

APPENDIX 1

Air Quality and Global Climate Change



KUNZMAN ASSOCIATES, INC.

MILLCREEK PROMENADE

**AIR QUALITY AND GLOBAL CLIMATE CHANGE
IMPACT ANALYSIS**

February 28, 2018



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I. INTRODUCTION AND SETTING

A. Purpose and Objectives

This study was performed to address the possibility of regional and local air quality impacts, and global climate change impacts, from air emissions. The objectives of the study include:

- documentation of the atmospheric setting
- discussion of criteria pollutants and greenhouse gases
- discussion of the air quality and global climate change regulatory framework
- discussion of the air quality, greenhouse gases, and cancer risk thresholds of significance
- analysis of the construction related air quality and greenhouse gas emissions
- analysis of the operations related air quality and greenhouse gas emissions
- analysis of the conformity of the proposed project with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP)
- recommendations for mitigation measures

The City of Menifee is the lead agency for this air quality analysis, and this analysis has been prepared in accordance with the California Environmental Quality Act authorizing legislation. Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with terms unique to air quality and global climate change, a definition of terms has been provided in Appendix A.

B. Project Location

The proposed project is located south of Garbani Road between Sherman Road and Haun Road in the City of Menifee. The general plan land use designation for the site is Economic Development Corridor (EDC). The site is currently vacant. The vicinity map showing the project location is provided on Figure 1.

C. Project Description

The project proposes to develop an approximately 58.51 gross acre project site with a mix of residential, commercial, and industrial park uses. The proposed project is separated into five planning areas.

The first planning area (Rancho Bonito Townhomes) covers approximately 15.61 acres and is proposed to consist of 210 two-story attached single-family residential townhomes and a 1,972 square foot clubhouse. The townhomes would consist of two different building types, Type A and Type B. There will be 35 Type A buildings and nine Type B buildings. This area is proposed to provide 120 open guest parking spaces.

The second planning area (Trails Single Family Detached Residences) covers approximately 21.72 acres and is proposed to consist of 204 small lot motor court cluster homes and a 1,781 square foot clubhouse. The homes are to be split between five plan types. This area is proposed to provide a total 158 guest parking spaces along private streets.

The third planning area (Millcreek Promenade Shopping Center) covers approximately 15.3 acres and is proposed to consist of approximately 122,727 square feet of retail commercial uses and an 8,000 square foot high-turnover (sit-down) restaurant. The shopping center is to proposed to provide a total of 756 parking spaces.

The fourth planning area (Industrial Park) covers approximately 2.82 acres and is proposed to consist of 38,400 square feet of industrial park uses, while the fifth planning area (Mill Creek/Rancho Bonito Open Space/Bluelines) covers approximately 3.06 acres and is a natural blueline/open space area with pedestrian access. The fourth planning area is proposed to provide a total of 80 parking spaces.

Figure 2 illustrates the project site plan.

D. Phasing and Timing

The proposed project is anticipated to be completed in two phases. Project construction is anticipated to start no earlier than June 2019 with the entire project being completed by September 2022.

Phase 1 includes the industrial park, commercial retail, and high-turnover (sit-down) restaurant portions of the proposed project. Construction of Phase 1 is expected to begin June 2019 and be completed by approximately mid-December 2020. Phase 1 is expected to be operational in 2020.

Phase 2 would include the residential portion of the proposed project, both multi-family residential and single-family residential, and is expected to begin approximately mid-December 2020 and be completed by the beginning of September 2022. Phase 2 is expected to be operational in 2022.

D. Sensitive Receptors in Project Vicinity

Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD defines a sensitive receptor as a land use such as residences, schools, child care centers, athletic facilities, playgrounds, retirement homes and convalescent homes (South Coast Air Quality Management District 2008). Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours.

The nearest sensitive receptors to the project site are a mobile home located approximately 30 feet west of the project site and single-family detached residential dwelling units located approximately 125 feet north of the project site, just north of Garbani Road. In addition, Marsden Community Park is approximately 612 feet north and Paloma Valley High School is located approximately 0.73 miles northwest of the project site.

E. Executive Summary of Findings

Construction-Source Emissions

With incorporation of mitigation measure 1 (see Section X), project construction-source emissions would not exceed applicable regional thresholds of significance established by the SCAQMD. For localized emissions, the project will not exceed applicable Localized Significance Thresholds (LSTs) established by the SCAQMD.

With incorporation of mitigation measure 1, project construction-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). As discussed herein, the project will comply with all applicable SCAQMD construction-source emission reduction rules and guidelines. Project construction source emissions would not cause or substantively contribute to violation of the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS).

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

Operational-Source Emissions

Even with incorporation of mitigation measures 2 through 8 (see Section X), project operational-sourced emissions would exceed applicable regional thresholds of significance established by the SCAQMD for NO_x. However, project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the Operations-Related Local Air Quality Impacts section of this report. Additionally, project-related trips will not cause or result in CO concentrations (CO "hot spots") exceeding applicable state and/or federal standards. Project operational-source emissions would therefore not adversely affect sensitive receptors within the vicinity of the project.

Due to exceedance of NO_x regional thresholds, project operational-source emissions would potentially conflict with the Basin Air Quality Management Plan (AQMP). The project's emissions exceed SCAQMD regional thresholds for NO_x and will potentially result in a significant cumulative impact. However, the project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential operational-source odor impacts are therefore considered less-than significant.

The project is in compliance with the goals of the CARB Scoping Plan and would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. However, even with incorporation of mitigation measures 2 through 8, project-related GHG emissions are considered to be significant and unavoidable.

Figure 1
Project Location Map

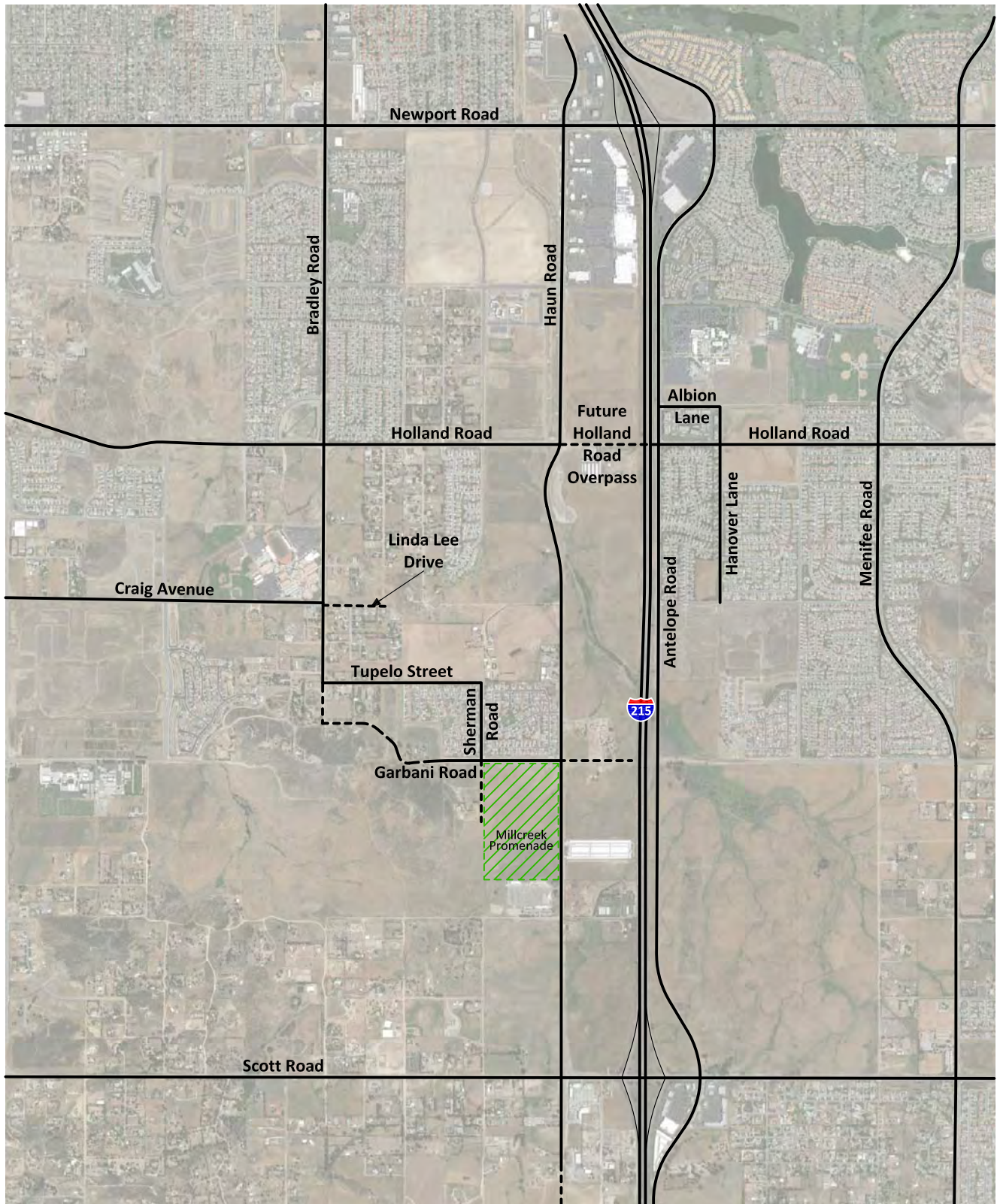
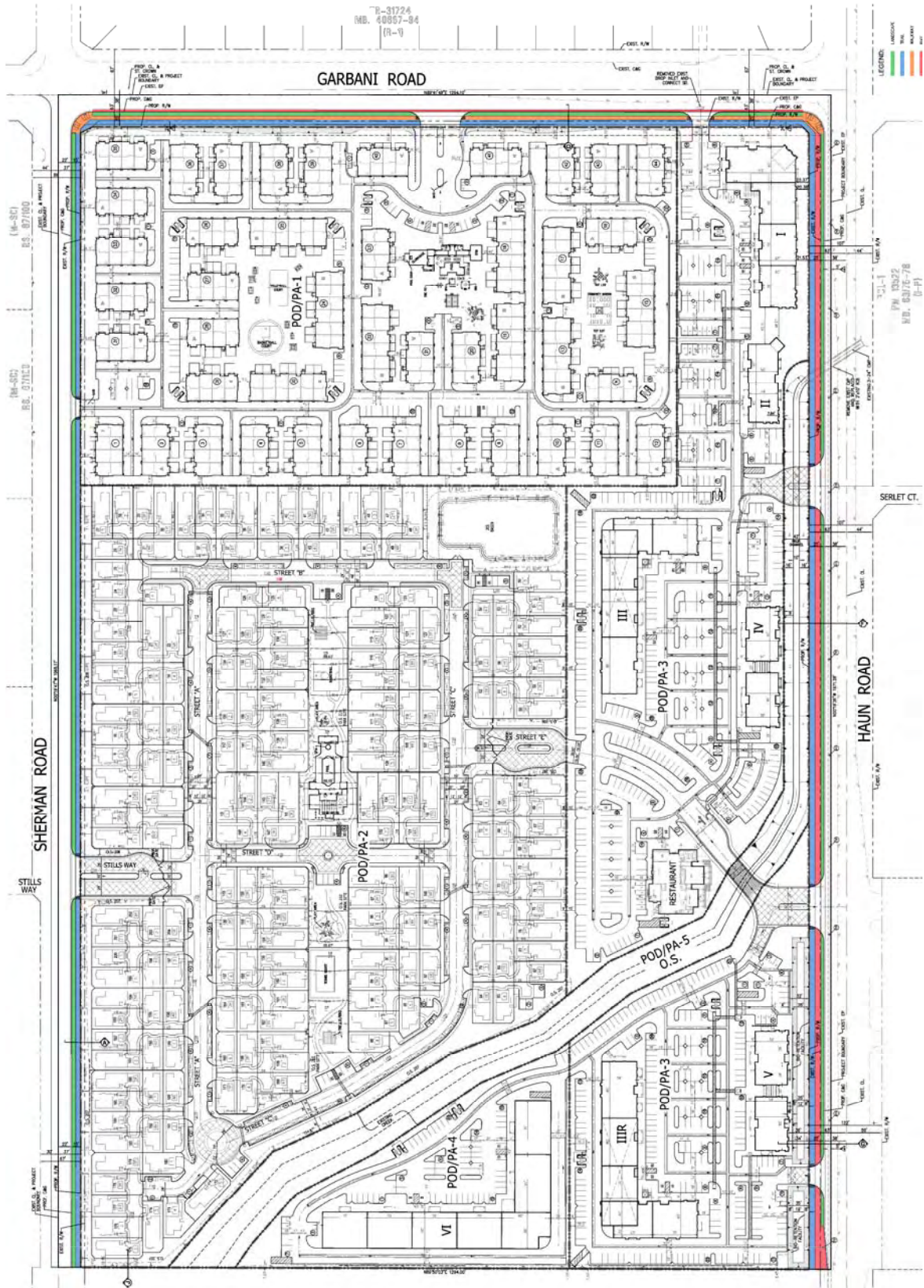


Figure 2
Site Plan



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II. ATMOSPHERIC SETTING

A. Local Air Quality

The project is located within the City of Menifee in the portion of Riverside County that lies within the South Coast Air Basin (Basin). The project area is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County.

The ambient concentrations of air pollutants are determined by the amount of emissions released by sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources.

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The topography and climate of southern California combine to make the Basin an area of high air pollution potential. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds.

The usually mild climatological pattern is disrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions that produce ozone.

The Menifee area is an interior valley of the Basin. Clouds and fog that form along the coast infrequently extend as far inland as the Menifee valley, and usually burn off quickly after sunrise. Precipitation is greatest during the winter season from December through March. Average temperatures are typically highest during August and lowest during December. The highest and lowest average temperatures recorded were 98.6 degrees Fahrenheit (°F) and 35.4 °F, respectively (see Table 1).

