided in Appendix A.

The following recommended mitigation measures are provided to help reduce project emissions:

- MM-2.** The project applicant shall require that high-efficiency lighting (such as LEDs) be installed that is at least 34% more efficient than standard lighting.
- MM-3.** The project applicant shall provide sidewalks within the project boundary and connecting off-site.
- MM-4.** The project applicant shall require that all faucets, toilets and showers installed in the proposed structures utilize low-flow fixtures that would reduce indoor water demand by 20% per CalGreen Standards.
- MM-5.** The project applicant shall require that a water-efficient irrigation system be installed that conforms to the requirements of City codes.
- MM-6.** The project applicant shall require recycling programs that reduces waste to landfills by a minimum 75 percent per AB 341.
- MM-7.** The project applicant shall require that ENERGY STAR-compliant appliances are installed wherever appliances are needed on-site.

**MM-8.** The project applicant shall plant at least 130 new trees on-site.

### **6.2.2 Localized Operational Emissions**

Project-related air emissions from on-site sources such as architectural coatings, landscaping equipment, on-site usage of natural gas appliances as well as the operation of vehicles on-site may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. The nearest sensitive receptor that may be impacted by the proposed project are the single-family detached residential dwelling units located adjacent to the eastern property line of the site, the single-family detached residential dwelling units located approximately 150 feet (46 meters) northeast of the site (across Palomar Road), and existing single-family detached residential dwelling units located approximately 300 feet north of the site.

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the project includes stationary sources, or attracts mobile sources (such as heavy-duty trucks) that may spend long periods queuing and idling at the site; such as industrial warehouse/transfer facilities. The proposed project is a mixed-use project consisting of residential and commercial uses and does not include such uses. Therefore, due the lack of stationary source emissions, no long-term localized significance threshold analysis is warranted.

**The project will result in less than significant localized operational emissions impacts.**

### **6.3 CO Hot Spot Emissions**

A CO hot spot is a localized concentration of carbon monoxide (CO) that is above the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. At the time of the publishing of the 1993 CEQA Air Quality Handbook, the SCAB was designated nonattainment, and projects were required to perform hot spot analyses to ensure they did not exacerbate an existing problem. Since this time, the SCAB has achieved attainment status and the potential for hot spots caused by vehicular traffic congestion has been greatly reduced. In fact, the SCAQMD AQMP found that peak CO concentrations were primarily the result of unusual meteorological and topographical conditions and not traffic congestion.

Furthermore, in the 2003 SCAQMD AQMP found that, at four of the busiest intersections in Los Angeles, there were no CO hot spots concentrations. The Palomar Crossing Traffic Analysis showed that the project would generate a maximum of 11,352 daily trips. In near term future cumulative conditions, the intersection of Interstate 215 northbound ramps and McCall Boulevard, which is shown to have the highest traffic volume within the traffic analysis study area, would experience approximately 2,138 vehicles during the peak hour. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. It is reasonable to conclude, therefore, that the project would not significantly contribute to the formation of CO Hot Spots in the project vicinity.

**The project impact to CO Hot Spots is less than significant.**

#### **6.4 Air Quality Management Plan Consistency**

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD Air Quality Management Plan (AQMP). Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies.

The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP in 2016 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

#### **6.4.1 Criterion 1 - Increase in the Frequency or Severity of Violations**

Based on the air quality modeling analysis contained in this analysis, the short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. However, this analysis also found that even with incorporation of mitigation, long-term operations impacts will exceed the SCAQMD regional threshold of significance for NO<sub>x</sub>.

Therefore, the proposed project contributes to the exceedance of an air pollutant concentration standard and is found to be inconsistent with the AQMP for the first criterion.

#### **6.4.2 Criterion 2 - Exceed Assumptions in the AQMP?**

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to insure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The 2016-2040 Regional Transportation/Sustainable Communities Strategy, prepared by SCAG, 2016, includes chapters on: the challenges in a changing region, creating a plan for our future, and the road to greater mobility and sustainable growth. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this project, the City of Menifee General Plan Update defines the assumptions that are represented in the AQMP.

As stated previously, the project site is located within the Menifee North Specific Plan area and the land use designations for the site include Commercial Retail (CR) 0.20-0.35 FAR, Commercial Office (CO) 0.25-1.0 FAR, and Public Utility Corridor (PUC). The proposed project includes commercial retail land uses and residential land uses. Residential uses

generate less vehicle trips (generally the main source of project-related emissions) than commercial retail and commercial office uses; and would be considered to be a less intense land use. Therefore, the project would not result in an inconsistency with the land use designation for this site and is found to be consistent with the AQMP for the second criterion.

However, as demonstrated above, the project will not comply with the applicable thresholds of significance for NO<sub>x</sub>, even with the proposed mitigation measures. **Therefore, the project is not consistent with the SCAQMD 2016 AQMP and the impact is considered potentially significant and unavoidable.**

### **6.5 Operational Odors**

Land uses that commonly receive odor complaints include agricultural uses (farming and livestock), chemical plants, composting operations, dairies, fiberglass molding facilities, food processing plants, landfills, refineries, rail yards, and wastewater treatment plants. The proposed project does not contain land uses that would typically be associated with significant odor emissions.

The project will be required to comply with standard building code requirements related to exhaust ventilation, as well as comply with SCAQMD Rule 402. Rule 402 requires that a person may 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. Project related odors are not expected to meet the criteria of being a nuisance. **The project's operation will not result in significant odor issues.**

### **6.6 Health Impacts**

The project is expected to generate significant levels of NO<sub>x</sub> that would persist over the life of the project and exceed the maximum daily emissions limits set by SCAQMD. By exceeding the SCAQMD regional threshold, the impact is considered cumulatively significant and would contribute to ozone formation, a criteria pollutant for which SCAQMD is nonattainment. While the project would not solely result in the exceedance of an AAQS, potential adverse health impacts associated with increased exposure to pollutant concentrations may occur.

NOx includes a group of highly reactive gases known as the oxides of nitrogen, and while all of these gases are harmful to human health and the environment, of the greatest concern is Nitrogen Dioxide (NO<sub>2</sub>). NO<sub>2</sub> is typically used as the indicator for the larger group of NOx.

Breathing air with a high concentration of NO<sub>2</sub> can irritate airways in the human respiratory system. Such exposures over short periods can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms. Longer exposures to elevated concentrations of NO<sub>2</sub> may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO<sub>2</sub>. NOx also reacts with ammonia, moisture, and other compounds to form small particle that can penetrate deeply into sensitive parts of the lungs.<sup>1</sup>

In addition, NOx reacts with volatile organic compounds to form ground-level ozone. Breathing ground-level ozone can result in a number of health effects that are observed in broad segments of the population. Some of these effects include; induction of respiratory symptoms, decrements in lung function, and inflammation of airways. Respiratory symptoms from ozone exposure can include; coughing, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily ozone concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity.<sup>2</sup>

SCAQMD, as noted in the Brief of Amicus Curiae to the Supreme Court of California in the Friant Ranch Case, (April 6, 2015), states that, with regards to analysis of air quality related health impacts, EIRs must generally quantify a project's pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g. premature mortality; hospital admissions).<sup>3</sup> Given the current limitations of quantifying health risks from NOx and Ozone at a residential/commercial project level, as acknowledged by SCAQMD, a quantifiable risk assessment has not been performed.

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<sup>1</sup> EPA. Nitrogen Dioxide (NO<sub>2</sub>) Pollution. <https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects>

<sup>2</sup> EPA. Health Effects of Ozone in the General Population. <https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population>

<sup>3</sup> Judicial Council of California. <https://www.courts.ca.gov/documents/9-s219783-ac-south-coast-air-quality-mgt-dist-041315.pdf>

## 7.0 Greenhouse Gas Impact Analysis

### 7.1 Construction Greenhouse Gas Emissions

Greenhouse gas emissions are estimated for on-site and off-site construction activity using CalEEMod. Table 24 shows the construction greenhouse gas emissions, including equipment and worker vehicle emissions for all phases of construction. Construction emissions are averaged over 30 years and added to the long term operational emissions, pursuant to SCAQMD recommendations.

CalEEMod annual GHG output calculations are provided in Appendix B.

**Table 24**  
**Construction Greenhouse Gas Emissions**

Activity	Emissions (MTCO <sub>2</sub> e) <sup>1</sup>		
	On-site	Off-site	Total
Site Preparation	51.66	2.57	54.23
Grading	210.53	7.13	217.66
Building Construction	863.87	5,257.44	6,121.31
Paving	55.52	3.53	59.05
Architectural Coating	7.03	42.42	49.45
<b>Total</b>	1,188.61	5,313.09	6,501.70
<b>Averaged over 30 years<sup>2</sup></b>	39.62	177.10	216.72

<sup>1</sup> MTCO<sub>2</sub>e=metric tons of carbon dioxide equivalents (includes carbon dioxide, methane, nitrous oxide, and/or hydrofluorocarbons).

<sup>2</sup> The emissions are averaged over 30 years and added to the operational emissions, pursuant to SCAQMD recommendations.

### 7.2 Operational Greenhouse Gas Emissions

Greenhouse gas emissions are estimated for on-site and off-site operational activity using CalEEMod. Greenhouse gas emissions from mobile sources, area sources and energy sources are shown in Table 25. CalEEMod annual GHG output calculations are provided in Appendix B.

**Table 25  
Operational Greenhouse Gas Emissions**

<b>Emission Source</b>	<b>Unmitigated GHG Emissions (MTCO<sub>2</sub>e)<sup>1</sup></b>	<b>Mitigated GHG Emissions (MTCO<sub>2</sub>e)<sup>1</sup></b>
Mobile Source	14,462.97	7,537.05
Energy Source	2,610.97	2,380.04
Area Source	149.50	149.50
Water	462.77	388.66
Waste	277.43	69.36
Construction (30 year average)	216.72	216.72
Sequestration <sup>5</sup>	-4.60	-4.60
<b>Total Annual Emissions</b>	<b>18,175.76</b>	<b>10,736.73</b>
SCAQMD Tier 3 Screening Threshold <sup>2</sup>	3,000	3,000
Exceed Tier 3 Threshold?	Yes	Yes
SCAQMD Tier 4 Compliance Option 1 GHG Reduction Threshold <sup>2</sup>		30%
Reduction Achieved From Mitigation		41%
SCAQMD Tier 4 Compliance Option 3 Efficiency Threshold (Interpolated 2023) <sup>2,3</sup>		4.44 MTCO <sub>2</sub> e/yr/SP
Mitigated Emissions Per Service Population <sup>4</sup>		4.43 MTCO <sub>2</sub> e/yr/SP

<sup>1</sup> MTCO<sub>2</sub>e = metric tons of carbon dioxide equivalents

<sup>2</sup> Per South Coast Air Quality Management District (SCAQMD) Draft Guidance Document - Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008

<sup>3</sup> The SCAQMD Tier 4 Interpolated 2023 Target Service Population Threshold of 4.44 MTCO<sub>2</sub>e/SP/year was interpolated through the use of the SCAQMD Tier 4 2020 and 2035 Target Service Population Threshold values.

<sup>4</sup> Service population based on US Census Estimates for City of Menifee of 3.03 persons/household (3.03 x 637 DUs = 1,930) and the average 1 employee/500 square foot commercial retail (246,312 sf/ 500 = ~493 emp). Total service population is 2,423 resident/employees.

<sup>5</sup> CO<sub>2</sub> sequestration from the design feature of planting of ~130 new trees (92.04/20 year [trees' lifetime]).

The analysis first compares the project's GHG emissions to the SCAQMD's Tier 3 approach, which limits GHG emissions to 3,000 MTCO<sub>2</sub>e. As shown in Table 25, project GHG emissions are expected to exceed 3,000 MTCO<sub>2</sub>e with all reasonably feasible mitigation measures. Therefore, the SCAQMD Tier 4 thresholds are applicable.

The project has been compared to the SCAQMD tier 4 interpolated 2023 target service population threshold of 4.44 MTCO<sub>2</sub>e per specific plan per year.<sup>1</sup> As shown in Table 25, the proposed project will meet the efficiency thresholds established in the Tier 4 requirements with reasonably feasible mitigation. **Thus, with the incorporation of mitigation, the project related long-term GHG impacts would be less than significant.**

The feasible mitigation measures MM-2 through MM-8 are provided to help reduce project GHG emissions.

- MM-2.** The project applicant shall require that high-efficiency lighting (such as LEDs) be installed that is at least 34% more efficient than standard lighting.
- MM-3.** The project applicant shall provide sidewalks within the project boundary and connecting off-site.
- MM-4.** The project applicant shall require that all faucets, toilets and showers installed in the proposed structures utilize low-flow fixtures that would reduce indoor water demand by 20% per CalGreen Standards.
- MM-5.** The project applicant shall require that a water-efficient irrigation system be installed that conforms to the requirements of City codes.
- MM-6.** The project applicant shall require recycling programs that reduces waste to landfills by a minimum 75 percent per AB 341.
- MM-7.** The project applicant shall require that ENERGY STAR-compliant appliances are installed wherever appliances are needed on-site.
- MM-8.** The project applicant shall plant at least 130 new trees on-site.

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<sup>1</sup> The Tier 4 2023 threshold was interpolated from the SCAQMD Tier 4 2020 Target Service Population Threshold of 4.8 MTCO<sub>2</sub>e/yr/SP and the 2035 Target Service Population Threshold of 3.0 MTCO<sub>2</sub>e/yr/SP.

### **7.3 GHG Consistency with Applicable Plans**

The proposed project could have the potential to conflict with applicable plans, policies or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The City of Menifee Open Space and Conservation Element establishes goals to have efficient and environmentally appropriate use and management of energy and mineral resources to ensure their availability for future generations as well as an environmentally aware community that is responsive to changing climate conditions and actively seeks to reduce local greenhouse gas emissions. Policies to meet these goals include:

- Apply energy efficiency and conservation practices in land use, transportation demand management, and subdivision and building design.
- Evaluate public and private efforts to develop and operate alternative systems of energy production, including solar, wind, and fuel cell.
- Encourage water conservation as a means of preserving water resources.
- Encourage the use of reclaimed water for the irrigation of parks, golf courses, public landscaped areas, and other feasible applications as service becomes available from the Eastern Municipal Water District.
- Align the City's local GHG reduction targets to be consistent with the statewide GHG reduction target of AB 32.
- Align the City's long-term GHG reduction goal consistent with the statewide GHG reduction goal of Executive Order S-03-05.
- Participate in regional greenhouse gas emission reduction initiatives.
- Consider impacts to climate change as a factor in evaluation of policies, strategies, and projects.

With the recommended mitigation measures described in Section 7.2, the project would be consistent with the goals and policies of the Menifee General Plan, with regards to GHG.

## *CARB Scoping Plan*

Emission reductions in California alone would not be able to stabilize the concentration of greenhouse gases in the earth's atmosphere. However, California's actions set an example and drive progress towards a reduction in greenhouse gases elsewhere. If other states and countries were to follow California's emission reduction targets, this could avoid medium or higher ranges of global temperature increases. Thus, severe consequences of climate change could also be avoided.

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (California Air Resources Board 2008). The measures in the Scoping Plan have been in place since 2012.

In May 2014, CARB released its *First Update to the Climate Change Scoping Plan* (CARB 2014). This *Update* identifies the next steps for California's leadership on climate change. While California continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California's success to date in reducing its GHG emissions and 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.

In November 2017, CARB release the 2017 Scoping Plan. This Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals, and includes a description of a suite of specific actions to meet the State's 2030 GHG limit. In addition, the 2017 Scoping Plan provides a broader description of the many actions and proposals being explored across the sectors, including the natural resources sector, to achieve the State's mid and long-term climate goals.

Guided by legislative direction, the actions identified in the 2017 Scoping Plan reduce overall GHG emissions in California and deliver policy signals that will continue to drive investment and certainty in a low carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation,

continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State’s largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources.

As the latest, 2017 Scoping Plan builds upon previous versions, Project consistency with applicable strategies of both the 2008 and 2017 Plan are assessed in Table 26a and 26b. As shown in Table 26a and 26b, **the project is consistent with the applicable strategies and would result in a less than significant impact.**

**TABLE 26a**

**Project Consistency with CARB 2008 Scoping Plan Policies and Measures<sup>1</sup>**

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. The project will be compliant with the current Title 24 standards. The project is to include Energy-Star appliances used on site and high-efficiency lighting.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.

**TABLE 26a**

**Project Consistency with CARB 2008 Scoping Plan Policies and Measures<sup>1</sup>**

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California’s new and existing inventory of buildings.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2016 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The project will be subject to these mandatory standards.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	Consistent. CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the project that are required to comply with the measures will comply with the strategy.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The project will be required to comply with City programs, such as City’s recycling and waste reduction program, which comply, with the 50 percent reduction required in AB 939 (75% by 2020 per AB 341).
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. Project is to include the use of low-flow fixtures and water-efficient irrigation systems. The project will comply with all applicable City ordinances and CAL Green requirements.

<sup>1</sup> Source: CARB Scoping Plan (2008)

**TABLE 26b**

**Project Consistency with CARB 2017 Scoping Plan Policies and Measures<sup>1</sup>**

2017 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Implement Mobile Source Strategy: Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Car regulations.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.

**TABLE 26b**

**Project Consistency with CARB 2017 Scoping Plan Policies and Measures<sup>1</sup>**

2017 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Implement Mobile Source Strategy: At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025 and at least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement SB 350 by 2030: Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	Consistent. The project will be compliant with the current Title 24 standards. Further, the project is to include mitigation measures requiring the use of energy efficient appliances and high-efficiency lighting on-site.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	Consistent. The project will be required to comply with City programs, such as City’s recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.

<sup>1</sup> Source: CARB Scoping Plan (2017)

## 8.0 References

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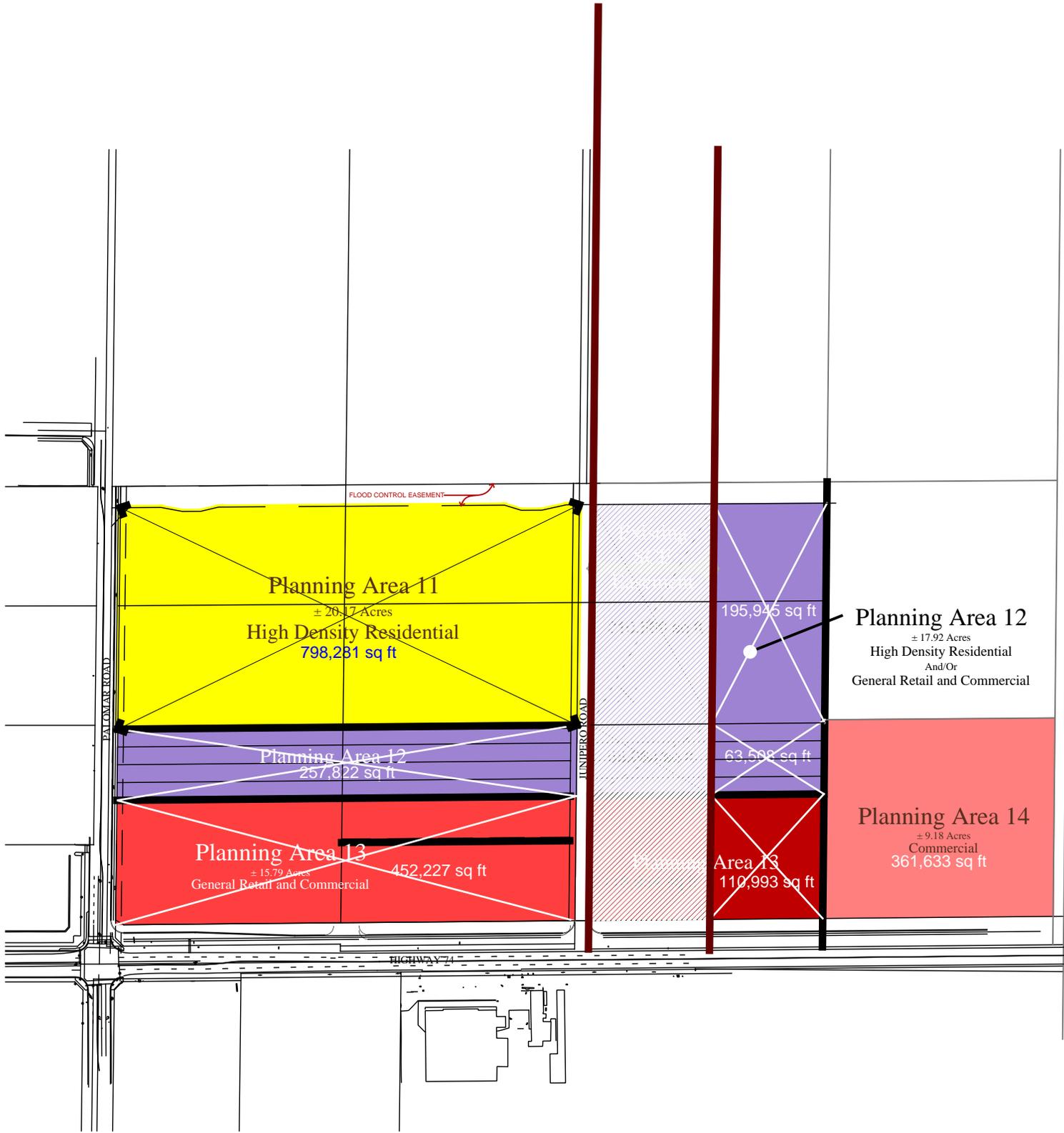
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# Exhibits

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# Exhibit A Location Map





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# Appendices

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## **Appendix A**

Daily Emissions Calculations Output  
(CalEEMod)

Palomar Crossing - Riverside-South Coast County, Summer

**Palomar Crossing**  
**Riverside-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	6.50	Acre	6.50	283,140.00	0
Parking Lot	574.73	1000sqft	13.19	574,727.00	0
Apartments Low Rise	637.00	Dwelling Unit	17.66	637,000.00	1822
Regional Shopping Center	246.31	1000sqft	5.65	246,312.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2023
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

## Palomar Crossing - Riverside-South Coast County, Summer

## Project Characteristics -

Land Use - ~43 acres (includes PA11, PA12, PA13 w/o SCE Easement) w/ 637 apt DU, 246.312 TSF shopping center, 574.727 TSF commercial parking lots, & 15% each PA landscaping (total = ~6.5 ac).

Construction Phase - Project expected to start construction no earlier than April 2019 and be operational by 2023. No site preparation or demolition needed as the site is relatively bare. CalEEMod default timing used.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Grading - Site is ~43 acres and is anticipated to be balanced. Site prep estimated to cover ~1/2 of the site (~21.5ac) for removal of vegetation (very little trees/weeds).

Architectural Coating - SCAQMD Rule 1113 limits architectural coatings to 50 g/L VOC and 100 g/L VOC parking lot striping. Architectural coatings mitigated to 10 g/L VOC buildings.

Vehicle Trips - Per TIA, 7.06 trips/DU for apts (includes 3% internal capture rdxn) & 27.82 trips/TSF for shopping ctr (includes 2% internal capture & 25% pass-by rdxns). Pass-by trips changed to 0 and pass-by trips split btwn primary and divert.

Woodstoves - SCAQMD Rule 445 prohibits the installation of wood burning devices in new developments.

Sequestration - Estimated at at least 20 trees per every acre of landscaping (6.5 ac x 20 = ~130 trees). Some of the trees may be planted in parking lots also.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - ~3.77 miles NE downtown Menifee & ~0.07 miles E RTA Rte 27 stop Hwy 74 at Palomar. Sidewalks on/off-site. 637DU/24.16ac= 26.37DU/ac. 1emp/500sf com retail = 246,312sf/500sf = ~493emp/18.85ac= 26.2emp/ac. LUT-3 mixed residential/commercial.

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - Energy Star appliances to be used on-site. Site to use high-efficiency lighting (such as LEDs) that is at least 30% more efficient than standard.

Water Mitigation - Per Cal Green Standards 20% reduction in indoor water use through use of low flow fixtures. Site to use water-efficient irrigation systems.

Waste Mitigation - AB 341 requires at least 75% of waste be diverted from landfills by 2020.

## Palomar Crossing - Riverside-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	NumberGas	541.45	573.30
tblFireplaces	NumberWood	31.85	0.00
tblGrading	AcresOfGrading	0.00	21.50
tblLandUse	LandUseSquareFeet	574,730.00	574,727.00
tblLandUse	LandUseSquareFeet	246,310.00	246,312.00
tblLandUse	LotAcreage	39.81	17.66
tblSequestration	NumberOfNewTrees	0.00	130.00
tblVehicleTrips	DV_TP	11.00	13.00
tblVehicleTrips	DV_TP	35.00	40.50
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	86.00	87.00
tblVehicleTrips	PR_TP	54.00	59.50
tblVehicleTrips	ST_TR	7.16	7.06
tblVehicleTrips	ST_TR	49.97	27.82
tblVehicleTrips	SU_TR	6.07	7.06
tblVehicleTrips	SU_TR	25.24	27.82
tblVehicleTrips	WD_TR	6.59	7.06
tblVehicleTrips	WD_TR	42.70	27.82
tblWoodstoves	NumberCatalytic	31.85	0.00
tblWoodstoves	NumberNoncatalytic	31.85	0.00

Palomar Crossing - Riverside-South Coast County, Summer

**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					
2019	8.1349	54.5878	62.3696	0.1950	19.0275	2.3916	21.4191	10.0661	2.2003	12.2664	0.0000	19,711.3657	19,711.3657	1.9490	0.0000	19,748.1104
2020	7.3836	47.5087	57.7442	0.1913	11.6320	1.3236	12.9556	3.1211	1.2457	4.3668	0.0000	19,302.6160	19,302.6160	1.3907	0.0000	19,337.3847
2021	6.7396	42.8998	53.8865	0.1874	11.6320	1.0616	12.6936	3.1211	0.9977	4.1187	0.0000	18,918.7775	18,918.7775	1.3308	0.0000	18,952.0464
2022	23.9860	39.5380	50.8099	0.1833	11.6319	0.9035	12.5353	3.1210	0.8494	3.9705	0.0000	18,512.4680	18,512.4680	1.2777	0.0000	18,544.4111
<b>Maximum</b>	<b>23.9860</b>	<b>54.5878</b>	<b>62.3696</b>	<b>0.1950</b>	<b>19.0275</b>	<b>2.3916</b>	<b>21.4191</b>	<b>10.0661</b>	<b>2.2003</b>	<b>12.2664</b>	<b>0.0000</b>	<b>19,711.3657</b>	<b>19,711.3657</b>	<b>1.9490</b>	<b>0.0000</b>	<b>19,748.1104</b>



Palomar Crossing - Riverside-South Coast County, Summer

**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	22.2807	10.1167	56.6963	0.0635		1.0601	1.0601		1.0601	1.0601	0.0000	12,235.2795	12,235.2795	0.3242	0.2226	12,309.7110
Energy	0.3093	2.6518	1.1893	0.0169		0.2137	0.2137		0.2137	0.2137		3,373.9788	3,373.9788	0.0647	0.0619	3,394.0286
Mobile	18.2074	108.2313	201.1183	0.9057	68.3135	0.4852	68.7987	18.2755	0.4522	18.7276		92,563.6622	92,563.6622	3.9932		92,663.4933
<b>Total</b>	<b>40.7974</b>	<b>120.9998</b>	<b>259.0039</b>	<b>0.9861</b>	<b>68.3135</b>	<b>1.7590</b>	<b>70.0725</b>	<b>18.2755</b>	<b>1.7260</b>	<b>20.0015</b>	<b>0.0000</b>	<b>108,172.9205</b>	<b>108,172.9205</b>	<b>4.3821</b>	<b>0.2844</b>	<b>108,367.2329</b>

**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	22.2807	10.1167	56.6963	0.0635		1.0601	1.0601		1.0601	1.0601	0.0000	12,235.2795	12,235.2795	0.3242	0.2226	12,309.7110
Energy	0.3093	2.6518	1.1893	0.0169		0.2137	0.2137		0.2137	0.2137		3,373.9788	3,373.9788	0.0647	0.0619	3,394.0286
Mobile	15.3275	90.1214	108.7945	0.4697	30.1839	0.2485	30.4324	8.0749	0.2313	8.3062		48,184.0164	48,184.0164	2.8390		48,254.9903
<b>Total</b>	<b>37.9175</b>	<b>102.8899</b>	<b>166.6801</b>	<b>0.5501</b>	<b>30.1839</b>	<b>1.5223</b>	<b>31.7062</b>	<b>8.0749</b>	<b>1.5052</b>	<b>9.5801</b>	<b>0.0000</b>	<b>63,793.2747</b>	<b>63,793.2747</b>	<b>3.2278</b>	<b>0.2844</b>	<b>63,958.7300</b>

## Palomar Crossing - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	7.06	14.97	35.65	44.22	55.82	13.46	54.75	55.82	12.80	52.10	0.00	41.03	41.03	26.34	0.00	40.98

### 3.0 Construction Detail

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	5/10/2019	5	30	
2	Grading	Grading	5/11/2019	8/23/2019	5	75	
3	Building Construction	Building Construction	8/24/2019	6/24/2022	5	740	
4	Paving	Paving	6/25/2022	9/9/2022	5	55	
5	Architectural Coating	Architectural Coating	9/10/2022	11/25/2022	5	55	

**Acres of Grading (Site Preparation Phase): 21.5**

**Acres of Grading (Grading Phase): 187.5**

**Acres of Paving: 19.69**

**Residential Indoor: 1,289,925; Residential Outdoor: 429,975; Non-Residential Indoor: 369,468; Non-Residential Outdoor: 123,156; Striped Parking Area: 51,472 (Architectural Coating – sqft)**

#### OffRoad Equipment

Palomar Crossing - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	898.00	249.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	180.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Palomar Crossing - Riverside-South Coast County, Summer