Table 1**Menifee Monthly Climate Data¹**

Descriptor	Month of Year											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Max. Temperature (°f)	66.7	68.1	71.1	77.2	83.2	91.8	97.6	98.6	93.5	84.2	71.2	66.9
Avg. Min. Temperature (°f)	36.3	38.9	41.6	45.1	50.1	54.5	58.6	60.1	57.4	49.3	39.4	35.4
Avg. Total Precipitation (in.)	2.29	3.08	1.95	0.79	0.31	0.07	0.04	0.22	0.10	0.45	0.71	1.33

¹ Source: <http://wrcc.dri.edu/climatedata/climsum/> (Data taken from the Sun City station)

III. POLLUTANTS

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

A. Criteria Pollutants

The criteria pollutants consist of: ozone, nitrogen oxides, carbon monoxide, sulfur oxides, lead, and particulate matter. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants “criteria” air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants.

1. Nitrogen Oxides

Nitrogen Oxide (NO_x) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NO_x are colorless and odorless, concentrations of nitrogen dioxide (NO₂) can often be seen as a reddish-brown layer over many urban areas. NO_x form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NO_x are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NO_x reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO₂, which cause respiratory problems. NO_x and the pollutants formed from NO_x can be transported over long distances, following the patterns of prevailing winds. Therefore controlling NO_x is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

2. Ozone

Ozone is not usually emitted directly into the air but at ground-level is created by a chemical reaction between NO_x and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NO_x and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NO_x and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NO_x and VOC emissions.

3. Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

4. Sulfur Oxides

Sulfur Oxide (SOx) gases are formed when fuel containing sulfur, such as coal and oil is burned, and from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

5. Lead

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants and children to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and

lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

6. Particulate Matter

Particulate matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Particulate matter is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM₁₀) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM_{2.5}) have been designated as a subset of PM₁₀ due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

7. Volatile Organic Compounds (VOC)

Although not a criteria pollutant, reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM₁₀ and lower visibility.

B. Other Pollutants of Concern

1. Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important of these toxic air contaminants, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to toxic air contaminants can result from emissions from normal operations as well as from accidental releases. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

Toxic air contaminants are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of toxic air contaminants with varying degrees of toxicity. Sources of toxic air

contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2013 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from toxic air contaminants can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). Diesel particulate matter is a subset of PM_{2.5} because the size of diesel particles are typically 2.5 microns and smaller. The identification of diesel particulate matter as a toxic air contaminant in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in diesel particulate matter by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of diesel particulate matter as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to diesel particulate matter is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

2. Asbestos

Asbestos is listed as a TAC by the ARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in Riverside County. The nearest likely locations of naturally occurring asbestos, as identified in the General Location Guide for Ultramafic Rocks in California prepared by the California Division of Mines and Geology, is located in Santa Barbara County. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

C. Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO₂), methane (CH₄), ozone, water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse

gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO₂ and nitrous oxide (NO_x) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO₂, where CO₂ is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

1. Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

2. Carbon Dioxide

The natural production and absorption of CO₂ is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s. Each of these activities has increased in scale and distribution. CO₂ was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC Fifth Assessment Report, 2014) Emissions of CO₂ from fossil fuel combustion and industrial processes contributed about 78% of the total GHG emissions increase from 1970 to 2010, with a similar percentage contribution for the increase during the period 2000 to 2010. Globally, economic and population growth continued to be the most important drivers of increases in CO₂ emissions from fossil fuel combustion. The contribution of

population growth between 2000 and 2010 remained roughly identical to the previous three decades, while the contribution of economic growth has risen sharply.

3. Methane

CH₄ is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO₂. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO₂, N₂O, and Chlorofluorocarbons (CFCs)). CH₄ has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

4. Nitrous Oxide

Concentrations of N₂O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration of this GHG was documented at 314 parts per billion (ppb). N₂O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is also commonly used as an aerosol spray propellant, (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and in race cars).

5. Chlorofluorocarbons

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C₂H₆) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

6. Hydrofluorocarbons

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF₃), HFC-134a (CF₃CH₂F), and HFC-152a (CH₃CHF₂). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a

refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

7. Perfluorocarbons

PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). Concentrations of CF_4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

8. Sulfur Hexafluoride

SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 has the highest global warming potential of any gas evaluated; 23,900 times that of CO_2 . Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

9. Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

10. Global Warming Potential

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 carbon dioxide (CO_2). The larger the GWP, the more that a given gas warms the Earth compared to CO_2 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 (e.g., to compile a national GHG inventory), and allows policymakers to compare emissions reduction opportunities across sectors and gases. A summary of the atmospheric lifetime and the global warming potential of selected gases are summarized in Table 2. As shown in Table 2, the global warming potential of GHGs ranges from 1 to 22,800.

Table 2**Global Warming Potentials and Atmospheric Lifetimes¹**

Gas	Atmospheric Lifetime	Global Warming Potential ² (100 Year Horizon)
Carbon Dioxide (CO ₂)	— ³	1
Methane (CH ₄)	12	28-36
Nitrous Oxide (NO)	114	298
Hydrofluorocarbons (HFCs)	1-270	12-14,800
Perfluorocarbons (PFCs)	2,600-50,000	7,390-12,200
Nitrogen trifluoride (NF ₃)	740	17,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800

¹ Source: <http://www3.epa.gov/climatechange/ghgemissions/gases.html>

² Compared to the same quantity of CO₂ emissions.

³ Carbon dioxide's lifetime is poorly defined because the gas is not destroyed over time, but instead moves among different parts of the ocean-atmosphere-land system. Some of the excess carbon dioxide will be absorbed quickly (for example, by the ocean surface), but some will remain in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments.

IV. AIR QUALITY MANAGEMENT

A. Regulatory Setting

The proposed project is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

1. International

Montreal Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—CFCs, halons, carbon tetrachloride, and methyl chloroform—were to be phased out, with the first three by the year 2000 and methyl chloroform by 2005.

The Paris Agreement

The Paris Agreement entered into force on 4 November 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depositary.

The Paris Agreement builds upon the Convention and – for the first time – brings all nations into a common cause to undertake take ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above 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. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable

countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework.

2. Federal - United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The National Ambient Air Quality Standards (NAAQS) pollutants were identified using medical evidence and are shown below in Table 3.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The State Implementation Plan (SIP) must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the State Implementation Plan (SIP).

The EPA and the California Air Resource Board (CARB) designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are 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_{2.5} standard is met if the three-year average of the annual average PM_{2.5} concentration is less than or equal to the standard. Attainment status is shown in Table 4.

As indicated below in Table 4, the Basin has been designated by the EPA as a non-attainment area for ozone (O₃) and suspended particulates (PM₁₀ and PM_{2.5}). Currently, the Basin is in attainment with the ambient air quality standards for carbon monoxide (CO), lead, sulfur dioxide (SO₂), and nitrogen dioxide (NO₂).

In 2011, the Basin exceeded federal standards for either ozone or PM_{2.5} at one or more locations on a total of 124 days, based on the current federal standards for 8-hour ozone and 24-hour PM_{2.5}. Despite substantial improvements in air quality over the past few decades, some air monitoring stations in the Basin still exceed the NAAQS for ozone more frequently than any other stations in the U.S. In 2011, three of the top five stations that exceeded the 8-hour ozone NAAQS were located in the Basin (Central San Bernardino Mountains, East San Bernardino Valley, and Metropolitan Riverside County).

PM2.5 in the Basin has improved significantly in recent years, with 2010 and 2011 being the cleanest years on record. In 2011, only one station in the Basin (Metropolitan Riverside County at Mira Loma) exceeded the annual PM2.5 NAAQS and the 98th percentile form of the 24-hour PM2.5 NAAQS, as well as the 3-year design values for these standards. Basin-wide, the federal PM2.5 24-hour standard level was exceeded in 2011 on 17 sampling days.

The Basin is currently in attainment for the federal standards for carbon monoxide (CO), lead, sulfur dioxide (SO₂), and nitrogen dioxide (NO₂). While the concentration level of the new 1-hour NO₂ federal standard (100 ppb) was exceeded in the Basin at two stations (Central Los Angeles and Long Beach) on the same day in 2011, the NAAQS NO₂ design value has not been exceeded. Therefore, the Basin remains in attainment of the NO₂ NAAQS.

The EPA designated the Los Angeles County portion of the Basin as nonattainment for the recently revised (2008) federal lead standard (0.15 µg/m³, rolling 3-month average), due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard in the 2007-2009 period of data used. For the most recent 2009-2011 data period, only one of these stations (Vernon) still exceeded the lead standard.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO₂ and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

In response to the FY2008 Consolidations Appropriations Act (H.R. 2764; Public Law 110-161), EPA proposed a rule on March 10, 2009 that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of GHG Rule was signed and published in the Federal Register on October 30, 2009. The rule became effective on December 29, 2009. This rule requires suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions will not themselves impose any requirements on industry or other entities. However, it is a prerequisite to finalizing the EPA's proposed GHG emission standards

for light-duty vehicles, which were jointly proposed by the EPA and Department of Transportation on September 15, 2009.

On March 19, 2015, the Whitehouse announced that President Obama will issue an Executive Order that will cut the Federal Government's greenhouse gas (GHG) emissions 40 percent over the next decade from 2008 levels -- saving taxpayers up to \$18 billion in avoided energy costs -- and increase the share of electricity the Federal Government consumes from renewable sources to 30 percent. Complementing this effort, several major Federal suppliers are announcing commitments to cut their own GHG emissions. Today, the Administration is hosting a roundtable that will bring some of these large Federal suppliers together to discuss the benefits of their GHG reduction targets or to make their first-ever corporate commitments to disclose emissions and set new reduction goals.

Together, the combined results of the Federal Government actions and new supplier commitments will reduce GHG emissions by 26 million metric tons by 2025 from 2008 levels, the equivalent of taking nearly 5.5 million cars off the road for a year. And to encourage continued progress across the Federal supply chain, the Administration is releasing a new scorecard to publicly track self-reported emissions disclosure and progress for all major Federal suppliers, who together represent more than \$187 billion in Federal spending and account for more than 40 percent of all Federal contract dollars.

Since the Federal Government is the single largest consumer of energy in the Nation, Federal emissions reductions and progress across the supply chain will have broad impacts. The new commitments announced today support the United States' international commitment to cut net GHG emissions 26-28 percent below 2005 levels by 2025, which President Obama first announced in November 2014 as part of an historic agreement with China. Additionally, the goals build on the strong progress made by Federal agencies during the first six years of the Administration under President Obama's 2009 Executive Order on Federal Leadership on Environmental, Energy and Economic Performance, including reducing Federal GHG emissions by 17 percent — which helped Federal agencies avoid \$1.8 billion in cumulative energy costs — and increasing the share of renewable energy consumption to 9 percent.¹

3. State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan (SIP). The California Ambient Air Quality Standards (CAAQS) for criteria pollutants are shown in Table 3. In addition, the CARB establishes emission

¹ Source: <https://www.whitehouse.gov/the-press-office/2015/03/19/fact-sheet-reducing-greenhouse-gas-emissions-federal-government-and-acro>.

standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The South Coast Air Basin has been designated by the CARB as a nonattainment area for ozone, PM10 and PM2.5. Currently, the South Coast Air Basin is in attainment with the ambient air quality standards for CO, lead, SO₂, NO₂, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

On June 20, 2002, the CARB revised the PM10 annual average standard to 20 µg/m³ and established an annual average standard for PM2.5 of 12 µg/m³. These standards were approved by the Office of Administrative Law in June 2003 and are now effective. On September 27, 2007 CARB approved the South Coast Air Basin and the Coachella Valley 2007 Air Quality Management Plan for Attaining the Federal 8-hour Ozone and PM2.5 Standards. The plan projects attainment for the 8-hour Ozone standard by 2024 and the PM2.5 standard by 2015.

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NO_x, PM10 and PM2.5 emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. This regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of California.

The CARB is also responsible for regulations pertaining to toxic air contaminants. The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into the South Coast Air Basin. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

The State currently has no regulations that establish ambient air quality standards for GHGs. However, the State has passed laws directing CARB to develop actions to reduce GHG emissions, which are listed below.

Assembly Bill 1493

California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs 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 CO₂ and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the “waiver” request. On January 21, 2009, CARB

submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-3-05

The California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels
- 2020: Reduce greenhouse gas emissions to 1990 levels
- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective.

On December 6, 2007 CARB released the calculated Year 1990 GHG emissions of 427 million metric tons of CO₂e (MMTCO₂e). The 2020 target of 427 MMTCO₂e requires the reduction of 169 MMTCO₂e, or approximately 30 percent from the State's projected 2020 business as usual emissions of 596 MMTCO₂e and the reduction of 42 MMTCO₂e, or almost 10 percent from the 2002-2004 average GHG emissions. Under AB 32, CARB was required to adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 cap by 2020. Early measures CARB took to lower GHG emissions included requiring operators of the largest industrial facilities that emit 25,000 metric tons of CO₂ in a calendar year to submit verification of GHG emissions by December 1, 2010. The CARB Board also approved nine discrete early action measures that include regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations and other sources that became enforceable on or before January 1, 2010.

On December 11, 2008 the CARB Board approved a Scoping Plan, with final adoption May 11, 2009 that proposed a variety of measures including direct regulations, alternative compliance mechanisms, monetary and non-monetary

incentives, voluntary actions, a market-based cap-and-trade system, and a fee regulation to fund the program. In current pending litigation, *Association of Irrigated Residents v. California Air Resources Board*, a California State trial court found that the analysis of the alternatives identified in the AB 32 Scoping Plan Functional Equivalent Document (FED) was not sufficient for informed decision-making and public review under CEQA. In response, CARB has appealed the decision. In addition, CARB prepared the *Supplement to the AB 32 Scoping Plan Functional Equivalent Document*, June 13, 2011. On August 24, 2011 CARB recertified the complete AB 32 Scoping Plan Functional Equivalent Environmental Document revised by the Final Supplement. In December, 2011 the Final Supplement was accepted as sufficient to fulfill the trial court's March order.

While local government operations were not accounted for in achieving the 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 metric tons of CO₂e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2010 levels by 2020 to ensure that municipal and community-wide emissions match the state's reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 metric tons of CO₂e (or approximately 1.2 percent of the GHG reduction target).

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.

On January 20, 2017, CARB announced its release of a proposed plan to reduce greenhouse gas emissions by 40 percent below 1990 levels by 2030 – the most ambitious target in North America. The plan builds on the state's successful efforts to reduce emissions and outlines the most effective ways to reach the 2030 goal, including continuing California's Cap-and-Trade Program. The Final 2017 Scoping Plan Update will be released in late March and be considered for approval by the Board in late April. The latest Scoping Plan was adopted in December 2017.

SB 32. SB 32, Pavley. California Global Warming Solutions Act of 2006.

- (1) The California Global Warming Solutions Act of 2006 designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is

required to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective greenhouse gas emissions reductions. This bill would require the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.

- (2) This bill would become operative only if AB 197 of the 2015–16 Regular Session is enacted and becomes effective on or before January 1, 2017. AB 197 requires that the California Air Resources Board, which directs implementation of emission-reduction programs, should target direct reductions at both stationary and mobile sources.

Senate Bill 1368

Senate Bill 1368 (SB 1368) is the companion Bill of AB 32 and was adopted September, 2006. SB 1368 requires the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007 and for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all electricity provided to the State, including imported electricity, must be generated by plants that meet the standards set by California Public Utilities Commission (CPUC) and California Energy Commission (CEC).

Executive Order S-1-07

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are “back-loaded”, with more reductions required in the last five years, than during the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel

standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

Senate Bill 97

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.

- OPR is clear to state that “to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation.”
- OPR’s emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09

Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08 was signed on November 2008 and expands the State’s Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO’s sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG) jurisdiction, which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements. The Housing Element Update is required by the State to be completed within 18 months after RTP/SCS adoption or by October 2013.

On April 7, 2016, SCAG’s Regional Council adopted the 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS or Plan). The Plan is a long-range visioning plan that balances future mobility and

housing needs with economic, environmental and public health goals. The Plan charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It outlines more than \$556.5 billion in transportation system investments through 2040. The Plan was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura. In June 2016, SCAG received its conformity determination from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) indicating that all air quality conformity requirements for the 2016 RTP/SCS and associated 2015 FTIP Consistency Amendment through Amendment 15-12 have been met.

Senate Bill X7-7

Senate Bill X7-7 (SB X7-7), enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. In addition SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

Assembly Bill 939 and Senate Bill 1374

Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013 Standards have been

approved and were effective July 1, 2014. 2016 Standards were adopted January 1, 2017.

California Code of Regulations (CCR) Title 24, Part 11

All buildings for which an application for a building permit is submitted on or after January 1, 2017 must follow the 2016 standards. The 2016 residential standards are estimated to be approximately 28 percent more efficient than the 2013 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Green Building Standards

On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

The 2016 version of the standards became effective as of January 1, 2017. The 2016 version address additional items such as clean air vehicles, increased requirements for electric vehicles charging infrastructure, organic waste, and water efficiency and conservation.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

Executive Order B-30-15

Executive Order B-30-15, establishing a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030, was signed by Governor Brown in April 2015.

Executive Order B-29-15

Executive Order B-29-15, mandates a statewide 25% reduction in potable water usage. EO B-29-15 signed into law on April 1, 2015.

Executive Order B-37-16

Executive Order B-29-15, continuing the State's adopted water reductions, was signed into law on May 9, 2016. The water reductions build off the mandatory 25% percent reduction called for in EO B-29-15.

4. Regional

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies. SCAMD defines a "sensitive receptor" as a land use such as residences, schools, child care centers, athletic facilities, playgrounds, retirement homes and convalescent homes.

South Coast Air Quality Management District

The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. The SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. On June 30, 2016, the SCAQMD released its Draft 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air.

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. As with every AQMP, a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures is updated with the latest data and methods. The most significant air quality challenge in the Basin is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. On March 23, 2017 CARB approved the 2016 AQMP. The primary goal of this Air Quality Management Plan is to meet clean air standards and protect public health, including ensuring benefits to environmental justice and disadvantaged communities. Now that the plan has been approved by CARB, it has been forwarded to the U.S. Environmental Protection Agency for its review. If approved by EPA, the plan becomes federally enforceable.

A revised draft of the 2012 AQMP was released on September, 2012, was adopted by the SCAQMD Board on December 7, 2012, and was adopted by CARB via Resolution 13-3 on January 25, 2013. The 2012 AQMP was prepared in order to meet the federal Clean Air Act requirement that all 24-hour PM_{2.5} non-attainment areas prepare a SIP, that were required to be submitted to the U.S. EPA by December 14, 2012 and demonstrate attainment with the 24-hour PM_{2.5} standard by 2014. The 2012 AQMP demonstrates attainment of the federal 24-hour PM_{2.5} standard by 2014 in the Basin through adoption of all feasible measures, and therefore, no extension of the attainment date is needed.

The 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023, through implementation of future improvements in control techniques and technologies. These “black box” emissions reductions represent 65 percent of the remaining NO_x emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NO_x control measures have been provided in this AQMP even though the primary purpose of this AQMP is to show compliance with 24-hour PM_{2.5} emissions standards.

The 2012 AQMP built upon the approaches taken in the 2007 AQMP for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions needed and the need to engage in interagency coordinated planning of mobile sources to meet all of the federal criteria pollutant standards. Compared with the 2007 AQMP, the 2012 AQMP utilizes revised emissions inventory projections that use 2008 as the base year. On-road emissions are calculated using CARB EMFAC2011 emission factors and the transportation activity data provided by SCAG from their 2012 Regional Transportation Plan (2012 RTP). Off-road emissions were updated using CARB’s 2011 In-Use Off-Road Fleet Inventory Model. Since the 2007 AQMP was finalized new area source categories such as liquid propane gas (LPG) transmission losses, storage tank and pipeline cleaning and degassing, and architectural colorants, were created and included in the emissions inventories. The 2012 AQMP also includes analysis of several additional sources of GHG emissions such as landfills and could also assist in reaching the GHG target goals in the AB32 Scoping Plan.

The control measures in the 2012 AQMP consist of three components: (1) Basin-wide and episodic short-term PM_{2.5} measures; (2) Section 182(e)(5) implementation measures; and (3) Transportation control measures. Many of the control measures are not based on command and control regulations, but instead focus on incentives, outreach, and education to bring about emissions reductions through voluntary participation and behavioral changes. More broadly, a transition to zero- and near-zero emission technologies is necessary to meet 2023 and 2032 air quality standards and 2050 climate goals. Many of the same technologies will address both air quality and climate needs.

During construction and operation, the project must comply with applicable rules and regulations. The following are rules the project may be required to comply with, either directly, or indirectly:

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.

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 Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM₁₀ component). Compliance with these rules would reduce impacts on nearby sensitive receptors. Rule 403 measures may include but are not limited to the following:

- 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 three times daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

SCAQMD Rule 445 prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning

heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

SCAQMD Rule 481 applies to all spray painting and spray coating operations and equipment. The rule states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

- (1) The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.
- (2) Coatings are applied with high-volume low-pressure, electrostatic and/or airless spray equipment.
- (3) An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.

SCAQMD Rule 1108 governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the South Coast Air Basin. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the project must comply with SCAQMD Rule 1108.

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 the project must comply with SCAQMD 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 1401, New Source Review of Toxic Air Contaminants, specifies limits for maximum individual cancer risk, cancer burden, and non-cancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units, which emit toxic air contaminants.

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.

In order to assist local agencies with direction on GHG emissions, the SCAQMD organized a working group and adopted Rules 2700, 2701, 2702, and 3002 which are described below.

SCAQMD Working Group

Since neither CARB nor the OPR has developed GHG emissions threshold, the SCAQMD formed a Working Group to develop significance thresholds related to GHG emissions. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual thresholds of 10,000 MTCO₂e for industrial uses.

Rules 2700 and 2701

The SCAQMD adopted Rules 2700 and 2701 on December 5, 2008, which establishes the administrative structure for a voluntary program designed to quantify GHG emission reductions. Rule 2700 establishes definitions for the various terms used in Regulation XXVII – Global Climate Change. Rule 2701 provides specific protocols for private parties to follow to generate certified GHG emission reductions for projects within the district. Approved protocols include forest projects, urban tree planting, and manure management. The SCAQMD is currently developing additional protocols for other reduction measures. For a GHG emission reduction project to qualify, it must be verified and certified by the SCAQMD Executive Officer, who has 60 days to approve or deny the Plan to reduce GHG emissions. Upon approval of the Plan, the Executive Officer issues required to issue a certified receipt of the GHG emission reductions within 90 days.

Rule 2702

The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the

cap-and-trade program identified for implementation in CARB's Scoping Plan, or a Federal cap and trade program.

Rule 3002

The SCAQMD amended Rule 3002 on November 5, 2010 to include facilities that emit greater than 100,000 tons per year of CO₂e are required to apply for a Title V permit by July 1, 2011. A Title V permit is for facilities that are considered major sources of emissions.

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the South Coast Air Basin. Instead, this is controlled through local jurisdictions in accordance with the California Environmental Quality Act (CEQA). In order to assist local jurisdictions with air quality compliance issues the CEQA Air Quality Handbook (SCAQMD CEQA Handbook) prepared by the SCAQMD (1993), with the most current updates found at <http://www.aqmd.gov/ceqa/hdbk.html>, was developed in accordance with the projections and programs of the AQMP. The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that the SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the South Coast Air Basin, and adverse impacts will be minimized.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the Federally designated MPO for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the Regional Transportation Plan and Regional Transportation Improvement Plan (RTIP), which addresses regional development and growth forecasts. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The Regional Transportation Plan, Regional Transportation Improvement Plan, and AQMP are based on projections originating within the City and County General Plans.

5. Local - City of Menifee

The Circulation Element, Open Space and Conservation Element, and the Land Use Element of the Menifee General Plan summarize air quality issues in the Basin, air

quality-related plans and programs administered by federal, state, and special purpose agencies, and establishes goals and policies to improve air quality.

Applicable goals and policies from the Circulation Element include:

- | | |
|---------------------|--|
| <i>Policy C-1.5</i> | Minimize idling times and vehicle miles traveled to conserve resources, protect air quality, and limit greenhouse gas emissions. |
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| <i>Goal C-2</i> | A bikeway and community pedestrian network that facilitates and encourages non-motorized travel throughout the City of Menifee. |
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| <i>Policy C-2.2</i> | Provide off-street multipurpose trails and on-street bike lanes as our primary paths of citywide travel, and explore the shared use of low speed roadways for connectivity wherever it is safe to do so. |
|
 | |
| <i>Policy C-2.3</i> | Require walkways that promote safe and convenient travel between residential areas, businesses, schools, parks, recreation areas, transit facilities, and other key destination points. |
|
 | |
| <i>Policy C-2.4</i> | Explore opportunities to expand the pedestrian and bicycle networks; this includes consideration of utility easements, drainage corridors, road rights-of-way and other potential options. |
|
 | |
| <i>Policy C-2.5</i> | Work with the Western Riverside Council of Governments to implement the Non-Motorized Transportation Plan for Western Riverside County. |
|
 | |
| <i>Goal C-3</i> | A public transit system that is a viable alternative to automobile travel and meets basic transportation needs of the transit dependent. |
|
 | |
| <i>Policy C-3.3</i> | Provide additional development-related incentives to projects that promote transit use. |

Applicable goals and policies from the Open Space and Conservation Element include:

- | | |
|-----------------------|---|
| <i>Goal OSC-9</i> | Reduced impacts to air quality at the local level by minimizing pollution and particulate matter. |
|
 | |
| <i>Policy OSC 9.1</i> | Meet state and federal clean air standards by minimizing particulate matter emissions from construction activities. |
|
 | |
| <i>Policy OSC 9.2</i> | 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.

Policy OSC 9.3 Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.

Policy OSC 9.4 Support the Riverside County Regional Air Quality Task Force, the Southern California Association of Government's Regional Transportation Plan/Sustainable Communities Strategy, and the South Coast Air Quality Management District's Air Quality Management Plan to reduce air pollution at the regional level.

Policy OSC 9.5 Comply with the mandatory requirements of Title 24 Part 11 of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building and Energy Efficiency Standards.

Applicable goals and policies from the Land Use Element include:

Goal LU-2 Thriving Economic Development Corridors that accommodate a mix of nonresidential and residential uses that generate activity and economic vitality in the city.

Policy LU-2.1 Promote infill development that complements existing neighborhoods and surrounding areas. Infill development and future growth in Menifee is strongly encouraged to locate within EDC areas to preserve the rural character of rural, estate, and small estate residential uses.

Policy LU-2.2 Encourage vertical and horizontal integration of uses where feasible on properties in EDCs.

B. Monitored 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_x emissions, 95 percent of the CO emissions and 34 percent of directly emitted PM_{2.5}, with another 13 percent of PM_{2.5} from road dust.

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are 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_{2.5} standard is met if the three-year average of the annual average PM_{2.5} concentration is less than or equal to the standard. Attainment status is shown in Table 4.

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. For evaluation purposes, the SCAQMD has divided the District into 36 Source Receptor Areas (SRAs), operating monitoring stations in most of the areas. These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. The project is within the Perris Area SRA 24. SCAQMD operates the Winchester-33700 Borel Road air monitoring station (Winchester Station) at 33700 Borel Road, Winchester, approximately 7.07 miles southeast of the project site. Since not all the monitoring stations monitor for all pollutants the next nearest station, Lake Elsinore-W Flint Street (Lake Elsinore Station), located approximately 8.75 miles northwest of the site at 506 W. Flint Street, Lake Elsinore, was used to complete the air pollutants concentration profiles.

Table 5 summarizes 2014 through 2016 published monitoring data from that station, which is the most recent 3-year period available. The data shows that during the past few years, the project area has exceeded the ozone standards. However, it should be noted that due to the air monitoring station distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site.

Ozone

During the 2014 to 2016 monitoring period, the State 1-hour concentration standard for ozone has been exceeded up to one day each year at the Winchester Station. The State 8-hour ozone standard has been exceeded between 14 and 23 days each year over the past three years at the Winchester Station. The Federal 8-hour ozone standard was exceeded between 10 and 20 days each year over the past five years at the Winchester Station.

The monitoring data presented in Table 5 shows that ozone is the air pollutants of primary concern in the project area. It is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO₂, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

Carbon Monoxide

CO is another important pollutant that is due mainly to motor vehicles. The Lake Elsinore Station did not record an exceedance of the state or federal 1-hour or 8-hour CO standards for the last three years.