**3.1 Mitigation Measures Construction**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Site Preparation - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.8263	0.0000	18.8263	10.0128	0.0000	10.0128			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
<b>Total</b>	<b>4.3350</b>	<b>45.5727</b>	<b>22.0630</b>	<b>0.0380</b>	<b>18.8263</b>	<b>2.3904</b>	<b>21.2166</b>	<b>10.0128</b>	<b>2.1991</b>	<b>12.2119</b>		<b>3,766.4529</b>	<b>3,766.4529</b>	<b>1.1917</b>		<b>3,796.2445</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.2 Site Preparation - 2019**

**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	0.0991	0.0608	0.7997	2.0600e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		204.7540	204.7540	5.7300e-003		204.8973
<b>Total</b>	<b>0.0991</b>	<b>0.0608</b>	<b>0.7997</b>	<b>2.0600e-003</b>	<b>0.2012</b>	<b>1.2400e-003</b>	<b>0.2024</b>	<b>0.0534</b>	<b>1.1400e-003</b>	<b>0.0545</b>		<b>204.7540</b>	<b>204.7540</b>	<b>5.7300e-003</b>		<b>204.8973</b>

**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					7.3423	0.0000	7.3423	3.9050	0.0000	3.9050			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
<b>Total</b>	<b>4.3350</b>	<b>45.5727</b>	<b>22.0630</b>	<b>0.0380</b>	<b>7.3423</b>	<b>2.3904</b>	<b>9.7326</b>	<b>3.9050</b>	<b>2.1991</b>	<b>6.1041</b>	<b>0.0000</b>	<b>3,766.4529</b>	<b>3,766.4529</b>	<b>1.1917</b>		<b>3,796.2445</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.2 Site Preparation - 2019**

**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	0.0991	0.0608	0.7997	2.0600e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		204.7540	204.7540	5.7300e-003		204.8973
<b>Total</b>	<b>0.0991</b>	<b>0.0608</b>	<b>0.7997</b>	<b>2.0600e-003</b>	<b>0.2012</b>	<b>1.2400e-003</b>	<b>0.2024</b>	<b>0.0534</b>	<b>1.1400e-003</b>	<b>0.0545</b>		<b>204.7540</b>	<b>204.7540</b>	<b>5.7300e-003</b>		<b>204.8973</b>

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
<b>Total</b>	<b>4.7389</b>	<b>54.5202</b>	<b>33.3768</b>	<b>0.0620</b>	<b>8.6733</b>	<b>2.3827</b>	<b>11.0560</b>	<b>3.5965</b>	<b>2.1920</b>	<b>5.7885</b>		<b>6,140.0195</b>	<b>6,140.0195</b>	<b>1.9426</b>		<b>6,188.5854</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.3 Grading - 2019**

**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	0.1101	0.0676	0.8885	2.2900e-003	0.2236	1.3800e-003	0.2249	0.0593	1.2700e-003	0.0606		227.5045	227.5045	6.3700e-003		227.6637
<b>Total</b>	<b>0.1101</b>	<b>0.0676</b>	<b>0.8885</b>	<b>2.2900e-003</b>	<b>0.2236</b>	<b>1.3800e-003</b>	<b>0.2249</b>	<b>0.0593</b>	<b>1.2700e-003</b>	<b>0.0606</b>		<b>227.5045</b>	<b>227.5045</b>	<b>6.3700e-003</b>		<b>227.6637</b>

**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					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
<b>Total</b>	<b>4.7389</b>	<b>54.5202</b>	<b>33.3768</b>	<b>0.0620</b>	<b>3.3826</b>	<b>2.3827</b>	<b>5.7653</b>	<b>1.4026</b>	<b>2.1920</b>	<b>3.5947</b>	<b>0.0000</b>	<b>6,140.0195</b>	<b>6,140.0195</b>	<b>1.9426</b>		<b>6,188.5854</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.3 Grading - 2019**

**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	0.1101	0.0676	0.8885	2.2900e-003	0.2236	1.3800e-003	0.2249	0.0593	1.2700e-003	0.0606		227.5045	227.5045	6.3700e-003		227.6637
<b>Total</b>	<b>0.1101</b>	<b>0.0676</b>	<b>0.8885</b>	<b>2.2900e-003</b>	<b>0.2236</b>	<b>1.3800e-003</b>	<b>0.2249</b>	<b>0.0593</b>	<b>1.2700e-003</b>	<b>0.0606</b>		<b>227.5045</b>	<b>227.5045</b>	<b>6.3700e-003</b>		<b>227.6637</b>

**3.4 Building Construction - 2019**

**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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>		<b>1.2127</b>	<b>1.2127</b>		<b>2,591.5802</b>	<b>2,591.5802</b>	<b>0.6313</b>		<b>2,607.3635</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.4 Building Construction - 2019**

**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	0.8294	28.3445	5.3117	0.0655	1.5946	0.2153	1.8099	0.4591	0.2060	0.6651		6,904.8351	6,904.8351	0.5525		6,918.6471
Worker	4.9444	3.0343	39.8941	0.1026	10.0375	0.0620	10.0995	2.6620	0.0571	2.7191		10,214.9504	10,214.9504	0.2860		10,222.0998
<b>Total</b>	<b>5.7737</b>	<b>31.3788</b>	<b>45.2058</b>	<b>0.1681</b>	<b>11.6321</b>	<b>0.2773</b>	<b>11.9094</b>	<b>3.1211</b>	<b>0.2630</b>	<b>3.3842</b>		<b>17,119.7855</b>	<b>17,119.7855</b>	<b>0.8385</b>		<b>17,140.7469</b>

**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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>		<b>1.2127</b>	<b>1.2127</b>	<b>0.0000</b>	<b>2,591.5802</b>	<b>2,591.5802</b>	<b>0.6313</b>		<b>2,607.3635</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.4 Building Construction - 2019**

**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	0.8294	28.3445	5.3117	0.0655	1.5946	0.2153	1.8099	0.4591	0.2060	0.6651		6,904.8351	6,904.8351	0.5525		6,918.6471
Worker	4.9444	3.0343	39.8941	0.1026	10.0375	0.0620	10.0995	2.6620	0.0571	2.7191		10,214.9504	10,214.9504	0.2860		10,222.0998
<b>Total</b>	<b>5.7737</b>	<b>31.3788</b>	<b>45.2058</b>	<b>0.1681</b>	<b>11.6321</b>	<b>0.2773</b>	<b>11.9094</b>	<b>3.1211</b>	<b>0.2630</b>	<b>3.3842</b>		<b>17,119.7855</b>	<b>17,119.7855</b>	<b>0.8385</b>		<b>17,140.7469</b>

**3.4 Building Construction - 2020**

**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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
<b>Total</b>	<b>2.1198</b>	<b>19.1860</b>	<b>16.8485</b>	<b>0.0269</b>		<b>1.1171</b>	<b>1.1171</b>		<b>1.0503</b>	<b>1.0503</b>		<b>2,553.0631</b>	<b>2,553.0631</b>	<b>0.6229</b>		<b>2,568.6345</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.4 Building Construction - 2020**

**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	0.6940	25.6201	4.6870	0.0650	1.5945	0.1457	1.7402	0.4591	0.1394	0.5985		6,857.234 0	6,857.234 0	0.5143		6,870.092 1
Worker	4.5698	2.7026	36.2087	0.0993	10.0375	0.0608	10.0983	2.6620	0.0560	2.7180		9,892.319 0	9,892.319 0	0.2536		9,898.658 1
<b>Total</b>	<b>5.2638</b>	<b>28.3226</b>	<b>40.8957</b>	<b>0.1644</b>	<b>11.6320</b>	<b>0.2065</b>	<b>11.8385</b>	<b>3.1211</b>	<b>0.1954</b>	<b>3.3165</b>		<b>16,749.55 30</b>	<b>16,749.55 30</b>	<b>0.7679</b>		<b>16,768.75 02</b>

**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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
<b>Total</b>	<b>2.1198</b>	<b>19.1860</b>	<b>16.8485</b>	<b>0.0269</b>		<b>1.1171</b>	<b>1.1171</b>		<b>1.0503</b>	<b>1.0503</b>	<b>0.0000</b>	<b>2,553.063 1</b>	<b>2,553.063 1</b>	<b>0.6229</b>		<b>2,568.634 5</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.4 Building Construction - 2020**

**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	0.6940	25.6201	4.6870	0.0650	1.5945	0.1457	1.7402	0.4591	0.1394	0.5985		6,857.234 0	6,857.234 0	0.5143		6,870.092 1
Worker	4.5698	2.7026	36.2087	0.0993	10.0375	0.0608	10.0983	2.6620	0.0560	2.7180		9,892.319 0	9,892.319 0	0.2536		9,898.658 1
<b>Total</b>	<b>5.2638</b>	<b>28.3226</b>	<b>40.8957</b>	<b>0.1644</b>	<b>11.6320</b>	<b>0.2065</b>	<b>11.8385</b>	<b>3.1211</b>	<b>0.1954</b>	<b>3.3165</b>		<b>16,749.55 30</b>	<b>16,749.55 30</b>	<b>0.7679</b>		<b>16,768.75 02</b>

**3.4 Building Construction - 2021**

**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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>		<b>2,553.363 9</b>	<b>2,553.363 9</b>	<b>0.6160</b>		<b>2,568.764 3</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.4 Building Construction - 2021**

**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	0.5813	23.0423	4.1111	0.0645	1.5944	0.0438	1.6383	0.4591	0.0419	0.5010		6,803.9505	6,803.9505	0.4868		6,816.1194
Worker	4.2574	2.4254	33.2001	0.0960	10.0375	0.0592	10.0967	2.6620	0.0545	2.7165		9,561.4632	9,561.4632	0.2280		9,567.1628
<b>Total</b>	<b>4.8387</b>	<b>25.4677</b>	<b>37.3113</b>	<b>0.1605</b>	<b>11.6320</b>	<b>0.1030</b>	<b>11.7349</b>	<b>3.1211</b>	<b>0.0964</b>	<b>3.2175</b>		<b>16,365.4136</b>	<b>16,365.4136</b>	<b>0.7148</b>		<b>16,383.2822</b>

**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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>	<b>0.0000</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.4 Building Construction - 2021**

**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	0.5813	23.0423	4.1111	0.0645	1.5944	0.0438	1.6383	0.4591	0.0419	0.5010		6,803.9505	6,803.9505	0.4868		6,816.1194
Worker	4.2574	2.4254	33.2001	0.0960	10.0375	0.0592	10.0967	2.6620	0.0545	2.7165		9,561.4632	9,561.4632	0.2280		9,567.1628
<b>Total</b>	<b>4.8387</b>	<b>25.4677</b>	<b>37.3113</b>	<b>0.1605</b>	<b>11.6320</b>	<b>0.1030</b>	<b>11.7349</b>	<b>3.1211</b>	<b>0.0964</b>	<b>3.2175</b>		<b>16,365.4136</b>	<b>16,365.4136</b>	<b>0.7148</b>		<b>16,383.2822</b>

**3.4 Building Construction - 2022**

**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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.4 Building Construction - 2022**

**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	0.5420	21.7397	3.8238	0.0639	1.5944	0.0369	1.6312	0.4590	0.0352	0.4943		6,746.0370	6,746.0370	0.4610		6,757.5618
Worker	3.9822	2.1827	30.6227	0.0924	10.0375	0.0576	10.0951	2.6620	0.0530	2.7150		9,212.0974	9,212.0974	0.2048		9,217.2171
<b>Total</b>	<b>4.5243</b>	<b>23.9224</b>	<b>34.4465</b>	<b>0.1564</b>	<b>11.6319</b>	<b>0.0944</b>	<b>11.7263</b>	<b>3.1210</b>	<b>0.0883</b>	<b>3.2093</b>		<b>15,958.1344</b>	<b>15,958.1344</b>	<b>0.6658</b>		<b>15,974.7789</b>

**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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.4 Building Construction - 2022**

**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	0.5420	21.7397	3.8238	0.0639	1.5944	0.0369	1.6312	0.4590	0.0352	0.4943		6,746.0370	6,746.0370	0.4610		6,757.5618
Worker	3.9822	2.1827	30.6227	0.0924	10.0375	0.0576	10.0951	2.6620	0.0530	2.7150		9,212.0974	9,212.0974	0.2048		9,217.2171
<b>Total</b>	<b>4.5243</b>	<b>23.9224</b>	<b>34.4465</b>	<b>0.1564</b>	<b>11.6319</b>	<b>0.0944</b>	<b>11.7263</b>	<b>3.1210</b>	<b>0.0883</b>	<b>3.2093</b>		<b>15,958.1344</b>	<b>15,958.1344</b>	<b>0.6658</b>		<b>15,974.7789</b>

**3.5 Paving - 2022**

**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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.6283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.7311</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>		<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.5 Paving - 2022**

**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	0.0665	0.0365	0.5115	1.5400e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		153.8769	153.8769	3.4200e-003		153.9624
<b>Total</b>	<b>0.0665</b>	<b>0.0365</b>	<b>0.5115</b>	<b>1.5400e-003</b>	<b>0.1677</b>	<b>9.6000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.9000e-004</b>	<b>0.0454</b>		<b>153.8769</b>	<b>153.8769</b>	<b>3.4200e-003</b>		<b>153.9624</b>

**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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.6283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.7311</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>	<b>0.0000</b>	<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.5 Paving - 2022**

**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	0.0665	0.0365	0.5115	1.5400e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		153.8769	153.8769	3.4200e-003		153.9624
<b>Total</b>	<b>0.0665</b>	<b>0.0365</b>	<b>0.5115</b>	<b>1.5400e-003</b>	<b>0.1677</b>	<b>9.6000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.9000e-004</b>	<b>0.0454</b>		<b>153.8769</b>	<b>153.8769</b>	<b>3.4200e-003</b>		<b>153.9624</b>

**3.6 Architectural Coating - 2022**

**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	22.9832					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>23.1878</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.6 Architectural Coating - 2022**

**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	0.7982	0.4375	6.1382	0.0185	2.0120	0.0115	2.0235	0.5336	0.0106	0.5442		1,846.5229	1,846.5229	0.0411		1,847.5491
<b>Total</b>	<b>0.7982</b>	<b>0.4375</b>	<b>6.1382</b>	<b>0.0185</b>	<b>2.0120</b>	<b>0.0115</b>	<b>2.0235</b>	<b>0.5336</b>	<b>0.0106</b>	<b>0.5442</b>		<b>1,846.5229</b>	<b>1,846.5229</b>	<b>0.0411</b>		<b>1,847.5491</b>

**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	22.9832					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>23.1878</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

Palomar Crossing - Riverside-South Coast County, Summer

**3.6 Architectural Coating - 2022**

**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	0.7982	0.4375	6.1382	0.0185	2.0120	0.0115	2.0235	0.5336	0.0106	0.5442		1,846.5229	1,846.5229	0.0411		1,847.5491
<b>Total</b>	<b>0.7982</b>	<b>0.4375</b>	<b>6.1382</b>	<b>0.0185</b>	<b>2.0120</b>	<b>0.0115</b>	<b>2.0235</b>	<b>0.5336</b>	<b>0.0106</b>	<b>0.5442</b>		<b>1,846.5229</b>	<b>1,846.5229</b>	<b>0.0411</b>		<b>1,847.5491</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Palomar Crossing - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive 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	15.3275	90.1214	108.7945	0.4697	30.1839	0.2485	30.4324	8.0749	0.2313	8.3062		48,184.0164	48,184.0164	2.8390		48,254.9903
Unmitigated	18.2074	108.2313	201.1183	0.9057	68.3135	0.4852	68.7987	18.2755	0.4522	18.7276		92,563.6622	92,563.6622	3.9932		92,663.4933