Nitrogen Dioxide

The Lake Elsinore Station did not record an exceedance of the State or Federal NO₂ standards for the last three years.

Particulate Matter

The Lake Elsinore Station had insufficient data for the State 24-hour concentration standards for PM₁₀ over the past three years. Over the past three years, the Federal 24-hour standard for PM₁₀ was not exceeded at the Lake Elsinore Station.

The Winchester Station had insufficient data for the Federal 24 hour standard for PM_{2.5} over the past three years. Particulate levels in the area are due to natural sources, grading operations, and motor vehicles.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM₁₀ and PM_{2.5}). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM₁₀ and PM_{2.5}. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

Table 3

State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone (O ₃)	0.09 ppm/1-hour 0.07 ppm/8-hour	0.070 ppm/8-hour	(a) Decline in pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm/1-hour 9.0 ppm/8-hour	35.0 ppm/1-hour 9.0 ppm/8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO ₂)	0.18 ppm/1-hour 0.03 ppm/annual	100 ppb/1-hour 0.053 ppm/annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO ₂)	0.25 ppm/1-hour 0.04 ppm/24-hour	75 ppb/1-hour 0.14 ppm/24-hour	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM ₁₀)	50 µg/m ³ /24-hour 20 µg/m ³ /annual	150 µg/m ³ /24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter (PM _{2.5})	12 µg/m ³ / annual	35 µg/m ³ /24-hour 12 µg/m ³ /annual	
Sulfates	25 µg/m ³ /24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) property damage.
Lead	1.5 µg/m ³ /30-day	0.15 µg/m ³ /3-month rolling	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more due to particles when humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

¹ Source: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

Table 4

South Coast Air Basin Attainment Status

Pollutant	State Status ¹	National Status ²
Ozone	Nonattainment	Nonattainment (Extreme)
Carbon monoxide	Attainment	Attainment/Unclassified
Nitrogen dioxide	Attainment	Attainment/Unclassified
Sulfur dioxide	Attainment	Attainment/Unclassified
PM10	Nonattainment	Attainment (Maintenance)
PM2.5	Nonattainment	Nonattainment (Moderate)

¹ Source of State status: California Air Resources Board 2015.

² Source of National status: <http://www3.epa.gov/airquality/greenbk/index.html> and CARB 2015

Table 5

Air Quality Monitoring Summary¹

Pollutant (Standard) ²	Year		
	2014	2015	2016
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.119	0.100	0.092
Days > CAAQS (0.09 ppm)	1	1	0
Maximum 8-Hour Concentration (ppm)	0.100	0.087	0.082
Days > NAAQS (0.075 ppm)	10	20	19
Days > CAAQS (0.070 ppm)	14	23	20
Carbon Monoxide: ³			
Maximum 8-Hour Concentration (ppm)	*	*	*
Days > CAAQS (9 ppm)	0	0	0
Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide: ³			
Annual Average (ppm)	*	0.008	0.008
1-Hour 98th Percentile	0.0396	0.0388	0.0356
Maximum 1-Hour Concentration (ppm)	0.0452	0.0472	0.0513
Days > CAAQS (0.18 ppm)	0	0	0
Inhalable Particulates (PM10): ³			
Maximum 24-Hour Concentration (ug/m ³)	86.8	90.7	99.7
Days > NAAQS (150 ug/m ³)	0	0	0
Days > CAAQS (50 ug/m ³)	*	*	*
Annual Average (ug/m ³)	26.0	20.1	22.4
Ultra-Fine Particulates (PM2.5):			
Maximum 24-Hour Concentration (ug/m ³)	64.0	24.5	26.9
Days > NAAQS (35 ug/m ³)	*	*	*
Annual Average (ug/m ³)	11.2	*	*

* means no data available

¹ Source: <http://www.arb.ca.gov/adam/topfour/topfour1.php>

Data from the Winchester-33700 Borel Road monitoring station unless noted.

² CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million

³ Data from Lake Elsinore-W Flint Street station.

V. AIR QUALITY STANDARDS

A. Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominate pollution generators in the basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, the SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the South Coast Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table 6.

B. Local Air Quality

Project-related construction air emissions 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 South Coast Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The Localized Significant Threshold Methodology found that the primary emissions of concern are NO₂, CO, PM₁₀, and PM_{2.5}.

The significance thresholds for the local emissions of NO₂ and CO are determined by subtracting the highest background concentration from the last three years of these pollutants from Table 5 above, from the most restrictive ambient air quality standards for these pollutants that are outlined in the Localized Significant Thresholds. Table 6 shows the ambient air quality standards for NO₂, CO, PM₁₀, and PM_{2.5}.

C. Toxic Air Contaminants

Construction

The construction equipment would emit DPM, which is a carcinogen. However, the DPM emissions are short-term in nature. Determination of risk from DPM is considered over a 30-year exposure period because carcinogenic risk is directly related to sustain exposure. In contrast, construction activities for the project are only expected to last approximately nineteen months per Phase. Thus, the duration of construction activities would represent only a small fraction of the 30-year exposure period used as the basis for assessing the significance of carcinogenic risk exposure and, therefore, would not represent a source of

sustained DPM emissions. Therefore, considering the short time frame, exposure to DPM is anticipated to be less than significant.

Operation

The project consists of 210 multi-family attached residential dwelling units, 204 single-family detached residential dwelling units, 122,727 square feet of commercial retail, an 8,000 square foot high-turnover (sit-down) restaurant, and a 38,400 square foot industrial park and will not be a source of toxic air contaminants. Sensitive receptors would not be exposed to toxic sources of air pollution.

D. Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

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 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.

The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

E. Greenhouse Gases

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
- The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions².

² The Governor's Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

1. Regional - South Coast Air Quality Management District

The project is within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

SCAQMD Regulation XXVII, Climate Change. SCAQMD Regulation XXVII currently includes three rules:

- The purpose of Rule 2700 is to define terms and post global warming potentials.
- The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified greenhouse gas emission reductions in the SCAQMD.
- Rule 2702, Greenhouse Gas Reduction Program, was adopted on February 6, 2009. The purpose of this rule is to create a Greenhouse Gas Reduction Program for greenhouse gas emission reductions in the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

A variety of agencies have developed greenhouse gas emission thresholds and/or have made recommendations for how to identify a threshold. However, the thresholds for projects in the jurisdiction of the SCAQMD remain in flux. The California Air Pollution Control Officers Association explored a variety of threshold approaches, but did not recommend one approach (2008). The ARB recommended approaches for setting interim significance thresholds (California Air Resources Board 2008b), in which a draft industrial project threshold suggests that non-transportation related emissions under 7,000 MTCO₂e per year would be less than significant; however, the ARB has not approved those thresholds and has not published anything since then. The Bay Area Air Quality Management District and the San Joaquin Valley Air Pollution Control District have both developed greenhouse gas thresholds. However, those thresholds are not applicable to the project since the project is under the jurisdiction of the SCAQMD. The SCAQMD is in the process of developing thresholds, as discussed below.

SCAQMD Threshold Development. On December 5, 2008, the SCAQMD Governing Board adopted an interim greenhouse gas significance threshold for stationary sources, rules, and plans where the SCAQMD is lead agency (SCAQMD permit threshold). The SCAQMD permit threshold consists of five tiers. However, the SCAQMD is not the lead agency for this project. Therefore, the five permit threshold tiers do not apply to the proposed project.

The SCAQMD is in the process of preparing recommended significance thresholds for greenhouse gases for local lead agency consideration (“SCAQMD draft local agency threshold”); however, the SCAQMD Board has not approved the thresholds as of the date of the Notice of Preparation. The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.

- Tier 2 consists of determining whether the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
 - All land use types: 3,000 MTCO₂e per year
 - Based on land use type: residential: 3,500 MTCO₂e per year; commercial: 1,400 MTCO₂e per year; or mixed use: 3,000 MTCO₂e per year.
 - Based on land type: Industrial (where SCAQMD is the lead agency), 10,000 MTCO₂e per year.
- Tier 4 has the following options:
 - Option 1: Reduce emissions from business as usual (BAU) by a certain percentage; this percentage is currently undefined
 - Option 2: Early implementation of applicable AB 32 Scoping Plan measures.
 - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO₂e/SP/year for projects and 6.6 MTCO₂e/SP/year for plans;
 - Option 3, 2035 target: 3.0 MTCO₂e/SP/year for projects and 4.1 MTCO₂e/SP/year for plans.
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap carbon dioxide concentrations at 450 ppm, thus stabilizing global climate. Specifically, the Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to a CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact report, which includes analyzing feasible alternatives and imposing feasible mitigation measures. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that staff estimates that these GHG emissions would account for slightly less than one percent of future 2050 statewide GHG emissions target (85 MMTCO₂eq/yr). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the

statewide GHG inventory. Finally, these small sources are already subject to BACT for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility.

2. Local - City of Menifee

The City of Menifee does not currently have a Climate Action Plan. However, some of the goals and policies contained in the Open Space and Conservation Element of the City's General Plan would also result in the reduction of greenhouse gas emissions. The goals and policies in the Open Space and Conservation Element that would also apply to greenhouse gases are provided below:

<i>Goal OSC-4:</i>	Efficient and environmentally appropriate use and management of energy and mineral resources to ensure their availability for future generations.
<i>OSC-4.1</i>	Apply energy efficiency and conservation practices in land use, transportation demand management, and subdivision and building design.
<i>OSC-4.2</i>	Evaluate public and private efforts to develop and operate alternative systems of energy production, including solar, wind, and fuel cell.
<i>OSC-7.2</i>	Encourage water conservation as a means of preserving water resources.
<i>OSC-7.4</i>	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.
<i>Goal OSC-10:</i>	An environmentally aware community that is responsive to changing climate conditions and actively seeks to reduce local greenhouse gas emissions.
<i>OSC-10.1</i>	Align the City's local GHG reduction targets to be consistent with the statewide GHG reduction target of AB 32.
<i>OSC-10.2</i>	Align the City's long-term GHG reduction goal consistent with the statewide GHG reduction goal of Executive Order S-03-05.
<i>OSC-10.3</i>	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.

Also see Goals and Policies listed for air quality in Section IV, 5.

To determine whether the project's GHG emissions are significant, this analysis initially uses the SCAQMD draft local agency tier 3 threshold of 3,000 MTCO₂e per year for all land use types, then, if the tier 3 threshold is exceeded, uses the SCAQMD Tier 4 2020 Target Service Population Threshold of 4.8 MTCO₂e/SP/year and an interpolated SCAQMD Tier 4 2022 Target Service Population Threshold of 4.56 MTCO₂e/SP/year.³

The project will be subject to the requirements of the California Green Building Code and 2016 Title 24 Building Energy Efficiency Standards which would reduce project-related greenhouse gas emissions.

³ SCAQMD Tier 4 2022 Target Service Population Threshold of 4.56 MTCO₂e/SP/year was interpolated through the use of the SCAQMD Tier 4 2020 and 2035 Target Service Population Thresholds.

Table 6

SCAQMD Air Quality Significance Thresholds¹

Mass Daily Thresholds		
Pollutant	Construction (lbs/day)	Operation (lbs/day)
NOx	100	55
VOC	75	55
PM10	150	150
PM2.5	55	55
SOx	150	150
CO	550	550
Lead	3	3
Toxic Air Contaminants, Odor and GHG Thresholds		
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index > 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO2e for industrial land uses	
Ambient Air Quality Standards		
Pollutant	SCAQMD Standards	
NO2 -1-hour average	0.18 ppm (338 µg/m^3)	
PM10 -24-hour average	10.4 µg/m^3	
Construction	2.5 ug/m^3	
Operations		
PM2.5 -24-hour average	10.4 µg/m^3	
Construction	2.5 µg/m^3	
Operations		
SO2	0.25 ppm	
1-hour average	0.04 ppm	
24-hour average		
CO	20 ppm (23,000 µg/m^3)	
1-hour average	9 ppm (10,000 µg/m^3)	
8-hour average		
Lead	1.5 µg/m^3	
30-day average	0.15 µg/m^3	
Rolling 3-month average	1.5 µg/m^3	
Quarterly average		

¹ Source: <http://www.aqmd.gov/ceqa/handbook/signthres.pdf>

VI. SHORT-TERM CONSTRUCTION IMPACTS

Construction activities associated with the proposed project would have the potential to generate air emissions, toxic air contaminant emissions, and odor impacts. Assumptions for the duration of project construction were obtained from the project applicant. The construction activities for the proposed project are anticipated to include: for phase one, grading of approximately 18.12 acres; building construction of 38,400 square feet of industrial park, 122,727 square feet of commercial retail, an 8,000 square foot high-turnover (sit-down) restaurant, and approximately 6.72 acres of landscaping; paving of 836 parking spaces; and painting. For phase two, grading of approximately 37.33 acres; building construction of 204 single-family detached residential dwelling units, 210 multi-family attached residential dwelling units, a 1,781 square foot clubhouse, a 1,972 square foot clubhouse, and approximately 15.47 acres of landscaping/outdoor recreational areas; paving of 278 parking spaces and approximately 25 percent of the Phase 2 area as on-site roadways (~9.33 acres); and painting.

Construction of Phase 1 is anticipated to start no sooner than June 2019 and be completed by mid-December 2020. Phase 2 is expected to begin construction no sooner than mid-December 2020 and be completed by the beginning of September 2022. Phase 1 is expected to be operational in 2020 and Phase 2 in 2022.

A. Construction-Related Regional Impacts

The construction-related regional air quality impacts have been analyzed for both criteria pollutants and GHGs.

1. Construction-Related Criteria Pollutants Analysis

The following provides a discussion of the methodology used to calculate regional construction air emissions and an analysis of the proposed project's short-term construction emissions for the criteria pollutants.

Methodology

Typical emission rates from construction activities were obtained from CalEEMod Version 2016.3.2. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2014 computer program to calculate the emission rates specific for the eastern portion of Riverside County for construction-related employee vehicle trips and the OFFROAD2014 computer program to calculate emission rates for heavy truck operations. EMFAC2014 and OFFROAD2014 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions during each phase was calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions. The construction emissions printouts from CalEEMod are provided in Appendix B.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Although the Project area (approximately 58.51 acres) is over 50 acres, it is anticipated that the project will not disturb more than 5 acres per day; therefore, a Fugitive Dust Control Plan or Large Operation Notification should not be required.