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	4,497.22	4,497.22	4,497.22	15,622,425	6,902,667
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	6,852.34	6,852.34	6,852.34	16,413,874	7,252,363
<b>Total</b>	<b>11,349.56</b>	<b>11,349.56</b>	<b>11,349.56</b>	<b>32,036,299</b>	<b>14,155,030</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	87	13	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	59.5	40.5	0

4.4 Fleet Mix

Palomar Crossing - Riverside-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Other Non-Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Regional Shopping Center	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	0.3093	2.6518	1.1893	0.0169		0.2137	0.2137		0.2137	0.2137		3,373.9788	3,373.9788	0.0647	0.0619	3,394.0286
NaturalGas Unmitigated	0.3093	2.6518	1.1893	0.0169		0.2137	0.2137		0.2137	0.2137		3,373.9788	3,373.9788	0.0647	0.0619	3,394.0286

Palomar Crossing - Riverside-South Coast County, Summer

**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					
Apartments Low Rise	27180.7	0.2931	2.5049	1.0659	0.0160		0.2025	0.2025		0.2025	0.2025		3,197.7297	3,197.7297	0.0613	0.0586	3,216.7322
Other Non-Asphalt Surfaces	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
Parking Lot	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
Regional Shopping Center	1498.12	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2490	176.2490	3.3800e-003	3.2300e-003	177.2964
<b>Total</b>		<b>0.3093</b>	<b>2.6518</b>	<b>1.1893</b>	<b>0.0169</b>		<b>0.2137</b>	<b>0.2137</b>		<b>0.2137</b>	<b>0.2137</b>		<b>3,373.9788</b>	<b>3,373.9788</b>	<b>0.0647</b>	<b>0.0619</b>	<b>3,394.0286</b>

Palomar Crossing - Riverside-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	27.1807	0.2931	2.5049	1.0659	0.0160		0.2025	0.2025		0.2025	0.2025		3,197.7297	3,197.7297	0.0613	0.0586	3,216.7322
Other Non-Asphalt Surfaces	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
Parking Lot	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
Regional Shopping Center	1.49812	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2490	176.2490	3.3800e-003	3.2300e-003	177.2964
<b>Total</b>		<b>0.3093</b>	<b>2.6518</b>	<b>1.1893</b>	<b>0.0169</b>		<b>0.2137</b>	<b>0.2137</b>		<b>0.2137</b>	<b>0.2137</b>		<b>3,373.9788</b>	<b>3,373.9788</b>	<b>0.0647</b>	<b>0.0619</b>	<b>3,394.0286</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Palomar Crossing - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive 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	22.2807	10.1167	56.6963	0.0635		1.0601	1.0601		1.0601	1.0601	0.0000	12,235.2795	12,235.2795	0.3242	0.2226	12,309.7110
Unmitigated	22.2807	10.1167	56.6963	0.0635		1.0601	1.0601		1.0601	1.0601	0.0000	12,235.2795	12,235.2795	0.3242	0.2226	12,309.7110

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	1.7830					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.7934					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.1129	9.5100	4.0468	0.0607		0.7689	0.7689		0.7689	0.7689	0.0000	12,140.4706	12,140.4706	0.2327	0.2226	12,212.6153
Landscaping	1.5914	0.6067	52.6495	2.7800e-003		0.2912	0.2912		0.2912	0.2912		94.8089	94.8089	0.0915		97.0957
<b>Total</b>	<b>22.2807</b>	<b>10.1167</b>	<b>56.6963</b>	<b>0.0635</b>		<b>1.0601</b>	<b>1.0601</b>		<b>1.0601</b>	<b>1.0601</b>	<b>0.0000</b>	<b>12,235.2795</b>	<b>12,235.2795</b>	<b>0.3242</b>	<b>0.2226</b>	<b>12,309.7110</b>

Palomar Crossing - Riverside-South Coast County, Summer

**6.2 Area by SubCategory**

**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	1.7830					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.7934					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.1129	9.5100	4.0468	0.0607		0.7689	0.7689		0.7689	0.7689	0.0000	12,140.4706	12,140.4706	0.2327	0.2226	12,212.6153
Landscaping	1.5914	0.6067	52.6495	2.7800e-003		0.2912	0.2912		0.2912	0.2912		94.8089	94.8089	0.0915		97.0957
<b>Total</b>	<b>22.2807</b>	<b>10.1167</b>	<b>56.6963</b>	<b>0.0635</b>		<b>1.0601</b>	<b>1.0601</b>		<b>1.0601</b>	<b>1.0601</b>	<b>0.0000</b>	<b>12,235.2795</b>	<b>12,235.2795</b>	<b>0.3242</b>	<b>0.2226</b>	<b>12,309.7110</b>

**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**

Palomar Crossing - Riverside-South Coast County, Summer

Institute Recycling and Composting Services

**9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Palomar Crossing - Riverside-South Coast County, Winter

**Palomar Crossing**  
**Riverside-South Coast County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	6.50	Acre	6.50	283,140.00	0
Parking Lot	574.73	1000sqft	13.19	574,727.00	0
Apartments Low Rise	637.00	Dwelling Unit	17.66	637,000.00	1822
Regional Shopping Center	246.31	1000sqft	5.65	246,312.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2023
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

## Palomar Crossing - Riverside-South Coast County, Winter

## Project Characteristics -

Land Use - ~43 acres (includes PA11, PA12, PA13 w/o SCE Easement) w/ 637 apt DU, 246.312 TSF shopping center, 574.727 TSF commercial parking lots, & 15% each PA landscaping (total = ~6.5 ac).

Construction Phase - Project expected to start construction no earlier than April 2019 and be operational by 2023. No site preparation or demolition needed as the site is relatively bare. CalEEMod default timing used.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Grading - Site is ~43 acres and is anticipated to be balanced. Site prep estimated to cover ~1/2 of the site (~21.5ac) for removal of vegetation (very little trees/weeds).

Architectural Coating - SCAQMD Rule 1113 limits architectural coatings to 50 g/L VOC and 100 g/L VOC parking lot striping. Architectural coatings mitigated to 10 g/L VOC buildings.

Vehicle Trips - Per TIA, 7.06 trips/DU for apts (includes 3% internal capture rdxn) & 27.82 trips/TSF for shopping ctr (includes 2% internal capture & 25% pass-by rdxns). Pass-by trips changed to 0 and pass-by trips split btwn primary and divert.

Woodstoves - SCAQMD Rule 445 prohibits the installation of wood burning devices in new developments.

Sequestration - Estimated at at least 20 trees per every acre of landscaping (6.5 ac x 20 = ~130 trees). Some of the trees may be planted in parking lots also.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - ~3.77 miles NE downtown Menifee & ~0.07 miles E RTA Rte 27 stop Hwy 74 at Palomar. Sidewalks on/off-site. 637DU/24.16ac= 26.37DU/ac. 1emp/500sf com retail = 246,312sf/500sf = ~493emp/18.85ac= 26.2emp/ac. LUT-3 mixed residential/commercial.

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - Energy Star appliances to be used on-site. Site to use high-efficiency lighting (such as LEDs) that is at least 30% more efficient than standard.

Water Mitigation - Per Cal Green Standards 20% reduction in indoor water use through use of low flow fixtures. Site to use water-efficient irrigation systems.

Waste Mitigation - AB 341 requires at least 75% of waste be diverted from landfills by 2020.

## Palomar Crossing - Riverside-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	NumberGas	541.45	573.30
tblFireplaces	NumberWood	31.85	0.00
tblGrading	AcresOfGrading	0.00	21.50
tblLandUse	LandUseSquareFeet	574,730.00	574,727.00
tblLandUse	LandUseSquareFeet	246,310.00	246,312.00
tblLandUse	LotAcreage	39.81	17.66
tblSequestration	NumberOfNewTrees	0.00	130.00
tblVehicleTrips	DV_TP	11.00	13.00
tblVehicleTrips	DV_TP	35.00	40.50
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	86.00	87.00
tblVehicleTrips	PR_TP	54.00	59.50
tblVehicleTrips	ST_TR	7.16	7.06
tblVehicleTrips	ST_TR	49.97	27.82
tblVehicleTrips	SU_TR	6.07	7.06
tblVehicleTrips	SU_TR	25.24	27.82
tblVehicleTrips	WD_TR	6.59	7.06
tblVehicleTrips	WD_TR	42.70	27.82
tblWoodstoves	NumberCatalytic	31.85	0.00
tblWoodstoves	NumberNoncatalytic	31.85	0.00

Palomar Crossing - Riverside-South Coast County, Winter

**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					
2019	8.0628	54.5901	55.6725	0.1820	19.0275	2.3916	21.4191	10.0661	2.2003	12.2664	0.0000	18,402.5962	18,402.5962	1.9482	0.0000	18,439.9402
2020	7.3271	47.4677	51.6268	0.1786	11.6320	1.3253	12.9573	3.1211	1.2474	4.3684	0.0000	18,026.9853	18,026.9853	1.4156	0.0000	18,062.3755
2021	6.6963	42.7842	48.2374	0.1751	11.6320	1.0629	12.6949	3.1211	0.9989	4.1200	0.0000	17,679.0351	17,679.0351	1.3566	0.0000	17,712.9500
2022	23.9734	39.3940	45.5841	0.1714	11.6319	0.9046	12.5365	3.1210	0.8506	3.9716	0.0000	17,309.8375	17,309.8375	1.3044	0.0000	17,342.4468
<b>Maximum</b>	<b>23.9734</b>	<b>54.5901</b>	<b>55.6725</b>	<b>0.1820</b>	<b>19.0275</b>	<b>2.3916</b>	<b>21.4191</b>	<b>10.0661</b>	<b>2.2003</b>	<b>12.2664</b>	<b>0.0000</b>	<b>18,402.5962</b>	<b>18,402.5962</b>	<b>1.9482</b>	<b>0.0000</b>	<b>18,439.9402</b>



Palomar Crossing - Riverside-South Coast County, Winter

**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	22.2807	10.1167	56.6963	0.0635		1.0601	1.0601		1.0601	1.0601	0.0000	12,235.2795	12,235.2795	0.3242	0.2226	12,309.7110
Energy	0.3093	2.6518	1.1893	0.0169		0.2137	0.2137		0.2137	0.2137		3,373.9788	3,373.9788	0.0647	0.0619	3,394.0286
Mobile	15.2037	107.5542	174.8820	0.8353	68.3135	0.4887	68.8022	18.2755	0.4555	18.7310		85,465.6312	85,465.6312	4.1197		85,568.6227
<b>Total</b>	<b>37.7936</b>	<b>120.3227</b>	<b>232.7676</b>	<b>0.9156</b>	<b>68.3135</b>	<b>1.7625</b>	<b>70.0760</b>	<b>18.2755</b>	<b>1.7293</b>	<b>20.0048</b>	<b>0.0000</b>	<b>101,074.8895</b>	<b>101,074.8895</b>	<b>4.5085</b>	<b>0.2844</b>	<b>101,272.3624</b>

**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	22.2807	10.1167	56.6963	0.0635		1.0601	1.0601		1.0601	1.0601	0.0000	12,235.2795	12,235.2795	0.3242	0.2226	12,309.7110
Energy	0.3093	2.6518	1.1893	0.0169		0.2137	0.2137		0.2137	0.2137		3,373.9788	3,373.9788	0.0647	0.0619	3,394.0286
Mobile	12.5112	88.5629	101.1351	0.4305	30.1839	0.2520	30.4359	8.0749	0.2347	8.3096		44,189.1550	44,189.1550	3.0427		44,265.2231
<b>Total</b>	<b>35.1012</b>	<b>101.3314</b>	<b>159.0207</b>	<b>0.5109</b>	<b>30.1839</b>	<b>1.5258</b>	<b>31.7097</b>	<b>8.0749</b>	<b>1.5085</b>	<b>9.5834</b>	<b>0.0000</b>	<b>59,798.4133</b>	<b>59,798.4133</b>	<b>3.4316</b>	<b>0.2844</b>	<b>59,968.9628</b>

Palomar Crossing - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	7.12	15.78	31.68	44.20	55.82	13.43	54.75	55.82	12.77	52.09	0.00	40.84	40.84	23.89	0.00	40.78

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	5/10/2019	5	30	
2	Grading	Grading	5/11/2019	8/23/2019	5	75	
3	Building Construction	Building Construction	8/24/2019	6/24/2022	5	740	
4	Paving	Paving	6/25/2022	9/9/2022	5	55	
5	Architectural Coating	Architectural Coating	9/10/2022	11/25/2022	5	55	

**Acres of Grading (Site Preparation Phase): 21.5**

**Acres of Grading (Grading Phase): 187.5**

**Acres of Paving: 19.69**

**Residential Indoor: 1,289,925; Residential Outdoor: 429,975; Non-Residential Indoor: 369,468; Non-Residential Outdoor: 123,156; Striped Parking Area: 51,472 (Architectural Coating – sqft)**

**OffRoad Equipment**

Palomar Crossing - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	898.00	249.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	180.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Palomar Crossing - Riverside-South Coast County, Winter

**3.1 Mitigation Measures Construction**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Site Preparation - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.8263	0.0000	18.8263	10.0128	0.0000	10.0128			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
<b>Total</b>	<b>4.3350</b>	<b>45.5727</b>	<b>22.0630</b>	<b>0.0380</b>	<b>18.8263</b>	<b>2.3904</b>	<b>21.2166</b>	<b>10.0128</b>	<b>2.1991</b>	<b>12.2119</b>		<b>3,766.4529</b>	<b>3,766.4529</b>	<b>1.1917</b>		<b>3,796.2445</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.2 Site Preparation - 2019**

**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	0.0968	0.0630	0.6481	1.8400e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		183.6931	183.6931	4.9800e-003		183.8177
<b>Total</b>	<b>0.0968</b>	<b>0.0630</b>	<b>0.6481</b>	<b>1.8400e-003</b>	<b>0.2012</b>	<b>1.2400e-003</b>	<b>0.2024</b>	<b>0.0534</b>	<b>1.1400e-003</b>	<b>0.0545</b>		<b>183.6931</b>	<b>183.6931</b>	<b>4.9800e-003</b>		<b>183.8177</b>

**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					7.3423	0.0000	7.3423	3.9050	0.0000	3.9050			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
<b>Total</b>	<b>4.3350</b>	<b>45.5727</b>	<b>22.0630</b>	<b>0.0380</b>	<b>7.3423</b>	<b>2.3904</b>	<b>9.7326</b>	<b>3.9050</b>	<b>2.1991</b>	<b>6.1041</b>	<b>0.0000</b>	<b>3,766.4529</b>	<b>3,766.4529</b>	<b>1.1917</b>		<b>3,796.2445</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.2 Site Preparation - 2019**

**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	0.0968	0.0630	0.6481	1.8400e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		183.6931	183.6931	4.9800e-003		183.8177
<b>Total</b>	<b>0.0968</b>	<b>0.0630</b>	<b>0.6481</b>	<b>1.8400e-003</b>	<b>0.2012</b>	<b>1.2400e-003</b>	<b>0.2024</b>	<b>0.0534</b>	<b>1.1400e-003</b>	<b>0.0545</b>		<b>183.6931</b>	<b>183.6931</b>	<b>4.9800e-003</b>		<b>183.8177</b>

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
<b>Total</b>	<b>4.7389</b>	<b>54.5202</b>	<b>33.3768</b>	<b>0.0620</b>	<b>8.6733</b>	<b>2.3827</b>	<b>11.0560</b>	<b>3.5965</b>	<b>2.1920</b>	<b>5.7885</b>		<b>6,140.0195</b>	<b>6,140.0195</b>	<b>1.9426</b>		<b>6,188.5854</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.3 Grading - 2019**

**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	0.1076	0.0700	0.7201	2.0500e-003	0.2236	1.3800e-003	0.2249	0.0593	1.2700e-003	0.0606		204.1034	204.1034	5.5400e-003		204.2419
<b>Total</b>	<b>0.1076</b>	<b>0.0700</b>	<b>0.7201</b>	<b>2.0500e-003</b>	<b>0.2236</b>	<b>1.3800e-003</b>	<b>0.2249</b>	<b>0.0593</b>	<b>1.2700e-003</b>	<b>0.0606</b>		<b>204.1034</b>	<b>204.1034</b>	<b>5.5400e-003</b>		<b>204.2419</b>

**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					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
<b>Total</b>	<b>4.7389</b>	<b>54.5202</b>	<b>33.3768</b>	<b>0.0620</b>	<b>3.3826</b>	<b>2.3827</b>	<b>5.7653</b>	<b>1.4026</b>	<b>2.1920</b>	<b>3.5947</b>	<b>0.0000</b>	<b>6,140.0195</b>	<b>6,140.0195</b>	<b>1.9426</b>		<b>6,188.5854</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.3 Grading - 2019**

**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	0.1076	0.0700	0.7201	2.0500e-003	0.2236	1.3800e-003	0.2249	0.0593	1.2700e-003	0.0606		204.1034	204.1034	5.5400e-003		204.2419
<b>Total</b>	<b>0.1076</b>	<b>0.0700</b>	<b>0.7201</b>	<b>2.0500e-003</b>	<b>0.2236</b>	<b>1.3800e-003</b>	<b>0.2249</b>	<b>0.0593</b>	<b>1.2700e-003</b>	<b>0.0606</b>		<b>204.1034</b>	<b>204.1034</b>	<b>5.5400e-003</b>		<b>204.2419</b>

**3.4 Building Construction - 2019**

**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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>		<b>1.2127</b>	<b>1.2127</b>		<b>2,591.5802</b>	<b>2,591.5802</b>	<b>0.6313</b>		<b>2,607.3635</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.4 Building Construction - 2019**

**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	0.8706	28.2800	6.1758	0.0631	1.5946	0.2180	1.8125	0.4591	0.2085	0.6676		6,646.7721	6,646.7721	0.6138		6,662.1160
Worker	4.8311	3.1411	32.3329	0.0920	10.0375	0.0620	10.0995	2.6620	0.0571	2.7191		9,164.2440	9,164.2440	0.2487		9,170.4607
<b>Total</b>	<b>5.7016</b>	<b>31.4211</b>	<b>38.5087</b>	<b>0.1551</b>	<b>11.6321</b>	<b>0.2799</b>	<b>11.9120</b>	<b>3.1211</b>	<b>0.2656</b>	<b>3.3867</b>		<b>15,811.0161</b>	<b>15,811.0161</b>	<b>0.8624</b>		<b>15,832.5767</b>

**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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>		<b>1.2127</b>	<b>1.2127</b>	<b>0.0000</b>	<b>2,591.5802</b>	<b>2,591.5802</b>	<b>0.6313</b>		<b>2,607.3635</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.4 Building Construction - 2019**

**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	0.8706	28.2800	6.1758	0.0631	1.5946	0.2180	1.8125	0.4591	0.2085	0.6676		6,646.7721	6,646.7721	0.6138		6,662.1160
Worker	4.8311	3.1411	32.3329	0.0920	10.0375	0.0620	10.0995	2.6620	0.0571	2.7191		9,164.2440	9,164.2440	0.2487		9,170.4607
<b>Total</b>	<b>5.7016</b>	<b>31.4211</b>	<b>38.5087</b>	<b>0.1551</b>	<b>11.6321</b>	<b>0.2799</b>	<b>11.9120</b>	<b>3.1211</b>	<b>0.2656</b>	<b>3.3867</b>		<b>15,811.0161</b>	<b>15,811.0161</b>	<b>0.8624</b>		<b>15,832.5767</b>

**3.4 Building Construction - 2020**

**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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
<b>Total</b>	<b>2.1198</b>	<b>19.1860</b>	<b>16.8485</b>	<b>0.0269</b>		<b>1.1171</b>	<b>1.1171</b>		<b>1.0503</b>	<b>1.0503</b>		<b>2,553.0631</b>	<b>2,553.0631</b>	<b>0.6229</b>		<b>2,568.6345</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.4 Building Construction - 2020**

**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	0.7321	25.4859	5.4880	0.0626	1.5945	0.1474	1.7419	0.4591	0.1411	0.6001		6,599.5648	6,599.5648	0.5723		6,613.8731
Worker	4.4752	2.7958	29.2904	0.0891	10.0375	0.0608	10.0983	2.6620	0.0560	2.7180		8,874.3574	8,874.3574	0.2204		8,879.8680
<b>Total</b>	<b>5.2072</b>	<b>28.2817</b>	<b>34.7783</b>	<b>0.1517</b>	<b>11.6320</b>	<b>0.2082</b>	<b>11.8402</b>	<b>3.1211</b>	<b>0.1970</b>	<b>3.3181</b>		<b>15,473.9222</b>	<b>15,473.9222</b>	<b>0.7928</b>		<b>15,493.7410</b>

**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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
<b>Total</b>	<b>2.1198</b>	<b>19.1860</b>	<b>16.8485</b>	<b>0.0269</b>		<b>1.1171</b>	<b>1.1171</b>		<b>1.0503</b>	<b>1.0503</b>	<b>0.0000</b>	<b>2,553.0631</b>	<b>2,553.0631</b>	<b>0.6229</b>		<b>2,568.6345</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.4 Building Construction - 2020**

**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	0.7321	25.4859	5.4880	0.0626	1.5945	0.1474	1.7419	0.4591	0.1411	0.6001		6,599.5648	6,599.5648	0.5723		6,613.8731
Worker	4.4752	2.7958	29.2904	0.0891	10.0375	0.0608	10.0983	2.6620	0.0560	2.7180		8,874.3574	8,874.3574	0.2204		8,879.8680
<b>Total</b>	<b>5.2072</b>	<b>28.2817</b>	<b>34.7783</b>	<b>0.1517</b>	<b>11.6320</b>	<b>0.2082</b>	<b>11.8402</b>	<b>3.1211</b>	<b>0.1970</b>	<b>3.3181</b>		<b>15,473.9222</b>	<b>15,473.9222</b>	<b>0.7928</b>		<b>15,493.7410</b>

**3.4 Building Construction - 2021**

**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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>		<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.4 Building Construction - 2021**

**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	0.6174	22.8438	4.8632	0.0621	1.5944	0.0452	1.6396	0.4591	0.0432	0.5023		6,548.033 2	6,548.033 2	0.5424		6,561.592 3
Worker	4.1780	2.5083	26.7990	0.0861	10.0375	0.0592	10.0967	2.6620	0.0545	2.7165		8,577.638 1	8,577.638 1	0.1982		8,582.593 4
<b>Total</b>	<b>4.7954</b>	<b>25.3521</b>	<b>31.6622</b>	<b>0.1482</b>	<b>11.6320</b>	<b>0.1043</b>	<b>11.7363</b>	<b>3.1211</b>	<b>0.0976</b>	<b>3.2187</b>		<b>15,125.67 12</b>	<b>15,125.67 12</b>	<b>0.7406</b>		<b>15,144.18 57</b>

**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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>	<b>0.0000</b>	<b>2,553.363 9</b>	<b>2,553.363 9</b>	<b>0.6160</b>		<b>2,568.764 3</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.4 Building Construction - 2021**

**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	0.6174	22.8438	4.8632	0.0621	1.5944	0.0452	1.6396	0.4591	0.0432	0.5023		6,548.033 2	6,548.033 2	0.5424		6,561.592 3
Worker	4.1780	2.5083	26.7990	0.0861	10.0375	0.0592	10.0967	2.6620	0.0545	2.7165		8,577.638 1	8,577.638 1	0.1982		8,582.593 4
<b>Total</b>	<b>4.7954</b>	<b>25.3521</b>	<b>31.6622</b>	<b>0.1482</b>	<b>11.6320</b>	<b>0.1043</b>	<b>11.7363</b>	<b>3.1211</b>	<b>0.0976</b>	<b>3.2187</b>		<b>15,125.67 12</b>	<b>15,125.67 12</b>	<b>0.7406</b>		<b>15,144.18 57</b>

**3.4 Building Construction - 2022**

**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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.333 6	2,554.333 6	0.6120		2,569.632 2
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.333 6</b>	<b>2,554.333 6</b>	<b>0.6120</b>		<b>2,569.632 2</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.4 Building Construction - 2022**

**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	0.5765	21.5220	4.5397	0.0615	1.5944	0.0380	1.6324	0.4590	0.0364	0.4954		6,490.8607	6,490.8607	0.5142		6,503.7154
Worker	3.9195	2.2564	24.6810	0.0829	10.0375	0.0576	10.0951	2.6620	0.0530	2.7150		8,264.6432	8,264.6432	0.1782		8,269.0992
<b>Total</b>	<b>4.4960</b>	<b>23.7784</b>	<b>29.2207</b>	<b>0.1444</b>	<b>11.6319</b>	<b>0.0956</b>	<b>11.7275</b>	<b>3.1210</b>	<b>0.0894</b>	<b>3.2104</b>		<b>14,755.5039</b>	<b>14,755.5039</b>	<b>0.6924</b>		<b>14,772.8146</b>

**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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.4 Building Construction - 2022**

**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	0.5765	21.5220	4.5397	0.0615	1.5944	0.0380	1.6324	0.4590	0.0364	0.4954		6,490.8607	6,490.8607	0.5142		6,503.7154
Worker	3.9195	2.2564	24.6810	0.0829	10.0375	0.0576	10.0951	2.6620	0.0530	2.7150		8,264.6432	8,264.6432	0.1782		8,269.0992
<b>Total</b>	<b>4.4960</b>	<b>23.7784</b>	<b>29.2207</b>	<b>0.1444</b>	<b>11.6319</b>	<b>0.0956</b>	<b>11.7275</b>	<b>3.1210</b>	<b>0.0894</b>	<b>3.2104</b>		<b>14,755.5039</b>	<b>14,755.5039</b>	<b>0.6924</b>		<b>14,772.8146</b>

**3.5 Paving - 2022**

**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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.6283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.7311</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>		<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.5 Paving - 2022**

**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	0.0655	0.0377	0.4123	1.3800e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0508	138.0508	2.9800e-003		138.1253
<b>Total</b>	<b>0.0655</b>	<b>0.0377</b>	<b>0.4123</b>	<b>1.3800e-003</b>	<b>0.1677</b>	<b>9.6000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.9000e-004</b>	<b>0.0454</b>		<b>138.0508</b>	<b>138.0508</b>	<b>2.9800e-003</b>		<b>138.1253</b>

**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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.6283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.7311</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>	<b>0.0000</b>	<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.5 Paving - 2022**

**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	0.0655	0.0377	0.4123	1.3800e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0508	138.0508	2.9800e-003		138.1253
<b>Total</b>	<b>0.0655</b>	<b>0.0377</b>	<b>0.4123</b>	<b>1.3800e-003</b>	<b>0.1677</b>	<b>9.6000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.9000e-004</b>	<b>0.0454</b>		<b>138.0508</b>	<b>138.0508</b>	<b>2.9800e-003</b>		<b>138.1253</b>

**3.6 Architectural Coating - 2022**

**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	22.9832					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>23.1878</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.6 Architectural Coating - 2022**

**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	0.7857	0.4523	4.9472	0.0166	2.0120	0.0115	2.0235	0.5336	0.0106	0.5442		1,656.6100	1,656.6100	0.0357		1,657.5032
<b>Total</b>	<b>0.7857</b>	<b>0.4523</b>	<b>4.9472</b>	<b>0.0166</b>	<b>2.0120</b>	<b>0.0115</b>	<b>2.0235</b>	<b>0.5336</b>	<b>0.0106</b>	<b>0.5442</b>		<b>1,656.6100</b>	<b>1,656.6100</b>	<b>0.0357</b>		<b>1,657.5032</b>

**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	22.9832					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>23.1878</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

Palomar Crossing - Riverside-South Coast County, Winter

**3.6 Architectural Coating - 2022**

**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	0.7857	0.4523	4.9472	0.0166	2.0120	0.0115	2.0235	0.5336	0.0106	0.5442		1,656.610 0	1,656.610 0	0.0357			1,657.503 2
<b>Total</b>	<b>0.7857</b>	<b>0.4523</b>	<b>4.9472</b>	<b>0.0166</b>	<b>2.0120</b>	<b>0.0115</b>	<b>2.0235</b>	<b>0.5336</b>	<b>0.0106</b>	<b>0.5442</b>		<b>1,656.610 0</b>	<b>1,656.610 0</b>	<b>0.0357</b>			<b>1,657.503 2</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Palomar Crossing - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	12.5112	88.5629	101.1351	0.4305	30.1839	0.2520	30.4359	8.0749	0.2347	8.3096		44,189.15 50	44,189.15 50	3.0427		44,265.22 31
Unmitigated	15.2037	107.5542	174.8820	0.8353	68.3135	0.4887	68.8022	18.2755	0.4555	18.7310		85,465.63 12	85,465.63 12	4.1197		85,568.62 27

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	4,497.22	4,497.22	4,497.22	15,622,425	6,902,667
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	6,852.34	6,852.34	6,852.34	16,413,874	7,252,363
<b>Total</b>	<b>11,349.56</b>	<b>11,349.56</b>	<b>11,349.56</b>	<b>32,036,299</b>	<b>14,155,030</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	87	13	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	59.5	40.5	0

4.4 Fleet Mix

Palomar Crossing - Riverside-South Coast County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Other Non-Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Regional Shopping Center	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	0.3093	2.6518	1.1893	0.0169		0.2137	0.2137		0.2137	0.2137		3,373.9788	3,373.9788	0.0647	0.0619	3,394.0286
NaturalGas Unmitigated	0.3093	2.6518	1.1893	0.0169		0.2137	0.2137		0.2137	0.2137		3,373.9788	3,373.9788	0.0647	0.0619	3,394.0286