Per SCAQMD Rule 1113 as amended on June 3, 2011, the architectural coatings applied to buildings after January 1, 2014 will be limited to an average of 50 grams per liter or less.

The phases of the construction activities which have been analyzed in the tables below are: (1) grading, (2) building construction, (3) paving, and (4) application of architectural coatings for Phases 1 and 2. See CalEEMod Output (see Appendix B) for details.

Project Impacts

The construction-related criteria pollutant emissions are shown in Table 7 for Phase 1 and Table 8 for Phase 2. As shown in Tables 7 and 8, the regional construction emissions for phase 1 and phase 2 of each phase would not exceed regional emissions thresholds for any of the analyzed criteria pollutants. As shown in Table 8, Phase 2 architectural coatings have been mitigated to 10 g/L VOC for buildings and 100 g/L VOC for parking lot striping (see Mitigation Measure 1 in Section X below). Therefore, with incorporation of the architectural coating mitigation for Phase 2, a less than significant regional air quality impact would occur from construction of the proposed project.

B. Construction-Related Local Impacts

Construction-related air emissions 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 South Coast Air Basin. The proposed project has been analyzed for the potential local air quality impacts created from: construction-related fugitive dust and diesel emissions; from toxic air contaminants; and from construction-related odor impacts.

1. Local Air Quality Impacts from Construction

The SCAQMD has published a “Fact Sheet for Applying CalEEMod to Localized Significance Thresholds” (South Coast Air Quality Management District 2011b).

CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

- (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.

The CalEEMod output sheets included in Appendix B show the equipment used for this analysis.

As shown in Table 9, the maximum number of acres disturbed in a day would be five acres during grading.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology prepared by SCAQMD (revised July 2008). The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. The emission thresholds were calculated based on the Perris source receptor area (SRA) 24 and a disturbance value of five acres per day (see Table 9). According to LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25 meter thresholds. The nearest sensitive receptors are an existing mobile home, whose property is located approximately 30 feet west of the project site, and the existing single-family detached residential dwelling units located approximately 125 feet north of the site; therefore, the SCAQMD Look-up Tables for 25 meters was used. Table 10 shows the on-site emissions from the CalEEMod model for the different construction phases for both Phases and the calculated emissions thresholds.

The data provided in Table 10 shows that none of the analyzed criteria pollutants for either site would exceed the SCAQMD local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the proposed project.

2. Construction-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual

cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 30 year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the proposed project would not result in a long-term (i.e., 30 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Furthermore, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project.

3. Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not reach an objectionable level at the nearest sensitive receptors. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed project.

Table 7

Regional Construction-Related Pollutant Emissions for Phase 1¹

Phase 1						
Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM10	PM2.5
Grading						
On-Site ²	4.74	54.52	33.38	0.06	4.97	3.51
Off-Site ³	0.11	0.07	0.89	0.00	0.22	0.06
Subtotal	4.85	54.59	34.27	0.06	5.19	3.57
Building Construction						
On-Site	2.36	21.08	17.16	0.03	1.29	1.21
Off-Site	2.21	16.00	17.10	0.07	4.58	1.33
Subtotal	4.57	37.08	34.26	0.10	5.86	2.54
Paving						
On-Site	2.25	14.07	14.65	0.02	0.75	0.69
Off-Site	0.08	0.05	0.60	0.00	0.17	0.05
Subtotal	2.33	14.11	15.26	0.02	0.92	0.74
Architectural Coating						
On-Site	58.32	1.68	1.83	0.00	0.11	0.11
Off-Site	0.33	0.20	2.58	0.01	0.72	0.19
Subtotal	58.64	1.88	4.41	0.01	0.83	0.30
Total of Overlapping Construction Phases⁴	65.54	53.08	53.93	0.13	7.62	3.58
SCAQMD Thresholds	75	100	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

¹ Source: CalEEMod Version 2016.3.2 Phase 1

² On-site emissions from equipment operated on-site that is not operated on public roads.

* Mitigated on-site values for fugitive dust used during grading to show compliance with SCAQMD Rule 403.

³ Off-site emissions from equipment operated on public roads.

⁴ Construction phase, paving phase and painting phase may overlap.

Table 8

Regional Construction-Related Pollutant Emissions for Phase 2¹

Phase 2						
Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM10	PM2.5
Grading						
On-Site ¹	4.45	50.20	31.96	0.06	4.96	3.34
Off-Site ²	0.10	0.06	0.81	0.00	0.22	0.06
Subtotal	4.55	50.26	32.76	0.06	5.19	3.40
Building Construction						
On-Site ¹	1.90	17.43	16.58	0.03	0.96	0.90
Off-Site ²	4.01	24.17	30.84	0.14	9.75	2.68
Subtotal	5.91	41.61	47.42	0.17	10.71	3.58
Paving						
On-Site ¹	2.25	11.12	14.58	0.02	0.57	0.52
Off-Site ²	0.07	0.04	0.51	0.00	0.17	0.05
Subtotal	2.32	11.16	15.09	0.02	0.74	0.57
Architectural Coating³						
On-Site ¹	23.70	1.41	1.81	0.00	0.08	0.08
Off-Site ²	0.64	0.36	4.94	0.01	1.63	0.44
Subtotal	24.34	1.77	6.76	0.02	1.71	0.52
Total of Overlapping Construction Phases⁵	32.57	54.54	69.27	0.21	13.16	4.67
SCAQMD Thresholds	75	100	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

¹ Source: CalEEMod Version 2016.3.2 Phase 2

² On-site emissions from equipment operated on-site that is not operated on public roads.

* Mitigated on-site values for fugitive dust used during grading to show compliance with SCAQMD Rule 403.

³ Architectural coating values show mitigation of 10 g/L VOC for buildings and 100 g/L VOC for parking lot striping.

⁴ Off-site emissions from equipment operated on public roads.

⁵ Construction phase, paving phase and painting phase may overlap.

Table 9

Maximum Number of Acres Disturbed Per Day¹

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Phase 1				
Site Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Excavators	2	0.5	1
	Scrapers	2	1	2
	Tractors/Loaders/Backhoes	2	0.5	1
Total per phase		-	-	5

Phase 2				
Site Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Excavators	2	0.5	1
	Scrapers	2	1	2
	Tractors/Loaders/Backhoes	2	0.5	1
Total per phase		-	-	5

¹ Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds

Table 10

Local Construction Emissions at the Nearest Receptors¹

Phase 1 Activity	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Grading	54.52	33.38	4.97	3.51
Building Construction	21.08	17.16	1.29	1.21
Paving	14.07	14.65	0.75	0.69
Architectural Coating	1.68	1.83	0.11	0.11
SCAQMD Thresholds²	270	1,577	13	8
Exceeds Threshold?	No	No	No	No

Phase 2 Activity	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Grading	50.20	31.96	4.96	3.34
Building Construction	17.43	16.58	0.96	0.90
Paving	11.12	14.58	0.57	0.57
Architectural Coating	1.41	1.81	0.08	0.08
SCAQMD Thresholds²	270	1,577	13	8
Exceeds Threshold?	No	No	No	No

¹ Source: Calculated from CalEEMod 2016.3.2

² Source: SCAQMD's Mass Rate Look-up Tables for five acres at a distance of 25 m in SRA 24 Perris Valley Area

VII. LONG-TERM AIR QUALITY OPERATIONAL IMPACTS

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the project-generated vehicle trips and through operational emissions from the on-going use of the proposed project. The following section provides an analysis of potential long-term air quality impacts due to: regional air quality and local air quality impacts with the on-going operations of the proposed project.

A. Operations-Related Regional Air Quality Impacts

The potential operations-related air emissions have been analyzed below for the criteria pollutants and cumulative impacts.

1. Operations-Related Criteria Pollutant Analysis

The operations-related criteria air quality impacts created by the proposed project have been analyzed through use of the CalEEMod model. The operating emissions were based on the year 2020 for Phase 1 and year 2022 for Phase 2. The operations daily emissions printouts from the CalEEMod model are provided in Appendix B. The CalEEMod analyzes operational emissions from area sources, energy usage, and mobile sources, which are discussed below.

Mobile Sources

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed based on the project trip generation calculated in the traffic impact analysis. For Phase 1, a 15 percent reduction was taken for both the commercial retail and the high-turnover (sit-down) restaurant resulting in trip generation rates of 47.85 trips per thousand square feet and 92.25 trips per thousand square feet, respectively. Phase 1 also includes a trip generation rate of 3.37 trips per thousand square feet for the industrial park. For Phase 2, a 10 percent internal capture reduction was taken for both the multi-family and single-family uses resulting in trip generation rates of 6.59 trips per dwelling unit and 8.5 trips per dwelling unit, respectively. The program then applies the emission factors for each trip which is provided by the EMFAC2014 model to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths were used in this analysis.

Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping equipment.

In order to account for SCAQMD Rule 445, no wood burning stoves or fireplaces will be included and the CalEEMod defaults for such have been adjusted accordingly. No other changes were made to the default area source parameters.

Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. ENERGY STAR-compliant appliances are to be installed on-site. No other changes were made to the CalEEMod default energy use parameters.

Project Impacts

The worst-case unmitigated summer or winter VOC, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} emissions created from the proposed project's long-term operations have been calculated and are summarized below, for Phases 1 and 2, in Table 11. Table 11 also includes the total emissions for the entire project, both Phases 1 and 2. The results show that Phase 2 individually would not exceed SCAQMD regional thresholds. However, Phase 1 individually and the entire project (Phases 1 and 2 combined) would exceed SCAQMD regional thresholds for NO_x. Therefore, a potentially significant regional air quality impact would occur from operation of the proposed project and mitigation measures are required to reduce the project's NO_x emissions.

The NO_x emissions would be primarily from mobile sources. Mitigation has been provided in Section X, Mitigation Measures, to reduce the project's total NO_x emissions. Those mitigated values are shown in Table 12.

The data in Table 12 shows that even with incorporation of mitigation measures 2 through 8, emissions from the operation of Phase 1 of the proposed project and the entire project (Phases 1 and 2 combined) would still exceed SCAQMD operational thresholds for NO_x. Therefore, even with mitigation, a potentially significant regional air quality impact would occur from operation of the proposed project.

2. Cumulative Regional Air Quality Impacts

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic in nature.

The project area is out of attainment for both ozone and particulate matter (PM-10 and PM-2.5). Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic volumes from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously.

However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. However, with respect to long-term emissions, even with incorporation of mitigation, this project would create a significant cumulative impact.

B. Operations-Related Local Air Quality Impacts

Project-related air emissions 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 South Coast Air Basin. The proposed project has been analyzed for the potential local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analysis analyzes the vehicular CO emissions, local impacts from on-site operations, and odor impacts.

1. Local CO Emission Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented in above in Section V.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above in Section V, a sensitivity analysis is typically conducted to determine the potential for CO “hot spots” at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, “hot spots” potentially can occur at high traffic volume intersections with a Level of Service E or worse.

The analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and air quality management plans. In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection

evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the LOS in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be Level of Service E during the morning peak hour and Level of Service F during the evening peak hour.

The traffic impact analysis showed that the entire project would generate a maximum of approximately 9,881 trips per day. The intersection with the highest traffic volume is located at the I-215 Freeway Southbound Ramps and Newport Road and has Existing Plus Ambient Growth Plus Project Plus Cumulative (without Holland Overpass) evening peak hour volume of 2,688 vehicles. The maximum average daily traffic (ADT) volumes for Existing Plus Ambient Growth Plus Project (without Holland Road Overpass) is 62,600 vehicles on Newport Road from Bradley Road to Haun Road. 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. Therefore, as both the intersection and average daily traffic volumes fall short of 100,000 vehicles per day, no CO “hot spot” modeling was performed and no significant long-term air quality impact is anticipated to local air quality due to the on-going use of the proposed project.

2. Local Air Quality Impacts from On-Site Operations

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 mobile home to the east, and other residential uses to the north of the project 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, commercial uses, and industrial park uses and does not include such uses. Therefore, due the lack of stationary source emissions, no long-term localized significance threshold analysis is warranted.

3. Operations-Related Odor Impacts

The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The project does not

contain land uses typically associated with emitting objectionable odors. Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not reach an objectionable level at the nearest sensitive receptors.

Table 11

Unmitigated Regional Operational Pollutant Emissions for Phases 1 and 2¹

Phase 1						
Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM10	PM2.5
Area Sources ²	4.06	0.00	0.10	0.00	0.00	0.00
Energy Usage ³	0.08	0.70	0.59	0.00	0.05	0.05
Mobile Sources ⁴	12.92	86.81	121.33	0.46	30.81	8.52
Total Emissions	17.05	87.50	122.02	0.46	30.86	8.57
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No

Phase 2						
Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM10	PM2.5
Area Sources ²	14.77	6.58	36.85	0.04	0.69	0.69
Energy Usage ³	0.28	2.43	1.05	0.02	0.20	0.20
Mobile Sources ⁴	5.85	42.15	69.95	0.30	22.92	6.27
Total Emissions	20.91	51.16	107.85	0.36	23.81	7.15
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Total for Phases 1 & 2	37.96	138.66	229.87	0.82	54.67	15.72
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No

¹ Source: CalEEMod Version 2016.3.2

² Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

³ Energy usage consists of emissions from generation of electricity and on-site natural gas usage.

⁴ Mobile sources consist of emissions from vehicles and road dust.

Table 12

Mitigated Regional Operational Pollutant Emissions for Phases 1 and 2¹

Phase 1						
Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM10	PM2.5
Area Sources ²	4.06	0.00	0.10	0.00	0.00	0.00
Energy Usage ³	0.08	0.70	0.59	0.00	0.05	0.05
Mobile Sources ⁴	11.96	77.08	92.33	0.34	21.20	5.87
Total Emissions	16.09	77.78	93.02	0.34	21.25	5.93
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No

Phase 2						
Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM10	PM2.5
Area Sources ²	14.77	6.58	36.85	0.04	0.69	0.69
Energy Usage ³	0.28	2.43	1.05	0.02	0.20	0.20
Mobile Sources ⁴	5.14	35.60	48.09	0.20	14.44	3.95
Total Emissions	20.20	44.61	86.00	0.26	15.32	4.84
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Total for Phases 1 & 2	36.29	122.38	179.01	0.61	36.57	10.76
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No

¹ Source: CalEEMod Version 2016.3.2

² Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

³ Energy usage consists of emissions from generation of electricity and on-site natural gas usage.