Palomar Crossing - Riverside-South Coast County, Winter

**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					
Apartments Low Rise	27180.7	0.2931	2.5049	1.0659	0.0160		0.2025	0.2025		0.2025	0.2025		3,197.7297	3,197.7297	0.0613	0.0586	3,216.7322
Other Non-Asphalt Surfaces	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
Parking Lot	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
Regional Shopping Center	1498.12	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2490	176.2490	3.3800e-003	3.2300e-003	177.2964
<b>Total</b>		<b>0.3093</b>	<b>2.6518</b>	<b>1.1893</b>	<b>0.0169</b>		<b>0.2137</b>	<b>0.2137</b>		<b>0.2137</b>	<b>0.2137</b>		<b>3,373.9788</b>	<b>3,373.9788</b>	<b>0.0647</b>	<b>0.0619</b>	<b>3,394.0286</b>

Palomar Crossing - Riverside-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	27.1807	0.2931	2.5049	1.0659	0.0160		0.2025	0.2025		0.2025	0.2025		3,197.7297	3,197.7297	0.0613	0.0586	3,216.7322
Other Non-Asphalt Surfaces	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
Parking Lot	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
Regional Shopping Center	1.49812	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2490	176.2490	3.3800e-003	3.2300e-003	177.2964
<b>Total</b>		<b>0.3093</b>	<b>2.6518</b>	<b>1.1893</b>	<b>0.0169</b>		<b>0.2137</b>	<b>0.2137</b>		<b>0.2137</b>	<b>0.2137</b>		<b>3,373.9788</b>	<b>3,373.9788</b>	<b>0.0647</b>	<b>0.0619</b>	<b>3,394.0286</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Palomar Crossing - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive 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	22.2807	10.1167	56.6963	0.0635		1.0601	1.0601		1.0601	1.0601	0.0000	12,235.2795	12,235.2795	0.3242	0.2226	12,309.7110
Unmitigated	22.2807	10.1167	56.6963	0.0635		1.0601	1.0601		1.0601	1.0601	0.0000	12,235.2795	12,235.2795	0.3242	0.2226	12,309.7110

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	1.7830					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.7934					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.1129	9.5100	4.0468	0.0607		0.7689	0.7689		0.7689	0.7689	0.0000	12,140.4706	12,140.4706	0.2327	0.2226	12,212.6153
Landscaping	1.5914	0.6067	52.6495	2.7800e-003		0.2912	0.2912		0.2912	0.2912		94.8089	94.8089	0.0915		97.0957
<b>Total</b>	<b>22.2807</b>	<b>10.1167</b>	<b>56.6963</b>	<b>0.0635</b>		<b>1.0601</b>	<b>1.0601</b>		<b>1.0601</b>	<b>1.0601</b>	<b>0.0000</b>	<b>12,235.2795</b>	<b>12,235.2795</b>	<b>0.3242</b>	<b>0.2226</b>	<b>12,309.7110</b>

Palomar Crossing - Riverside-South Coast County, Winter

**6.2 Area by SubCategory**

**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	1.7830					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.7934					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.1129	9.5100	4.0468	0.0607		0.7689	0.7689		0.7689	0.7689	0.0000	12,140.4706	12,140.4706	0.2327	0.2226	12,212.6153
Landscaping	1.5914	0.6067	52.6495	2.7800e-003		0.2912	0.2912		0.2912	0.2912		94.8089	94.8089	0.0915		97.0957
<b>Total</b>	<b>22.2807</b>	<b>10.1167</b>	<b>56.6963</b>	<b>0.0635</b>		<b>1.0601</b>	<b>1.0601</b>		<b>1.0601</b>	<b>1.0601</b>	<b>0.0000</b>	<b>12,235.2795</b>	<b>12,235.2795</b>	<b>0.3242</b>	<b>0.2226</b>	<b>12,309.7110</b>

**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**

Palomar Crossing - Riverside-South Coast County, Winter

Institute Recycling and Composting Services

**9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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## **Appendix B**

Annual Emission Calculations Output  
(CalEEMod)

Palomar Crossing - Riverside-South Coast County, Annual

**Palomar Crossing**  
**Riverside-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	6.50	Acre	6.50	283,140.00	0
Parking Lot	574.73	1000sqft	13.19	574,727.00	0
Apartments Low Rise	637.00	Dwelling Unit	17.66	637,000.00	1822
Regional Shopping Center	246.31	1000sqft	5.65	246,312.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2023
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

## Palomar Crossing - Riverside-South Coast County, Annual

## Project Characteristics -

Land Use - ~43 acres (includes PA11, PA12, PA13 w/o SCE Easement) w/ 637 apt DU, 246.312 TSF shopping center, 574.727 TSF commercial parking lots, & 15% each PA landscaping (total = ~6.5 ac).

Construction Phase - Project expected to start construction no earlier than April 2019 and be operational by 2023. No site preparation or demolition needed as the site is relatively bare. CalEEMod default timing used.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Grading - Site is ~43 acres and is anticipated to be balanced. Site prep estimated to cover ~1/2 of the site (~21.5ac) for removal of vegetation (very little trees/weeds).

Architectural Coating - SCAQMD Rule 1113 limits architectural coatings to 50 g/L VOC and 100 g/L VOC parking lot striping. Architectural coatings mitigated to 10 g/L VOC buildings.

Vehicle Trips - Per TIA, 7.06 trips/DU for apts (includes 3% internal capture rdxn) & 27.82 trips/TSF for shopping ctr (includes 2% internal capture & 25% pass-by rdxns). Pass-by trips changed to 0 and pass-by trips split btwn primary and divert.

Woodstoves - SCAQMD Rule 445 prohibits the installation of wood burning devices in new developments.

Sequestration - Estimated at at least 20 trees per every acre of landscaping (6.5 ac x 20 = ~130 trees). Some of the trees may be planted in parking lots also.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - ~3.77 miles NE downtown Menifee & ~0.07 miles E RTA Rte 27 stop Hwy 74 at Palomar. Sidewalks on/off-site. 637DU/24.16ac= 26.37DU/ac. 1emp/500sf com retail = 246,312sf/500sf = ~493emp/18.85ac= 26.2emp/ac. LUT-3 mixed residential/commercial.

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - Energy Star appliances to be used on-site. Site to use high-efficiency lighting (such as LEDs) that is at least 30% more efficient than standard.

Water Mitigation - Per Cal Green Standards 20% reduction in indoor water use through use of low flow fixtures. Site to use water-efficient irrigation systems.

Waste Mitigation - AB 341 requires at least 75% of waste be diverted from landfills by 2020.

## Palomar Crossing - Riverside-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	NumberGas	541.45	573.30
tblFireplaces	NumberWood	31.85	0.00
tblGrading	AcresOfGrading	0.00	21.50
tblLandUse	LandUseSquareFeet	574,730.00	574,727.00
tblLandUse	LandUseSquareFeet	246,310.00	246,312.00
tblLandUse	LotAcreage	39.81	17.66
tblSequestration	NumberOfNewTrees	0.00	130.00
tblVehicleTrips	DV_TP	11.00	13.00
tblVehicleTrips	DV_TP	35.00	40.50
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	86.00	87.00
tblVehicleTrips	PR_TP	54.00	59.50
tblVehicleTrips	ST_TR	7.16	7.06
tblVehicleTrips	ST_TR	49.97	27.82
tblVehicleTrips	SU_TR	6.07	7.06
tblVehicleTrips	SU_TR	25.24	27.82
tblVehicleTrips	WD_TR	6.59	7.06
tblVehicleTrips	WD_TR	42.70	27.82
tblWoodstoves	NumberCatalytic	31.85	0.00
tblWoodstoves	NumberNoncatalytic	31.85	0.00

Palomar Crossing - Riverside-South Coast County, Annual

**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					
2019	0.6004	5.1727	4.2413	0.0116	1.1452	0.1974	1.3427	0.4295	0.1832	0.6127	0.0000	1,053.850 3	1,053.850 3	0.1438	0.0000	1,057.445 6
2020	0.9110	6.2849	6.9159	0.0239	1.4990	0.1735	1.6725	0.4028	0.1633	0.5661	0.0000	2,187.260 2	2,187.260 2	0.1652	0.0000	2,191.390 8
2021	0.8280	5.6433	6.4352	0.0233	1.4933	0.1386	1.6319	0.4012	0.1303	0.5315	0.0000	2,136.695 5	2,136.695 5	0.1577	0.0000	2,140.637 2
2022	1.0736	2.8476	3.5167	0.0122	0.7741	0.0747	0.8488	0.2078	0.0701	0.2779	0.0000	1,109.928 6	1,109.928 6	0.0919	0.0000	1,112.2248
<b>Maximum</b>	<b>1.0736</b>	<b>6.2849</b>	<b>6.9159</b>	<b>0.0239</b>	<b>1.4990</b>	<b>0.1974</b>	<b>1.6725</b>	<b>0.4295</b>	<b>0.1832</b>	<b>0.6127</b>	<b>0.0000</b>	<b>2,187.260 2</b>	<b>2,187.260 2</b>	<b>0.1652</b>	<b>0.0000</b>	<b>2,191.390 8</b>

Palomar Crossing - Riverside-South Coast County, Annual

**2.1 Overall Construction**

**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					
2019	0.6004	5.1727	4.2413	0.0116	0.7746	0.1974	0.9720	0.2556	0.1832	0.4388	0.0000	1,053.8498	1,053.8498	0.1438	0.0000	1,057.4452
2020	0.9110	6.2849	6.9159	0.0239	1.4990	0.1735	1.6725	0.4028	0.1633	0.5661	0.0000	2,187.2599	2,187.2599	0.1652	0.0000	2,191.3904
2021	0.8280	5.6433	6.4352	0.0233	1.4933	0.1386	1.6319	0.4012	0.1303	0.5315	0.0000	2,136.6952	2,136.6952	0.1577	0.0000	2,140.6369
2022	1.0736	2.8476	3.5167	0.0122	0.7741	0.0747	0.8488	0.2078	0.0701	0.2779	0.0000	1,109.9283	1,109.9283	0.0919	0.0000	1,112.2246
<b>Maximum</b>	<b>1.0736</b>	<b>6.2849</b>	<b>6.9159</b>	<b>0.0239</b>	<b>1.4990</b>	<b>0.1974</b>	<b>1.6725</b>	<b>0.4028</b>	<b>0.1832</b>	<b>0.5661</b>	<b>0.0000</b>	<b>2,187.2599</b>	<b>2,187.2599</b>	<b>0.1652</b>	<b>0.0000</b>	<b>2,191.3904</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.55</b>	<b>0.00</b>	<b>6.74</b>	<b>12.06</b>	<b>0.00</b>	<b>8.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2019	6-30-2019	1.7979	1.7979
2	7-1-2019	9-30-2019	1.9686	1.9686
3	10-1-2019	12-31-2019	1.9899	1.9899
4	1-1-2020	3-31-2020	1.7808	1.7808
5	4-1-2020	6-30-2020	1.7840	1.7840
6	7-1-2020	9-30-2020	1.8036	1.8036
7	10-1-2020	12-31-2020	1.8004	1.8004
8	1-1-2021	3-31-2021	1.5904	1.5904

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9	4-1-2021	6-30-2021	1.6133	1.6133
10	7-1-2021	9-30-2021	1.6310	1.6310
11	10-1-2021	12-31-2021	1.6258	1.6258
12	1-1-2022	3-31-2022	1.4656	1.4656
13	4-1-2022	6-30-2022	1.4172	1.4172
14	7-1-2022	9-30-2022	0.5223	0.5223
		Highest	1.9899	1.9899

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	3.7855	0.1947	6.6318	1.1100e-003		0.0460	0.0460		0.0460	0.0460	0.0000	148.4218	148.4218	0.0130	2.5200e-003	149.4992
Energy	0.0564	0.4840	0.2170	3.0800e-003		0.0390	0.0390		0.0390	0.0390	0.0000	2,600.3454	2,600.3454	0.0950	0.0277	2,610.9693
Mobile	2.7753	19.9063	32.7740	0.1556	12.2300	0.0885	12.3185	3.2763	0.0825	3.3587	0.0000	14,446.4335	14,446.4335	0.6613	0.0000	14,462.9665
Waste						0.0000	0.0000		0.0000	0.0000	111.9800	0.0000	111.9800	6.6178	0.0000	277.4256
Water						0.0000	0.0000		0.0000	0.0000	18.9553	380.0855	399.0407	1.9626	0.0492	462.7718
<b>Total</b>	<b>6.6172</b>	<b>20.5850</b>	<b>39.6228</b>	<b>0.1598</b>	<b>12.2300</b>	<b>0.1735</b>	<b>12.4035</b>	<b>3.2763</b>	<b>0.1675</b>	<b>3.4438</b>	<b>130.9352</b>	<b>17,575.2861</b>	<b>17,706.2213</b>	<b>9.3497</b>	<b>0.0794</b>	<b>17,963.6324</b>

Palomar Crossing - Riverside-South Coast County, Annual

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.7855	0.1947	6.6318	1.1100e-003		0.0460	0.0460		0.0460	0.0460	0.0000	148.4218	148.4218	0.0130	2.5200e-003	149.4992
Energy	0.0564	0.4840	0.2170	3.0800e-003		0.0390	0.0390		0.0390	0.0390	0.0000	2,370.2439	2,370.2439	0.0855	0.0257	2,380.0446
Mobile	2.2768	16.3952	18.6042	0.0808	5.4037	0.0454	5.4492	1.4476	0.0423	1.4899	0.0000	7,525.0292	7,525.0292	0.4809	0.0000	7,537.0511
Waste						0.0000	0.0000		0.0000	0.0000	27.9950	0.0000	27.9950	1.6545	0.0000	69.3564
Water						0.0000	0.0000		0.0000	0.0000	15.1642	322.4449	337.6091	1.5708	0.0395	388.6597
<b>Total</b>	<b>6.1188</b>	<b>17.0739</b>	<b>25.4530</b>	<b>0.0850</b>	<b>5.4037</b>	<b>0.1305</b>	<b>5.5342</b>	<b>1.4476</b>	<b>0.1273</b>	<b>1.5749</b>	<b>43.1592</b>	<b>10,366.1398</b>	<b>10,409.2990</b>	<b>3.8047</b>	<b>0.0678</b>	<b>10,524.6110</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>7.53</b>	<b>17.06</b>	<b>35.76</b>	<b>46.82</b>	<b>55.82</b>	<b>24.80</b>	<b>55.38</b>	<b>55.82</b>	<b>23.97</b>	<b>54.27</b>	<b>67.04</b>	<b>41.02</b>	<b>41.21</b>	<b>59.31</b>	<b>14.67</b>	<b>41.41</b>

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**2.3 Vegetation**

Vegetation

	CO2e
Category	MT
New Trees	92.0400
<b>Total</b>	<b>92.0400</b>

**3.0 Construction Detail**

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	5/10/2019	5	30	
2	Grading	Grading	5/11/2019	8/23/2019	5	75	
3	Building Construction	Building Construction	8/24/2019	6/24/2022	5	740	
4	Paving	Paving	6/25/2022	9/9/2022	5	55	
5	Architectural Coating	Architectural Coating	9/10/2022	11/25/2022	5	55	

**Acres of Grading (Site Preparation Phase): 21.5**

**Acres of Grading (Grading Phase): 187.5**

**Acres of Paving: 19.69**

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**Residential Indoor: 1,289,925; Residential Outdoor: 429,975; Non-Residential Indoor: 369,468; Non-Residential Outdoor: 123,156; Striped Parking Area: 51,472 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