⁴ Mobile sources consist of emissions from vehicles and road dust.

Table 13**Overlapping Mitigated Regional Construction and Mitigated Operational Emissions¹**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM10	PM2.5
Total for Operation of Phase 1 plus construction Phase 2	48.66	132.32	162.28	0.55	34.41	10.60
SCAQMD Operational Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No

¹ Overlapping emissions calculated from the highest emissions levels during construction and the active operational phase(s). Construction and Operational emissions include mitigation (as detailed in Section X of the report).

VIII. GLOBAL CLIMATE CHANGE ANALYSIS

The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water, and construction equipment. The following provides the methodology used to calculate the project-related GHG emissions, the project impacts and a consistency analysis of the proposed project with any applicable GHG reduction plans, policies or regulations.

A. Methodology

The CalEEMod Version 2016.3.2 was used to calculate the GHG emissions from all phases of the proposed project. The project's emissions were initially compared to the tier 3 SCAQMD draft screening threshold of 3,000 metric tons CO₂e per year for all land uses and then, if the tier 3 screening threshold was exceeded, compared to either the tier 4 SCAQMD 2020 Target Service Population Threshold of 4.8 MTCO₂e/SP/year or the interpolated tier 4 SCAQMD 2022 Target Service Population Threshold of 4.56 MTCO₂e/SP/year.

The service population for Phase 1 was estimated to be 299 future employees (based on Riverside County estimates⁴ of one employee for every 500 square feet of commercial use and one employee for every 1,030 square feet of light industrial use). The service population for Phase 2 was estimated to be 1,184 future residents (estimated population from CalEEMod).

The CalEEMod Annual Outputs for year 2020 for Phase 1 and year 2022 for Phase 2 are available in Appendix C. Each source of GHG emissions is described in greater detail below.

1. Area Sources

Area sources include emissions from hearths, consumer products, landscape equipment and architectural coatings. In order to account for SCAQMD Rule 445, no wood burning stoves or fireplaces will be included. No other changes were made to the default area source parameters.

2. Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. ENERGY STAR-compliant appliances are to be installed on-site. No other changes were made to CalEEMod default parameters.

3. Mobile Sources

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed based on the project trip generation calculated in the traffic impact

⁴ Source: Riverside County General Plan Appendix E, Socioeconomic Build-Out Projections, Assumptions and Methodology.

analysis. For Phase 1, a 15 percent reduction was taken for both the commercial retail and the high-turnover (sit-down) restaurant resulting in trip generation rates of 47.85 trips per thousand square feet and 92.25 trips per thousand square feet, respectively. Phase 1 also includes a trip generation rate of 3.37 trips per thousand square feet for the industrial park. For Phase 2, a 10 percent internal capture reduction was taken for both the multi-family and single-family residential uses resulting in trip generation rates of 6.59 trips per dwelling unit and 8.5 trips per dwelling unit, respectively. The program then applies the emission factors for each trip which is provided by the EMFAC2014 model to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths were used in this analysis.

4. Waste

Waste includes the GHG emissions generated from the processing of waste from the proposed project as well as the GHG emissions from the waste once it is interred into a landfill. AB 341 requires that 75 percent of waste be diverted from landfills. No other changes were made to the CalEEMod default values for waste generated.

5. Water

Water includes the water used for the interior of the building as well as for landscaping and is based on the GHG emissions associated with the energy used to transport and filter the water. Water-efficient irrigations systems and low-flow fixtures are to be utilized. No other changes were made to the CalEEMod default parameters.

6. Construction

The construction-related GHG emissions were also included in the analysis and were based on a 30 year amortization rate as recommended in the SCAQMD GHG Working Group meeting on November 19, 2009. The construction-related GHG emissions were calculated by CalEEMod and detailed above in Section VI.

7. Sequestration

The project design includes planting a total of 634 new trees, which were split between Phase 1 and Phase 2 (see Appendix C for details). CAPCOA states that trees sequester carbon dioxide over 20 years of their life, after that, sequestration is nominal and outweighed by tree maintenance-related emissions. The total sequestration value given in the Annual CalEEMod output (see Appendix C) was divided by 20 years to yield an annual value, which was then subtracted from the project's opening year emissions.

B. Project Greenhouse Gas Emissions

The GHG emissions have been calculated based on the parameters described above for Phases 1 and 2. A summary of the results are shown in Table 14 and the CalEEMod model run for the proposed project is provided in Appendix C.

Table 14 shows that the proposed project's unmitigated GHG emissions are as follows: Phase 1 would be 8,513.4 MTCO₂e per year resulting in 28.5 MTCO₂e/SP/year and Phase 2 would be 6,842.73 MTCO₂e per year resulting in 5.8 MTCO₂e/SP/year. The total emissions for both phases (the entire project) would be 15,356.12 MTCO₂e per year resulting in a total of 10.54 MTCO₂e/SP/year.

According to the thresholds of significance established above in Section V, a cumulative global climate change impact would occur if the GHG emissions created from the on-going operations of each Phase of the proposed project would exceed both the SCAQMD threshold of 3,000 metric tons CO₂e per year for all land uses and either the SCAQMD 2020 Target Service Population threshold of 4.8 MTCO₂e/SP/year for projects or the interpolated SCAQMD 2022 Target Service Population Threshold of 4.56 MTCO₂e/SP/year. Phase 1 and Phase 2 both individually exceed the SCAQMD threshold of 3,000 MTCO₂e per year as well as the appropriate SCAQMD Target Service Population Threshold. Further, the entire project (both phases totaled together) would also exceed both the SCAQMD draft screening threshold of 3,000 MTCO₂e/year and the interpolated Target Service Population threshold of 4.56 MTCO₂e/SP/year for projects, mitigation is required (see Section X, Mitigation Measures for details).

The data provided in Table 15 shows that the proposed project's mitigated emissions for Phase 1 would be reduced to 6,387.44 MTCO₂e per year resulting in 21.4 MTCO₂e/SP/year and Phase 2 would be reduced to 4,998.19 MTCO₂e per year resulting in 4.2 MTCO₂e/SP/year. The total emissions for all phases (the entire project) would be reduced to 11,385.63 MTCO₂e per year, resulting in a total of 7.7 MTCO₂e/SP/year.

As shown in Table 15, with incorporation of mitigation measures MM 2 through MM 8, the project's emissions for Phase 1 still exceed both SCAQMD thresholds, while Phase 2 meets the interpolated SCAQMD 2022 Target Service Population Threshold of 4.56 MTCO₂e/SP/year. Further, the entire project (both phases added together) would still exceed both the SCAQMD screening threshold of 3,000 MTCO₂e and the interpolated SCAQMD 2022 Target Service Population threshold of 4.56 MTCO₂e/SP/year for projects. Therefore, the project's GHG emissions are considered to be significant and unavoidable. Operation of the proposed project would create a significant cumulative impact to global climate change.

The project is also subject to the requirements of the California Green Building Standards Code. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The current version of the Green Building Standards Code became effective January 1, 2017. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas

not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code (code section in parentheses) requires at a minimum:

- Water Efficiency and Conservation [Indoor Water Use (4.303.1)]. Fixtures and fixture fittings reducing the overall use of potable water within the building by at least 20 percent shall be provided. The 20 percent reduction shall be demonstrated by one of the following methods:
 - Prescriptive Method: Showerheads (≤ 2.0 gpm @ 80 psi); Residential Lavatory Faucets (≤ 1.5 gpm @ 60 psi); Nonresidential Lavatory Faucets ($\leq .4$ gpm @ 60 psi); Kitchen Faucets (≤ 1.8 gpm @ 60 psi); Toilets (≤ 1.28 gal/flush); and urinals (≤ 0.5 gal/flush).
 - Performance Method: Provide a calculation demonstrating a 20% reduction of indoor potable water using the baseline values set forth in Table 4.303.1. The calculation will be limited to the total water usage of showerheads, lavatory faucets, water closets and urinals within the dwelling.
- Water Efficiency and Conservation [Outdoor Water Use (4.304.1)]. Irrigation Controllers. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:
 - Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' watering needs as weather or soil conditions change.
 - Weather-based controllers without integral rain sensors or communication systems that account for rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s).
- Construction Waste Reduction of at least 50 percent (4.408.1). Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4; OR meet a more stringent local construction and demolition waste management ordinance. Documentation is required per Section 4.408.5. Exceptions:
 - Excavated soil and land-clearing debris.
 - Alternate waste reduction methods developed by working with local enforcing agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
 - The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.
- Materials pollution control (4.504.1 – 4.504.6). Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particleboard.
- Installer and Special Inspector Qualifications (702.1-702.2). Mandatory special installer inspector qualifications for installation and inspection of energy systems (e.g., heat furnace, air conditioner, mechanical equipment).

C. Greenhouse Gas Plan Consistency

The proposed project could have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. As stated previously, the City of Menifee does not currently have a Climate Action Plan; therefore, the project has been compared to the goals of the CARB Scoping Plan.

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.

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

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, Chapter 4 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 16. As shown in Table 16, the project is consistent with the applicable strategies and would result in a less than significant impact.

SB-32

SB-32 requires the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030. SCAQMD's thresholds used Executive Order S-3-05 goal as the basis for deriving the screening level. The California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels
- 2020: Reduce greenhouse gas emissions to 1990 levels
- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels.

As the SCAQMD uses EO S-3-05 as the basis for their screening level, and EO S-3-05 includes the long-term goal to reduce greenhouse gas emissions to 80 percent below 1990 levels by 2050, the project would also be consistent with the goal of SB 32 (to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030). Therefore, projects that meet the current interim emissions targets/thresholds established by SCAQMD (as described in Section V, Air Quality Standards) would also be on track to meet the reduction targets for 2030. Furthermore, all of the post 2020 reductions in GHG emissions are addressed via regulatory requirements at the State level and the project will be required to comply with these regulations as they come into effect.

Therefore, as the project's emissions exceed the SCAQMD draft GHG emissions threshold of 3,000 MTCO₂e/year and the SCAQMD's Service Population thresholds, the project would conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. However, the project will comply with applicable Green Building Standards and City of Menifee's policies regarding sustainability (by the Open Space and Conservation Element of the City's General Plan).

Table 14

Unmitigated Project-Related Greenhouse Gas Emissions for Phases 1 and 2¹

Phase 1						
Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO ₂	NonBio-CO ₂	CO ₂	CH ₄	N ₂ O	CO ₂ e
Area Sources ²	0.00	0.03	0.03	0.00	0.00	0.03
Energy Usage ³	0.00	907.06	907.06	0.03	0.01	910.63
Mobile Sources ⁴	0.00	7,298.29	7,298.29	0.47	0.00	7,310.07
Solid Waste ⁵	55.15	0.00	55.15	3.26	0.00	136.63
Water ⁶	6.47	104.90	111.38	0.67	0.02	133.05
Construction ⁷	0.00	30.38	30.38	0.00	0.00	30.47
Sequestration ⁸						-7.47
Total Emissions	61.62	8,340.66	8,402.28	4.44	0.03	8,513.40
SCAQMD Tier 3 Draft Screening Threshold						3,000.00
Exceeds Threshold?						Yes
SCAQMD 2020 Target Service Population Threshold 4.8 MTCO₂e/SP/year for projects						28.5
Exceeds Threshold?						Yes

Phase 2						
Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO ₂	NonBio-CO ₂	CO ₂	CH ₄	N ₂ O	CO ₂ e
Area Sources ²	0.00	96.46	96.46	0.01	0.00	97.16
Energy Usage ³	0.00	1,430.42	1,430.42	0.05	0.02	1,436.75
Mobile Sources ⁴	0.00	4,851.82	4,851.82	0.24	0.00	4,857.80
Solid Waste ⁵	72.47	0.00	72.47	4.28	0.00	179.54
Water ⁶	8.63	173.51	182.13	0.89	0.02	211.14
Construction ⁷	0.00	60.20	60.20	0.01	0.00	60.34
Sequestration ⁸						-14.97
Total Emissions	81.10	6,612.41	6,693.51	5.48	0.04	6,842.73
SCAQMD Tier 3 Draft Screening Threshold						3,000
Exceeds Threshold?						Yes
Interpolated SCAQMD 2022 Target Service Population Threshold 4.56 MTCO₂e/SP/year for projects						5.8
Exceeds Threshold?						Yes

Total for Phases 1 & 2	15,356.12
SCAQMD Tier 3 Draft Screening Threshold	3,000.00
Exceeds Threshold?	Yes
Interpolated SCAQMD 2022 Target Service Population Threshold 4.56 MTCO₂e/SP/year for projects	10.4
Exceeds Threshold?	Yes

¹ Source: CalEEMod Version 2016.3.2² Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.³ Energy usage consist of GHG emissions from electricity and natural gas usage.⁴ Mobile sources consist of GHG emissions from vehicles.⁵ Solid waste includes the CO₂ and CH₄ emissions created from the solid waste placed in landfills.⁶ Water includes GHG emissions from electricity used for transport of water and processing of wastewater.⁷ Construction GHG emissions CO₂e based on a 30 year amortization rate.⁸ Sequestration of trees divided by 20 years to produce an annual value.