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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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	898.00	249.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	180.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Site Preparation - 2019**

**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					0.2824	0.0000	0.2824	0.1502	0.0000	0.1502	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0650	0.6836	0.3310	5.7000e-004		0.0359	0.0359		0.0330	0.0330	0.0000	51.2530	51.2530	0.0162	0.0000	51.6584
<b>Total</b>	<b>0.0650</b>	<b>0.6836</b>	<b>0.3310</b>	<b>5.7000e-004</b>	<b>0.2824</b>	<b>0.0359</b>	<b>0.3183</b>	<b>0.1502</b>	<b>0.0330</b>	<b>0.1832</b>	<b>0.0000</b>	<b>51.2530</b>	<b>51.2530</b>	<b>0.0162</b>	<b>0.0000</b>	<b>51.6584</b>

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**3.2 Site Preparation - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3400e-003	9.8000e-004	0.0102	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.5639	2.5639	7.0000e-005	0.0000	2.5657
<b>Total</b>	<b>1.3400e-003</b>	<b>9.8000e-004</b>	<b>0.0102</b>	<b>3.0000e-005</b>	<b>2.9700e-003</b>	<b>2.0000e-005</b>	<b>2.9900e-003</b>	<b>7.9000e-004</b>	<b>2.0000e-005</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>2.5639</b>	<b>2.5639</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>2.5657</b>

**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					0.1101	0.0000	0.1101	0.0586	0.0000	0.0586	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0650	0.6836	0.3309	5.7000e-004		0.0359	0.0359		0.0330	0.0330	0.0000	51.2530	51.2530	0.0162	0.0000	51.6584
<b>Total</b>	<b>0.0650</b>	<b>0.6836</b>	<b>0.3309</b>	<b>5.7000e-004</b>	<b>0.1101</b>	<b>0.0359</b>	<b>0.1460</b>	<b>0.0586</b>	<b>0.0330</b>	<b>0.0916</b>	<b>0.0000</b>	<b>51.2530</b>	<b>51.2530</b>	<b>0.0162</b>	<b>0.0000</b>	<b>51.6584</b>

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**3.2 Site Preparation - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3400e-003	9.8000e-004	0.0102	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.5639	2.5639	7.0000e-005	0.0000	2.5657
<b>Total</b>	<b>1.3400e-003</b>	<b>9.8000e-004</b>	<b>0.0102</b>	<b>3.0000e-005</b>	<b>2.9700e-003</b>	<b>2.0000e-005</b>	<b>2.9900e-003</b>	<b>7.9000e-004</b>	<b>2.0000e-005</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>2.5639</b>	<b>2.5639</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>2.5657</b>

**3.3 Grading - 2019**

**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					0.3253	0.0000	0.3253	0.1349	0.0000	0.1349	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1777	2.0445	1.2516	2.3300e-003		0.0894	0.0894		0.0822	0.0822	0.0000	208.8800	208.8800	0.0661	0.0000	210.5321
<b>Total</b>	<b>0.1777</b>	<b>2.0445</b>	<b>1.2516</b>	<b>2.3300e-003</b>	<b>0.3253</b>	<b>0.0894</b>	<b>0.4146</b>	<b>0.1349</b>	<b>0.0822</b>	<b>0.2171</b>	<b>0.0000</b>	<b>208.8800</b>	<b>208.8800</b>	<b>0.0661</b>	<b>0.0000</b>	<b>210.5321</b>

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**3.3 Grading - 2019**

**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	3.7300e-003	2.7100e-003	0.0285	8.0000e-005	8.2400e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	7.1221	7.1221	1.9000e-004	0.0000	7.1269
<b>Total</b>	<b>3.7300e-003</b>	<b>2.7100e-003</b>	<b>0.0285</b>	<b>8.0000e-005</b>	<b>8.2400e-003</b>	<b>5.0000e-005</b>	<b>8.3000e-003</b>	<b>2.1900e-003</b>	<b>5.0000e-005</b>	<b>2.2400e-003</b>	<b>0.0000</b>	<b>7.1221</b>	<b>7.1221</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>7.1269</b>

**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					0.1269	0.0000	0.1269	0.0526	0.0000	0.0526	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1777	2.0445	1.2516	2.3300e-003		0.0894	0.0894		0.0822	0.0822	0.0000	208.8797	208.8797	0.0661	0.0000	210.5319
<b>Total</b>	<b>0.1777</b>	<b>2.0445</b>	<b>1.2516</b>	<b>2.3300e-003</b>	<b>0.1269</b>	<b>0.0894</b>	<b>0.2162</b>	<b>0.0526</b>	<b>0.0822</b>	<b>0.1348</b>	<b>0.0000</b>	<b>208.8797</b>	<b>208.8797</b>	<b>0.0661</b>	<b>0.0000</b>	<b>210.5319</b>

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**3.3 Grading - 2019**

**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	3.7300e-003	2.7100e-003	0.0285	8.0000e-005	8.2400e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	7.1221	7.1221	1.9000e-004	0.0000	7.1269
<b>Total</b>	<b>3.7300e-003</b>	<b>2.7100e-003</b>	<b>0.0285</b>	<b>8.0000e-005</b>	<b>8.2400e-003</b>	<b>5.0000e-005</b>	<b>8.3000e-003</b>	<b>2.1900e-003</b>	<b>5.0000e-005</b>	<b>2.2400e-003</b>	<b>0.0000</b>	<b>7.1221</b>	<b>7.1221</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>7.1269</b>

**3.4 Building Construction - 2019**

**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	0.1086	0.9696	0.7895	1.2400e-003		0.0593	0.0593		0.0558	0.0558	0.0000	108.1479	108.1479	0.0264	0.0000	108.8066
<b>Total</b>	<b>0.1086</b>	<b>0.9696</b>	<b>0.7895</b>	<b>1.2400e-003</b>		<b>0.0593</b>	<b>0.0593</b>		<b>0.0558</b>	<b>0.0558</b>	<b>0.0000</b>	<b>108.1479</b>	<b>108.1479</b>	<b>0.0264</b>	<b>0.0000</b>	<b>108.8066</b>

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**3.4 Building Construction - 2019**

**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	0.0388	1.3218	0.2631	2.9700e-003	0.0724	9.9600e-003	0.0823	0.0209	9.5200e-003	0.0304	0.0000	283.6193	283.6193	0.0242	0.0000	284.2234
Worker	0.2052	0.1494	1.5674	4.3400e-003	0.4540	2.8500e-003	0.4569	0.1206	2.6300e-003	0.1232	0.0000	392.2641	392.2641	0.0107	0.0000	392.5324
<b>Total</b>	<b>0.2440</b>	<b>1.4713</b>	<b>1.8305</b>	<b>7.3100e-003</b>	<b>0.5264</b>	<b>0.0128</b>	<b>0.5392</b>	<b>0.1414</b>	<b>0.0122</b>	<b>0.1536</b>	<b>0.0000</b>	<b>675.8834</b>	<b>675.8834</b>	<b>0.0349</b>	<b>0.0000</b>	<b>676.7559</b>

**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	0.1086	0.9696	0.7895	1.2400e-003		0.0593	0.0593		0.0558	0.0558	0.0000	108.1478	108.1478	0.0264	0.0000	108.8065
<b>Total</b>	<b>0.1086</b>	<b>0.9696</b>	<b>0.7895</b>	<b>1.2400e-003</b>		<b>0.0593</b>	<b>0.0593</b>		<b>0.0558</b>	<b>0.0558</b>	<b>0.0000</b>	<b>108.1478</b>	<b>108.1478</b>	<b>0.0264</b>	<b>0.0000</b>	<b>108.8065</b>

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**3.4 Building Construction - 2019**

**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	0.0388	1.3218	0.2631	2.9700e-003	0.0724	9.9600e-003	0.0823	0.0209	9.5200e-003	0.0304	0.0000	283.6193	283.6193	0.0242	0.0000	284.2234
Worker	0.2052	0.1494	1.5674	4.3400e-003	0.4540	2.8500e-003	0.4569	0.1206	2.6300e-003	0.1232	0.0000	392.2641	392.2641	0.0107	0.0000	392.5324
<b>Total</b>	<b>0.2440</b>	<b>1.4713</b>	<b>1.8305</b>	<b>7.3100e-003</b>	<b>0.5264</b>	<b>0.0128</b>	<b>0.5392</b>	<b>0.1414</b>	<b>0.0122</b>	<b>0.1536</b>	<b>0.0000</b>	<b>675.8834</b>	<b>675.8834</b>	<b>0.0349</b>	<b>0.0000</b>	<b>676.7559</b>

**3.4 Building Construction - 2020**

**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	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
<b>Total</b>	<b>0.2777</b>	<b>2.5134</b>	<b>2.2072</b>	<b>3.5300e-003</b>		<b>0.1463</b>	<b>0.1463</b>		<b>0.1376</b>	<b>0.1376</b>	<b>0.0000</b>	<b>303.4091</b>	<b>303.4091</b>	<b>0.0740</b>	<b>0.0000</b>	<b>305.2596</b>

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**3.4 Building Construction - 2020**

**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	0.0927	3.3927	0.6637	8.3900e-003	0.2060	0.0192	0.2252	0.0594	0.0184	0.0778	0.0000	802.0610	802.0610	0.0641	0.0000	803.6639
Worker	0.5407	0.3788	4.0450	0.0120	1.2930	7.9600e-003	1.3010	0.3433	7.3300e-003	0.3507	0.0000	1,081.7902	1,081.7902	0.0271	0.0000	1,082.4674
<b>Total</b>	<b>0.6333</b>	<b>3.7716</b>	<b>4.7087</b>	<b>0.0204</b>	<b>1.4990</b>	<b>0.0271</b>	<b>1.5262</b>	<b>0.4028</b>	<b>0.0257</b>	<b>0.4285</b>	<b>0.0000</b>	<b>1,883.8512</b>	<b>1,883.8512</b>	<b>0.0912</b>	<b>0.0000</b>	<b>1,886.1312</b>

**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	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
<b>Total</b>	<b>0.2777</b>	<b>2.5134</b>	<b>2.2072</b>	<b>3.5300e-003</b>		<b>0.1463</b>	<b>0.1463</b>		<b>0.1376</b>	<b>0.1376</b>	<b>0.0000</b>	<b>303.4087</b>	<b>303.4087</b>	<b>0.0740</b>	<b>0.0000</b>	<b>305.2592</b>

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**3.4 Building Construction - 2020**

**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	0.0927	3.3927	0.6637	8.3900e-003	0.2060	0.0192	0.2252	0.0594	0.0184	0.0778	0.0000	802.0610	802.0610	0.0641	0.0000	803.6639
Worker	0.5407	0.3788	4.0450	0.0120	1.2930	7.9600e-003	1.3010	0.3433	7.3300e-003	0.3507	0.0000	1,081.7902	1,081.7902	0.0271	0.0000	1,082.4674
<b>Total</b>	<b>0.6333</b>	<b>3.7716</b>	<b>4.7087</b>	<b>0.0204</b>	<b>1.4990</b>	<b>0.0271</b>	<b>1.5262</b>	<b>0.4028</b>	<b>0.0257</b>	<b>0.4285</b>	<b>0.0000</b>	<b>1,883.8512</b>	<b>1,883.8512</b>	<b>0.0912</b>	<b>0.0000</b>	<b>1,886.1312</b>

**3.4 Building Construction - 2021**

**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	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
<b>Total</b>	<b>0.2481</b>	<b>2.2749</b>	<b>2.1631</b>	<b>3.5100e-003</b>		<b>0.1251</b>	<b>0.1251</b>		<b>0.1176</b>	<b>0.1176</b>	<b>0.0000</b>	<b>302.2867</b>	<b>302.2867</b>	<b>0.0729</b>	<b>0.0000</b>	<b>304.1099</b>

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**3.4 Building Construction - 2021**

**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	0.0775	3.0299	0.5829	8.2900e-003	0.2052	5.7900e-003	0.2110	0.0592	5.5400e-003	0.0648	0.0000	792.7787	792.7787	0.0605	0.0000	794.2906
Worker	0.5024	0.3386	3.6892	0.0115	1.2881	7.7200e-003	1.2958	0.3420	7.1100e-003	0.3491	0.0000	1,041.6302	1,041.6302	0.0243	0.0000	1,042.2368
<b>Total</b>	<b>0.5800</b>	<b>3.3685</b>	<b>4.2721</b>	<b>0.0198</b>	<b>1.4933</b>	<b>0.0135</b>	<b>1.5068</b>	<b>0.4012</b>	<b>0.0127</b>	<b>0.4139</b>	<b>0.0000</b>	<b>1,834.4089</b>	<b>1,834.4089</b>	<b>0.0847</b>	<b>0.0000</b>	<b>1,836.5274</b>

**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	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
<b>Total</b>	<b>0.2481</b>	<b>2.2749</b>	<b>2.1631</b>	<b>3.5100e-003</b>		<b>0.1251</b>	<b>0.1251</b>		<b>0.1176</b>	<b>0.1176</b>	<b>0.0000</b>	<b>302.2863</b>	<b>302.2863</b>	<b>0.0729</b>	<b>0.0000</b>	<b>304.1095</b>

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**3.4 Building Construction - 2021**

**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	0.0775	3.0299	0.5829	8.2900e-003	0.2052	5.7900e-003	0.2110	0.0592	5.5400e-003	0.0648	0.0000	792.7787	792.7787	0.0605	0.0000	794.2906
Worker	0.5024	0.3386	3.6892	0.0115	1.2881	7.7200e-003	1.2958	0.3420	7.1100e-003	0.3491	0.0000	1,041.6302	1,041.6302	0.0243	0.0000	1,042.2368
<b>Total</b>	<b>0.5800</b>	<b>3.3685</b>	<b>4.2721</b>	<b>0.0198</b>	<b>1.4933</b>	<b>0.0135</b>	<b>1.5068</b>	<b>0.4012</b>	<b>0.0127</b>	<b>0.4139</b>	<b>0.0000</b>	<b>1,834.4089</b>	<b>1,834.4089</b>	<b>0.0847</b>	<b>0.0000</b>	<b>1,836.5274</b>

**3.4 Building Construction - 2022**

**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	0.1066	0.9760	1.0227	1.6800e-003		0.0506	0.0506		0.0476	0.0476	0.0000	144.8283	144.8283	0.0347	0.0000	145.6957
<b>Total</b>	<b>0.1066</b>	<b>0.9760</b>	<b>1.0227</b>	<b>1.6800e-003</b>		<b>0.0506</b>	<b>0.0506</b>		<b>0.0476</b>	<b>0.0476</b>	<b>0.0000</b>	<b>144.8283</b>	<b>144.8283</b>	<b>0.0347</b>	<b>0.0000</b>	<b>145.6957</b>

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**3.4 Building Construction - 2022**

**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	0.0346	1.3671	0.2600	3.9300e-003	0.0983	2.3300e-003	0.1006	0.0284	2.2300e-003	0.0306	0.0000	376.4173	376.4173	0.0274	0.0000	377.1033
Worker	0.2255	0.1459	1.6276	5.3100e-003	0.6169	3.6000e-003	0.6205	0.1638	3.3100e-003	0.1671	0.0000	480.6607	480.6607	0.0104	0.0000	480.9219
<b>Total</b>	<b>0.2601</b>	<b>1.5130</b>	<b>1.8877</b>	<b>9.2400e-003</b>	<b>0.7152</b>	<b>5.9300e-003</b>	<b>0.7211</b>	<b>0.1922</b>	<b>5.5400e-003</b>	<b>0.1977</b>	<b>0.0000</b>	<b>857.0780</b>	<b>857.0780</b>	<b>0.0379</b>	<b>0.0000</b>	<b>858.0251</b>

**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	0.1066	0.9760	1.0227	1.6800e-003		0.0506	0.0506		0.0476	0.0476	0.0000	144.8281	144.8281	0.0347	0.0000	145.6955
<b>Total</b>	<b>0.1066</b>	<b>0.9760</b>	<b>1.0227</b>	<b>1.6800e-003</b>		<b>0.0506</b>	<b>0.0506</b>		<b>0.0476</b>	<b>0.0476</b>	<b>0.0000</b>	<b>144.8281</b>	<b>144.8281</b>	<b>0.0347</b>	<b>0.0000</b>	<b>145.6955</b>

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**3.4 Building Construction - 2022**

**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	0.0346	1.3671	0.2600	3.9300e-003	0.0983	2.3300e-003	0.1006	0.0284	2.2300e-003	0.0306	0.0000	376.4173	376.4173	0.0274	0.0000	377.1033
Worker	0.2255	0.1459	1.6276	5.3100e-003	0.6169	3.6000e-003	0.6205	0.1638	3.3100e-003	0.1671	0.0000	480.6607	480.6607	0.0104	0.0000	480.9219
<b>Total</b>	<b>0.2601</b>	<b>1.5130</b>	<b>1.8877</b>	<b>9.2400e-003</b>	<b>0.7152</b>	<b>5.9300e-003</b>	<b>0.7211</b>	<b>0.1922</b>	<b>5.5400e-003</b>	<b>0.1977</b>	<b>0.0000</b>	<b>857.0780</b>	<b>857.0780</b>	<b>0.0379</b>	<b>0.0000</b>	<b>858.0251</b>

**3.5 Paving - 2022**

**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	0.0303	0.3059	0.4010	6.3000e-004		0.0156	0.0156		0.0144	0.0144	0.0000	55.0758	55.0758	0.0178	0.0000	55.5211
Paving	0.0173					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0476</b>	<b>0.3059</b>	<b>0.4010</b>	<b>6.3000e-004</b>		<b>0.0156</b>	<b>0.0156</b>		<b>0.0144</b>	<b>0.0144</b>	<b>0.0000</b>	<b>55.0758</b>	<b>55.0758</b>	<b>0.0178</b>	<b>0.0000</b>	<b>55.5211</b>

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**3.5 Paving - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6600e-003	1.0700e-003	0.0120	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	2.0000e-005	1.2300e-003	0.0000	3.5327	3.5327	8.0000e-005	0.0000	3.5346
<b>Total</b>	<b>1.6600e-003</b>	<b>1.0700e-003</b>	<b>0.0120</b>	<b>4.0000e-005</b>	<b>4.5300e-003</b>	<b>3.0000e-005</b>	<b>4.5600e-003</b>	<b>1.2000e-003</b>	<b>2.0000e-005</b>	<b>1.2300e-003</b>	<b>0.0000</b>	<b>3.5327</b>	<b>3.5327</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>3.5346</b>

**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	0.0303	0.3059	0.4010	6.3000e-004		0.0156	0.0156		0.0144	0.0144	0.0000	55.0757	55.0757	0.0178	0.0000	55.5210
Paving	0.0173					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0476</b>	<b>0.3059</b>	<b>0.4010</b>	<b>6.3000e-004</b>		<b>0.0156</b>	<b>0.0156</b>		<b>0.0144</b>	<b>0.0144</b>	<b>0.0000</b>	<b>55.0757</b>	<b>55.0757</b>	<b>0.0178</b>	<b>0.0000</b>	<b>55.5210</b>

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**3.5 Paving - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6600e-003	1.0700e-003	0.0120	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	2.0000e-005	1.2300e-003	0.0000	3.5327	3.5327	8.0000e-005	0.0000	3.5346
<b>Total</b>	<b>1.6600e-003</b>	<b>1.0700e-003</b>	<b>0.0120</b>	<b>4.0000e-005</b>	<b>4.5300e-003</b>	<b>3.0000e-005</b>	<b>4.5600e-003</b>	<b>1.2000e-003</b>	<b>2.0000e-005</b>	<b>1.2300e-003</b>	<b>0.0000</b>	<b>3.5327</b>	<b>3.5327</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>3.5346</b>

**3.6 Architectural Coating - 2022**

**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	0.6320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6200e-003	0.0387	0.0499	8.0000e-005		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	7.0215	7.0215	4.6000e-004	0.0000	7.0329
<b>Total</b>	<b>0.6377</b>	<b>0.0387</b>	<b>0.0499</b>	<b>8.0000e-005</b>		<b>2.2500e-003</b>	<b>2.2500e-003</b>		<b>2.2500e-003</b>	<b>2.2500e-003</b>	<b>0.0000</b>	<b>7.0215</b>	<b>7.0215</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>7.0329</b>

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**3.6 Architectural Coating - 2022**

**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	0.0199	0.0129	0.1436	4.7000e-004	0.0544	3.2000e-004	0.0547	0.0145	2.9000e-004	0.0147	0.0000	42.3924	42.3924	9.2000e-004	0.0000	42.4154
<b>Total</b>	<b>0.0199</b>	<b>0.0129</b>	<b>0.1436</b>	<b>4.7000e-004</b>	<b>0.0544</b>	<b>3.2000e-004</b>	<b>0.0547</b>	<b>0.0145</b>	<b>2.9000e-004</b>	<b>0.0147</b>	<b>0.0000</b>	<b>42.3924</b>	<b>42.3924</b>	<b>9.2000e-004</b>	<b>0.0000</b>	<b>42.4154</b>

**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	0.6320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6200e-003	0.0387	0.0499	8.0000e-005		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	7.0214	7.0214	4.6000e-004	0.0000	7.0329
<b>Total</b>	<b>0.6377</b>	<b>0.0387</b>	<b>0.0499</b>	<b>8.0000e-005</b>		<b>2.2500e-003</b>	<b>2.2500e-003</b>		<b>2.2500e-003</b>	<b>2.2500e-003</b>	<b>0.0000</b>	<b>7.0214</b>	<b>7.0214</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>7.0329</b>

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**3.6 Architectural Coating - 2022**

**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	0.0199	0.0129	0.1436	4.7000e-004	0.0544	3.2000e-004	0.0547	0.0145	2.9000e-004	0.0147	0.0000	42.3924	42.3924	9.2000e-004	0.0000	42.4154
<b>Total</b>	<b>0.0199</b>	<b>0.0129</b>	<b>0.1436</b>	<b>4.7000e-004</b>	<b>0.0544</b>	<b>3.2000e-004</b>	<b>0.0547</b>	<b>0.0145</b>	<b>2.9000e-004</b>	<b>0.0147</b>	<b>0.0000</b>	<b>42.3924</b>	<b>42.3924</b>	<b>9.2000e-004</b>	<b>0.0000</b>	<b>42.4154</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.2768	16.3952	18.6042	0.0808	5.4037	0.0454	5.4492	1.4476	0.0423	1.4899	0.0000	7,525.029 2	7,525.029 2	0.4809	0.0000	7,537.0511
Unmitigated	2.7753	19.9063	32.7740	0.1556	12.2300	0.0885	12.3185	3.2763	0.0825	3.3587	0.0000	14,446.43 35	14,446.43 35	0.6613	0.0000	14,462.96 65

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	4,497.22	4,497.22	4,497.22	15,622,425	6,902,667
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	6,852.34	6,852.34	6,852.34	16,413,874	7,252,363
Total	11,349.56	11,349.56	11,349.56	32,036,299	14,155,030

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	87	13	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	59.5	40.5	0

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Other Non-Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Regional Shopping Center	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,811.6439	1,811.6439	0.0748	0.0155	1,818.1251
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,041.7454	2,041.7454	0.0843	0.0174	2,049.0498
NaturalGas Mitigated	0.0564	0.4840	0.2170	3.0800e-003		0.0390	0.0390		0.0390	0.0390	0.0000	558.6000	558.6000	0.0107	0.0102	561.9195
NaturalGas Unmitigated	0.0564	0.4840	0.2170	3.0800e-003		0.0390	0.0390		0.0390	0.0390	0.0000	558.6000	558.6000	0.0107	0.0102	561.9195

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**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					
Apartments Low Rise	9.92096e+006	0.0535	0.4571	0.1945	2.9200e-003		0.0370	0.0370		0.0370	0.0370	0.0000	529.4200	529.4200	0.0102	9.7100e-003	532.5661
Other Non-Asphalt Surfaces	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
Parking Lot	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
Regional Shopping Center	546813	2.9500e-003	0.0268	0.0225	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.1800	29.1800	5.6000e-004	5.3000e-004	29.3534
<b>Total</b>		<b>0.0565</b>	<b>0.4839</b>	<b>0.2171</b>	<b>3.0800e-003</b>		<b>0.0390</b>	<b>0.0390</b>		<b>0.0390</b>	<b>0.0390</b>	<b>0.0000</b>	<b>558.6000</b>	<b>558.6000</b>	<b>0.0107</b>	<b>0.0102</b>	<b>561.9195</b>

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**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	9.92096e+006	0.0535	0.4571	0.1945	2.9200e-003		0.0370	0.0370		0.0370	0.0370	0.0000	529.4200	529.4200	0.0102	9.7100e-003	532.5661
Other Non-Asphalt Surfaces	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
Parking Lot	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
Regional Shopping Center	546813	2.9500e-003	0.0268	0.0225	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.1800	29.1800	5.6000e-004	5.3000e-004	29.3534
<b>Total</b>		<b>0.0565</b>	<b>0.4839</b>	<b>0.2171</b>	<b>3.0800e-003</b>		<b>0.0390</b>	<b>0.0390</b>		<b>0.0390</b>	<b>0.0390</b>	<b>0.0000</b>	<b>558.6000</b>	<b>558.6000</b>	<b>0.0107</b>	<b>0.0102</b>	<b>561.9195</b>

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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.09599e+006	986.4474	0.0407	8.4300e-003	989.9764
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	201154	64.0921	2.6500e-003	5.5000e-004	64.3214
Regional Shopping Center	3.11092e+006	991.2059	0.0409	8.4700e-003	994.7520
<b>Total</b>		<b>2,041.7454</b>	<b>0.0843</b>	<b>0.0175</b>	<b>2,049.0498</b>

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**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.8716e+006	914.9544	0.0378	7.8200e-003	918.2277
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	140808	44.8645	1.8500e-003	3.8000e-004	45.0250
Regional Shopping Center	2.67347e+006	851.8250	0.0352	7.2800e-003	854.8724
<b>Total</b>		<b>1,811.6439</b>	<b>0.0748</b>	<b>0.0155</b>	<b>1,818.1251</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive 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	3.7855	0.1947	6.6318	1.1100e-003		0.0460	0.0460		0.0460	0.0460	0.0000	148.4218	148.4218	0.0130	2.5200e-003	149.4992
Unmitigated	3.7855	0.1947	6.6318	1.1100e-003		0.0460	0.0460		0.0460	0.0460	0.0000	148.4218	148.4218	0.0130	2.5200e-003	149.4992

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	0.3254					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.2473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0139	0.1189	0.0506	7.6000e-004		9.6100e-003	9.6100e-003		9.6100e-003	9.6100e-003	0.0000	137.6706	137.6706	2.6400e-003	2.5200e-003	138.4887
Landscaping	0.1989	0.0758	6.5812	3.5000e-004		0.0364	0.0364		0.0364	0.0364	0.0000	10.7512	10.7512	0.0104	0.0000	11.0105
<b>Total</b>	<b>3.7855</b>	<b>0.1947</b>	<b>6.6318</b>	<b>1.1100e-003</b>		<b>0.0460</b>	<b>0.0460</b>		<b>0.0460</b>	<b>0.0460</b>	<b>0.0000</b>	<b>148.4218</b>	<b>148.4218</b>	<b>0.0130</b>	<b>2.5200e-003</b>	<b>149.4992</b>

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**6.2 Area by SubCategory**

**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	0.3254					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.2473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0139	0.1189	0.0506	7.6000e-004		9.6100e-003	9.6100e-003		9.6100e-003	9.6100e-003	0.0000	137.6706	137.6706	2.6400e-003	2.5200e-003	138.4887
Landscaping	0.1989	0.0758	6.5812	3.5000e-004		0.0364	0.0364		0.0364	0.0364	0.0000	10.7512	10.7512	0.0104	0.0000	11.0105
<b>Total</b>	<b>3.7855</b>	<b>0.1947</b>	<b>6.6318</b>	<b>1.1100e-003</b>		<b>0.0460</b>	<b>0.0460</b>		<b>0.0460</b>	<b>0.0460</b>	<b>0.0000</b>	<b>148.4218</b>	<b>148.4218</b>	<b>0.0130</b>	<b>2.5200e-003</b>	<b>149.4992</b>

**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

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	337.6091	1.5708	0.0395	388.6597
Unmitigated	399.0407	1.9626	0.0492	462.7718

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	41.5031 / 26.165	277.9750	1.3633	0.0342	322.2477
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	18.2448 / 11.1823	121.0658	0.5993	0.0150	140.5241
<b>Total</b>		<b>399.0407</b>	<b>1.9626</b>	<b>0.0492</b>	<b>462.7718</b>

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**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	33.2025 / 24.5689	235.2543	1.0912	0.0275	270.7186
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	14.5958 / 10.5002	102.3548	0.4796	0.0121	117.9411
<b>Total</b>		<b>337.6091</b>	<b>1.5708</b>	<b>0.0395</b>	<b>388.6597</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

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**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	27.9950	1.6545	0.0000	69.3564
Unmitigated	111.9800	6.6178	0.0000	277.4256

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	293.02	59.4804	3.5152	0.0000	147.3602
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	258.63	52.4996	3.1026	0.0000	130.0654
<b>Total</b>		<b>111.9800</b>	<b>6.6178</b>	<b>0.0000</b>	<b>277.4256</b>

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**8.2 Waste by Land Use**

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	73.255	14.8701	0.8788	0.0000	36.8401
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	64.6575	13.1249	0.7757	0.0000	32.5164
<b>Total</b>		<b>27.9950</b>	<b>1.6545</b>	<b>0.0000</b>	<b>69.3564</b>

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Palomar Crossing - Riverside-South Coast County, Annual

Equipment Type	Number
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**11.0 Vegetation**

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	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	92.0400	0.0000	0.0000	92.0400

**11.2 Net New Trees**

**Species Class**

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	130	92.0400	0.0000	0.0000	92.0400
<b>Total</b>		<b>92.0400</b>	<b>0.0000</b>	<b>0.0000</b>	<b>92.0400</b>