Table 15

Mitigated Project-Related Greenhouse Gas Emissions for Phases 1 and 2¹

Phase 1						
Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO ₂	NonBio-CO ₂	CO ₂	CH ₄	N ₂ O	CO ₂ e
Area Sources ²	0.00	0.03	0.03	0.00	0.00	0.03
Energy Usage ³	0.00	794.22	794.22	0.03	0.01	797.39
Mobile Sources ⁴	0.00	5,413.18	5,413.18	0.42	0.00	5,423.60
Solid Waste ⁵	13.79	0.00	13.79	0.81	0.00	34.16
Water ⁶	5.18	86.74	91.92	0.54	0.01	109.26
Construction ⁷	0.00	30.38	30.38	0.00	0.00	30.47
Sequestration ⁸						-7.47
Total Emissions	18.97	6,324.55	6,343.52	1.80	0.02	6,387.44
SCAQMD Tier 3 Draft Screening Threshold						3,000.00
Exceeds Threshold?						Yes
SCAQMD 2020 Target Service Population Threshold 4.8 MTCO₂e/SP/year for projects						21.4
Exceeds Threshold?						Yes

Phase 2						
Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO ₂	NonBio-CO ₂	CO ₂	CH ₄	N ₂ O	CO ₂ e
Area Sources ²	0.00	96.46	96.46	0.01	0.00	97.16
Energy Usage ³	0.00	1,352.60	1,352.60	0.05	0.02	1,358.65
Mobile Sources ⁴	0.00	3,269.84	3,269.84	0.20	0.00	3,274.75
Solid Waste ⁵	18.12	0.00	18.12	1.07	0.00	44.89
Water ⁶	6.90	147.24	154.14	0.72	0.02	177.38
Construction ⁷	0.00	60.20	60.20	0.01	0.00	60.34
Sequestration ⁸						-14.97
Total Emissions	25.02	4,926.33	4,951.35	2.04	0.04	4,998.19
SCAQMD Tier 3 Draft Screening Threshold						3,000
Exceeds Threshold?						Yes
Interpolated SCAQMD 2022 Target Service Population Threshold 4.56 MTCO₂e/SP/year for projects						4.2
Exceeds Threshold?						No

Total for Phases 1 & 2						11,385.63
SCAQMD Tier 3 Draft Screening Threshold						3,000.00
Exceeds Threshold?						Yes
Interpolated SCAQMD 2022 Target Service Population Threshold 4.56 MTCO₂e/SP/year for projects						7.7
Exceeds Threshold?						Yes

¹ Source: CalEEMod Version 2016.3.2² Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.³ Energy usage consist of GHG emissions from electricity and natural gas usage.⁴ Mobile sources consist of GHG emissions from vehicles.⁵ Solid waste includes the CO₂ and CH₄ emissions created from the solid waste placed in landfills.⁶ Water includes GHG emissions from electricity used for transport of water and processing of wastewater.⁷ Construction GHG emissions CO₂e based on a 30 year amortization rate.⁸ Sequestration of trees divided by 20 years to produce an annual value.

Table 16

Project Consistency with CARB Scoping Plan Policies and Measures¹

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.
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.
2017 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	Project Compliance with Recommended Action
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.
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.

¹ Source: CARB Scoping Plan (2008 and 2017)

IX. AIR QUALITY COMPLIANCE

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.

A. Criterion 1 - Increase in the Frequency or Severity of Violations

Based on the air quality modeling analysis contained in this Air Analysis, with mitigation, the short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. However, this Air Analysis also found that even with mitigation, long-term operations impacts will result in significant impacts based on the SCAQMD regional thresholds of significance.

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

B. 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 Land Use Plan defines the assumptions that are represented in the AQMP.

The general plan land use designation for the site is Economic Development Corridor (EDC). According to the General Plan, "Overall, residential uses shall not exceed 15 percent of the total EDC acreage or be allowed on parcels or properties directly adjacent to the freeway, and the maximum density permitted is 24 dwelling units per acre." The proposed townhomes at 13.5 DU/acre, single-family dwelling units at 9.39 DU/acre, commercial retail uses, restaurant, and industrial park would be consistent with the current General Plan land use designation and density requirements, would not place sensitive uses in close proximity to the freeway, and would not result in an inconsistency with the current land use designation in the City's General Plan. Therefore, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

However, based on the failure of Criterion 1 above, the proposed project will result in an inconsistency with the SCAQMD AQMP. Therefore, a significant impact will potentially occur.

X. MITIGATION MEASURES

A. Construction Measures

The project is required to comply with SCAQMD Rule 403 - Fugitive Dust.

Mitigation Measure 1. All architectural coatings for Phase 2 of the proposed project are to be limited to 10 grams per liter VOC for buildings and 100 g/L VOC for parking lot striping.

B. Operational Measures

Mitigation Measure 2. The project applicant shall provide sidewalks within the project boundary and connecting off-site.

Mitigation Measure 3. The project applicant shall require that all building structures meet or exceed 2016 Title 24, Part 6 Standards and meet Green Building Code Standards.

Mitigation Measure 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.

Mitigation Measure 5. The project applicant shall require that a water-efficient irrigation system be installed that conforms to the requirements of City codes.

Mitigation Measure 6. The project applicant shall require that ENERGY STAR-compliant appliances are installed on-site.

Mitigation Measure 7. The project applicant shall require recycling programs that reduces waste to landfills by a minimum 75 percent per AB 341.

Mitigation Measure 8. The project applicant shall require that high-efficiency lighting be installed that is at least 34% more efficient than standard lighting.

XI. REFERENCES

California Air Resources Board

- 2008 Resolution 08-43
- 2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act
- 2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions
- 2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document
- 2013 Almanac of Emissions and Air Quality. Source:
<https://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm>
- 2017 Historical Air Quality, Top 4 Summary
- 2017 California's 2017 Climate Change Scoping Plan. November.

City of Menifee

- 2013 City of Menifee General Plan EIR. September.

Governor's Office of Planning and Research

- 2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review
- 2009 CEQA Guideline Sections to be Added or Amended

Intergovernmental Panel on Climate Change (IPCC).

- 2014 IPCC Fifth Assessment Report, Climate Change 2014: Synthesis Report

Kunzman Associates, Inc.

- 2018 Millcreek Promenade Traffic Impact Analysis. February 8.

South Coast Air Quality Management District

- 1993 CEQA Air Quality Handbook
- 2007 2007 Air Quality Management Plan
- 2008 Final Localized Significance Threshold Methodology, Revised
- 2012 Final 2012 Air Quality Management Plan
- 2016 2016 Air Quality Management Plan

Southern California Association of Governments

2012 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy

U.S. Environmental Protection Agency (EPA)

2017 Understanding Global Warming Potentials
(Source: <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>)

U.S. Geological Survey

2011 Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California

APPENDICES

Appendix A – Glossary of Terms

Appendix B – CalEEMod Model Daily Emissions Printouts

Appendix C – CalEEMod Model Annual Emissions Printouts

APPENDIX A

Glossary of Terms

AQMP	Air Quality Management Plan
BACT	Best Available Control Technologies
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH ₄	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HIDPM	Hazard Index Diesel Particulate Matter
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
MTCO ₂ e	Metric tons of carbon dioxide equivalent
MMTCO ₂ e	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen Oxides
NO ₂	Nitrogen dioxide
N ₂ O	Nitrous oxide
O ₃	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM ₁₀	Particles that are less than 10 micrometers in diameter
PM _{2.5}	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SANBAG	San Bernardino Association of Governments
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments

SCAQMD	South Coast Air Quality Management District
SF ₆	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

APPENDIX B

CalEEMod Model Daily Emissions Printouts

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

6437e Millcreek Promenade - Phase 1
Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	38.40	1000sqft	0.88	38,400.00	0
Other Non-Asphalt Surfaces	6.72	Acre	6.72	292,723.20	0
Parking Lot	836.00	Space	7.52	334,400.00	0
High Turnover (Sit Down Restaurant)	8.00	1000sqft	0.18	8,000.00	0
Regional Shopping Center	122.73	1000sqft	2.82	122,727.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

Project Characteristics -

Land Use - P1 (18.12 ac total)- 38.4 TSF industrial park over 2.82 ac w/ 80 prk spcs, 122.727 sf retail & 8 TSF restaurant over 15.3 ac w/ 756 prk spcs, & remainder landscaping/open space (6.72 ac).

Construction Phase - Phase 1 anticipated to begin construction 6/1/19 and be completed by mid-December 2020. No demo.

Grading - Phase 1 covers ~18.12 acres. Site to balance.

Vehicle Trips - Per TIA, 3.37 trips/TSF/day industrial park, 47.85 trips/TSF/day retail (w/ 15% pass-by reduction), & 95.25 trips/TSF/day restaurant (w/ 15% pass-by reduction).

Sequestration - Per applicant, 634 trees to be planted. For modeling purposes, trees were split 1/3 in P1 and 2/3 in P2 resulting in 211 trees in P1 & 423 trees P2.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - RTA Rte 61 Antelope Square ~1 mile SE, Downtown Menifee is ~2.3 miles N, project to provide sidewalks on & off site, project is mixed commercial/residential, retail = 1emp/500sf, industrial = 1 emp/1,030sf.

Energy Mitigation - Energy Star appliances to be installed onsite. High efficiency lighting at least 34% more efficient than standard.

Water Mitigation - Use of low-flow fixtures and water-efficient irrigation systems.

Waste Mitigation - Ab 347 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	300.00	326.00
tblConstructionPhase	NumDays	30.00	32.00
tblConstructionPhase	NumDays	20.00	22.00
tblGrading	AcresOfGrading	80.00	18.12
tblLandUse	LandUseSquareFeet	122,730.00	122,727.00
tblSequestration	NumberOfNewTrees	0.00	211.00
tblVehicleTrips	ST_TR	158.37	95.25
tblVehicleTrips	ST_TR	2.49	3.37
tblVehicleTrips	ST_TR	49.97	47.85
tblVehicleTrips	SU_TR	131.84	95.25
tblVehicleTrips	SU_TR	0.73	3.37
tblVehicleTrips	SU_TR	25.24	47.85
tblVehicleTrips	WD_TR	127.15	95.25
tblVehicleTrips	WD_TR	6.83	3.37
tblVehicleTrips	WD_TR	42.70	47.85

2.0 Emissions Summary

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

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	4.8490	54.5878	34.2653	0.0982	6.8461	2.3840	9.2302	3.4344	2.1933	5.6277	0.0000	9,887.066 3	9,887.066 3	1.9490	0.0000	9,912.679 8
2020	60.9701	33.6339	32.2979	0.0968	4.4381	1.2155	5.6536	1.1961	1.1437	2.3398	0.0000	9,707.818 6	9,707.818 6	0.9844	0.0000	9,732.427 7
Maximum	60.9701	54.5878	34.2653	0.0982	6.8461	2.3840	9.2302	3.4344	2.1933	5.6277	0.0000	9,887.066 3	9,887.066 3	1.9490	0.0000	9,912.679 8

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.8490	54.5878	34.2653	0.0982	4.4381	2.3840	5.8635	1.3756	2.1933	3.5689	0.0000	9,887.066 3	9,887.066 3	1.9490	0.0000	9,912.679 8
2020	60.9701	33.6339	32.2979	0.0968	4.4381	1.2155	5.6536	1.1961	1.1437	2.3398	0.0000	9,707.818 6	9,707.818 6	0.9844	0.0000	9,732.427 7
Maximum	60.9701	54.5878	34.2653	0.0982	4.4381	2.3840	5.8635	1.3756	2.1933	3.5689	0.0000	9,887.066 3	9,887.066 3	1.9490	0.0000	9,912.679 8

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	21.34	0.00	22.62	44.46	0.00	25.84	0.00	0.00	0.00	0.00	0.00	0.00

6437e Millcreek Promenade - Phase 1 - 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	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Energy	0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162
Mobile	12.9185	86.8061	121.3281	0.4587	30.4037	0.4012	30.8049	8.1358	0.3781	8.5138		46,811.4158	46,811.4158	2.8131		46,881.7436
Total	17.0531	87.5036	122.0171	0.4629	30.4037	0.4546	30.8582	8.1358	0.4314	8.5672		47,647.4864	47,647.4864	2.8297	0.0153	47,722.7961

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	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Energy	0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162
Mobile	11.9592	77.0785	92.3281	0.3395	20.9001	0.2912	21.1913	5.5927	0.2743	5.8670		34,704.0636	34,704.0636	2.4651		34,765.6898
Total	16.0938	77.7760	93.0172	0.3437	20.9001	0.3445	21.2446	5.5927	0.3276	5.9203		35,540.1342	35,540.1342	2.4817	0.0153	35,606.7423

6437e Millcreek Promenade - Phase 1 - 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	5.63	11.12	23.77	25.75	31.26	24.20	31.15	31.26	24.06	30.90	0.00	25.41	25.41	12.30	0.00	25.39

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/1/2019	7/16/2019	5	32	
2	Building Construction	Building Construction	7/17/2019	10/14/2020	5	326	
3	Paving	Paving	10/15/2020	11/15/2020	5	22	
4	Architectural Coating	Architectural Coating	11/4/2020	12/15/2020	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 18.12

Acres of Paving: 14.24

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 253,691; Non-Residential Outdoor: 84,564; Striped Parking Area: 37,627 (Architectural Coating – sqft)

OffRoad Equipment

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	322.00	131.00	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	64.00	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

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.2 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					6.6226	0.0000	6.6226	3.3751	0.0000	3.3751			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.019 5	6,140.019 5	1.9426		6,188.585 4
Total	4.7389	54.5202	33.3768	0.0620	6.6226	2.3827	9.0052	3.3751	2.1920	5.5671		6,140.019 5	6,140.019 5	1.9426		6,188.585 4

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
Total	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

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.2 Grading - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5828	0.0000	2.5828	1.3163	0.0000	1.3163			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
Total	4.7389	54.5202	33.3768	0.0620	2.5828	2.3827	4.9655	1.3163	2.1920	3.5083	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854

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
Total	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

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.3 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		2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5

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	0.4363	14.9122	2.7945	0.0345	0.8389	0.1133	0.9522	0.2415	0.1084	0.3499		3,632.664 2	3,632.664 2	0.2907		3,639.930 8
Worker	1.7729	1.0880	14.3050	0.0368	3.5992	0.0222	3.6214	0.9545	0.0205	0.9750		3,662.821 9	3,662.821 9	0.1025		3,665.385 5
Total	2.2093	16.0002	17.0995	0.0713	4.4381	0.1355	4.5736	1.1961	0.1288	1.3249		7,295.486 1	7,295.486 1	0.3932		7,305.316 3

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.3 Building Construction - 2019**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	2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5

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	0.4363	14.9122	2.7945	0.0345	0.8389	0.1133	0.9522	0.2415	0.1084	0.3499		3,632.664 2	3,632.664 2	0.2907		3,639.930 8
Worker	1.7729	1.0880	14.3050	0.0368	3.5992	0.0222	3.6214	0.9545	0.0205	0.9750		3,662.821 9	3,662.821 9	0.1025		3,665.385 5
Total	2.2093	16.0002	17.0995	0.0713	4.4381	0.1355	4.5736	1.1961	0.1288	1.3249		7,295.486 1	7,295.486 1	0.3932		7,305.316 3

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.3 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		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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	0.3651	13.4788	2.4659	0.0342	0.8389	0.0767	0.9155	0.2415	0.0733	0.3149		3,607.621 1	3,607.621 1	0.2706		3,614.385 8
Worker	1.6386	0.9691	12.9835	0.0356	3.5992	0.0218	3.6210	0.9545	0.0201	0.9746		3,547.134 4	3,547.134 4	0.0909		3,549.407 5
Total	2.0037	14.4479	15.4494	0.0698	4.4381	0.0985	4.5365	1.1961	0.0934	1.2895		7,154.755 5	7,154.755 5	0.3615		7,163.793 3

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.3 Building Construction - 2020**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
Total	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

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	0.3651	13.4788	2.4659	0.0342	0.8389	0.0767	0.9155	0.2415	0.0733	0.3149		3,607.621 1	3,607.621 1	0.2706		3,614.385 8
Worker	1.6386	0.9691	12.9835	0.0356	3.5992	0.0218	3.6210	0.9545	0.0201	0.9746		3,547.134 4	3,547.134 4	0.0909		3,549.407 5
Total	2.0037	14.4479	15.4494	0.0698	4.4381	0.0985	4.5365	1.1961	0.0934	1.2895		7,154.755 5	7,154.755 5	0.3615		7,163.793 3

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.4 Paving - 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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.733 4	2,207.733 4	0.7140		2,225.584 1
Paving	0.8956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2521	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.733 4	2,207.733 4	0.7140		2,225.584 1

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	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.4 Paving - 2020**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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.733 4	2,207.733 4	0.7140		2,225.584 1
Paving	0.8956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2521	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.733 4	2,207.733 4	0.7140		2,225.584 1

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	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.5 Architectural Coating - 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					
Archit. Coating	58.0738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	58.3160	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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	0.3257	0.1926	2.5806	7.0800e-003	0.7154	4.3300e-003	0.7197	0.1897	3.9900e-003	0.1937		705.0205	705.0205	0.0181		705.4723
Total	0.3257	0.1926	2.5806	7.0800e-003	0.7154	4.3300e-003	0.7197	0.1897	3.9900e-003	0.1937		705.0205	705.0205	0.0181		705.4723

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

3.5 Architectural Coating - 2020**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	58.0738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	58.3160	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

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	0.3257	0.1926	2.5806	7.0800e-003	0.7154	4.3300e-003	0.7197	0.1897	3.9900e-003	0.1937		705.0205	705.0205	0.0181		705.4723
Total	0.3257	0.1926	2.5806	7.0800e-003	0.7154	4.3300e-003	0.7197	0.1897	3.9900e-003	0.1937		705.0205	705.0205	0.0181		705.4723

4.0 Operational Detail - Mobile

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	11.9592	77.0785	92.3281	0.3395	20.9001	0.2912	21.1913	5.5927	0.2743	5.8670		34,704.06 36	34,704.06 36	2.4651		34,765.68 98
Unmitigated	12.9185	86.8061	121.3281	0.4587	30.4037	0.4012	30.8049	8.1358	0.3781	8.5138		46,811.41 58	46,811.41 58	2.8131		46,881.74 36

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	762.00	762.00	762.00	1,038,477	713,870
Industrial Park	129.41	129.41	129.41	514,641	353,774
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	5,872.63	5,872.63	5,872.63	12,701,583	8,731,322
Total	6,764.04	6,764.04	6,764.04	14,254,701	9,798,967

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

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
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
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	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Industrial Park	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Regional Shopping Center	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Install Energy Efficient Appliances

6437e Millcreek Promenade - Phase 1 - 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					
NaturalGas Mitigated	0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162
NaturalGas Unmitigated	0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162

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					
High Turnover (Sit Down Restaurant)	5993.21	0.0646	0.5876	0.4936	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.0830	705.0830	0.0135	0.0129	709.2730
Industrial Park	365.063	3.9400e-003	0.0358	0.0301	2.1000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		42.9486	42.9486	8.2000e-004	7.9000e-004	43.2038
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	746.449	8.0500e-003	0.0732	0.0615	4.4000e-004		5.5600e-003	5.5600e-003		5.5600e-003	5.5600e-003		87.8176	87.8176	1.6800e-003	1.6100e-003	88.3394
Total		0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162

6437e Millcreek Promenade - Phase 1 - 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					
High Turnover (Sit Down Restaurant)	5.99321	0.0646	0.5876	0.4936	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.0830	705.0830	0.0135	0.0129	709.2730
Industrial Park	0.365063	3.9400e-003	0.0358	0.0301	2.1000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		42.9486	42.9486	8.2000e-004	7.9000e-004	43.2038
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	0.746449	8.0500e-003	0.0732	0.0615	4.4000e-004		5.5600e-003	5.5600e-003		5.5600e-003	5.5600e-003		87.8176	87.8176	1.6800e-003	1.6100e-003	88.3394
Total		0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162

6.0 Area Detail**6.1 Mitigation Measures Area**

6437e Millcreek Promenade - Phase 1 - 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	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Unmitigated	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.7800e-003	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Total	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363

6437e Millcreek Promenade - Phase 1 - 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	0.4773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.7800e-003	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Total	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Summer

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

Equipment Type	Number
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11.0 Vegetation

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

6437e Millcreek Promenade - Phase 1

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	38.40	1000sqft	0.88	38,400.00	0
Other Non-Asphalt Surfaces	6.72	Acre	6.72	292,723.20	0
Parking Lot	836.00	Space	7.52	334,400.00	0
High Turnover (Sit Down Restaurant)	8.00	1000sqft	0.18	8,000.00	0
Regional Shopping Center	122.73	1000sqft	2.82	122,727.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

Project Characteristics -

Land Use - P1 (18.12 ac total)- 38.4 TSF industrial park over 2.82 ac w/ 80 prk spcs, 122.727 sf retail & 8 TSF restaurant over 15.3 ac w/ 756 prk spcs, & remainder landscaping/open space (6.72 ac).

Construction Phase - Phase 1 anticipated to begin construction 6/1/19 and be completed by mid-December 2020. No demo.

Grading - Phase 1 covers ~18.12 acres. Site to balance.

Vehicle Trips - Per TIA, 3.37 trips/TSF/day industrial park, 47.85 trips/TSF/day retail (w/ 15% pass-by reduction), & 95.25 trips/TSF/day restaurant (w/ 15% pass-by reduction).

Sequestration - Per applicant, 634 trees to be planted. For modeling purposes, trees were split 1/3 in P1 and 2/3 in P2 resulting in 211 trees in P1 & 423 trees P2.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - RTA Rte 61 Antelope Square ~1 mile SE, Downtown Menifee is ~2.3 miles N, project to provide sidewalks on & off site, project is mixed commercial/residential, retail = 1emp/500sf, industrial = 1 emp/1,030sf.

Energy Mitigation - Energy Star appliances to be installed onsite. High efficiency lighting at least 34% more efficient than standard.

Water Mitigation - Use of low-flow fixtures and water-efficient irrigation systems.

Waste Mitigation - Ab 347 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	300.00	326.00
tblConstructionPhase	NumDays	30.00	32.00
tblConstructionPhase	NumDays	20.00	22.00
tblGrading	AcresOfGrading	80.00	18.12
tblLandUse	LandUseSquareFeet	122,730.00	122,727.00
tblSequestration	NumberOfNewTrees	0.00	211.00
tblVehicleTrips	ST_TR	158.37	95.25
tblVehicleTrips	ST_TR	2.49	3.37
tblVehicleTrips	ST_TR	49.97	47.85
tblVehicleTrips	SU_TR	131.84	95.25
tblVehicleTrips	SU_TR	0.73	3.37
tblVehicleTrips	SU_TR	25.24	47.85
tblVehicleTrips	WD_TR	127.15	95.25
tblVehicleTrips	WD_TR	6.83	3.37
tblVehicleTrips	WD_TR	42.70	47.85

2.0 Emissions Summary

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

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	4.8465	54.5901	34.0969	0.0931	6.8461	2.3840	9.2302	3.4344	2.1933	5.6277	0.0000	9,374.5415	9,374.5415	1.9482	0.0000	9,400.6265
2020	60.9618	33.5968	30.2385	0.0918	4.4381	1.2164	5.6545	1.1961	1.1446	2.3407	0.0000	9,207.2425	9,207.2425	1.0030	0.0000	9,232.3175
Maximum	60.9618	54.5901	34.0969	0.0931	6.8461	2.3840	9.2302	3.4344	2.1933	5.6277	0.0000	9,374.5415	9,374.5415	1.9482	0.0000	9,400.6265

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.8465	54.5901	34.0969	0.0931	4.4381	2.3840	5.8649	1.3756	2.1933	3.5689	0.0000	9,374.5415	9,374.5415	1.9482	0.0000	9,400.6265
2020	60.9618	33.5968	30.2385	0.0918	4.4381	1.2164	5.6545	1.1961	1.1446	2.3407	0.0000	9,207.2425	9,207.2425	1.0030	0.0000	9,232.3175
Maximum	60.9618	54.5901	34.0969	0.0931	4.4381	2.3840	5.8649	1.3756	2.1933	3.5689	0.0000	9,374.5415	9,374.5415	1.9482	0.0000	9,400.6265

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	21.34	0.00	22.61	44.46	0.00	25.84	0.00	0.00	0.00	0.00	0.00	0.00

6437e Millcreek Promenade - Phase 1 - 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	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Energy	0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162
Mobile	10.8391	86.2813	108.6898	0.4219	30.4037	0.4066	30.8103	8.1358	0.3832	8.5190		43,091.3311	43,091.3311	2.9595		43,165.3174
Total	14.9737	86.9788	109.3789	0.4261	30.4037	0.4599	30.8636	8.1358	0.4365	8.5723		43,927.4016	43,927.4016	2.9761	0.0153	44,006.3699

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	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Energy	0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162
Mobile	9.9441	76.0708	85.4846	0.3114	20.9001	0.2966	21.1967	5.5927	0.2794	5.8721		31,855.0898	31,855.0898	2.6379		31,921.0376
Total	14.0787	76.7683	86.1737	0.3156	20.9001	0.3499	21.2500	5.5927	0.3327	5.9254		32,691.1604	32,691.1604	2.6545	0.0153	32,762.0901

6437e Millcreek Promenade - Phase 1 - 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	5.98	11.74	21.22	25.92	31.26	23.92	31.15	31.26	23.78	30.88	0.00	25.58	25.58	10.80	0.00	25.55

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/1/2019	7/16/2019	5	32	
2	Building Construction	Building Construction	7/17/2019	10/14/2020	5	326	
3	Paving	Paving	10/15/2020	11/15/2020	5	22	
4	Architectural Coating	Architectural Coating	11/4/2020	12/15/2020	5	30	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 18.12****Acres of Paving: 14.24****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 253,691; Non-Residential Outdoor: 84,564; Striped Parking Area: 37,627 (Architectural Coating – sqft)****OffRoad Equipment**

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	322.00	131.00	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	64.00	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

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.2 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					6.6226	0.0000	6.6226	3.3751	0.0000	3.3751			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.019 5	6,140.019 5	1.9426		6,188.585 4
Total	4.7389	54.5202	33.3768	0.0620	6.6226	2.3827	9.0052	3.3751	2.1920	5.5671		6,140.019 5	6,140.019 5	1.9426		6,188.585 4

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
Total	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

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.2 Grading - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5828	0.0000	2.5828	1.3163	0.0000	1.3163			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
Total	4.7389	54.5202	33.3768	0.0620	2.5828	2.3827	4.9655	1.3163	2.1920	3.5083	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854

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
Total	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

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.3 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		2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5

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	0.4580	14.8782	3.2491	0.0332	0.8389	0.1147	0.9536	0.2415	0.1097	0.3513		3,496.896 1	3,496.896 1	0.3229		3,504.968 7
Worker	1.7323	1.1263	11.5938	0.0330	3.5992	0.0222	3.6214	0.9545	0.0205	0.9750		3,286.065 2	3,286.065 2	0.0892		3,288.294 4
Total	2.1903	16.0045	14.8429	0.0662	4.4381	0.1369	4.5750	1.1961	0.1302	1.3262		6,782.961 4	6,782.961 4	0.4121		6,793.263 0

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.3 Building Construction - 2019**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	2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5

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	0.4580	14.8782	3.2491	0.0332	0.8389	0.1147	0.9536	0.2415	0.1097	0.3513		3,496.896 1	3,496.896 1	0.3229		3,504.968 7
Worker	1.7323	1.1263	11.5938	0.0330	3.5992	0.0222	3.6214	0.9545	0.0205	0.9750		3,286.065 2	3,286.065 2	0.0892		3,288.294 4
Total	2.1903	16.0045	14.8429	0.0662	4.4381	0.1369	4.5750	1.1961	0.1302	1.3262		6,782.961 4	6,782.961 4	0.4121		6,793.263 0

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.3 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		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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	0.3851	13.4082	2.8872	0.0329	0.8389	0.0776	0.9164	0.2415	0.0742	0.3157		3,472.060 2	3,472.060 2	0.3011		3,479.587 8
Worker	1.6047	1.0025	10.5028	0.0319	3.5992	0.0218	3.6210	0.9545	0.0201	0.9746		3,182.119 3	3,182.119 3	0.0790		3,184.095 2
Total	1.9898	14.4107	13.3900	0.0649	4.4381	0.0994	4.5374	1.1961	0.0943	1.2903		6,654.179 4	6,654.179 4	0.3802		6,663.683 0

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.3 Building Construction - 2020**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
Total	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

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	0.3851	13.4082	2.8872	0.0329	0.8389	0.0776	0.9164	0.2415	0.0742	0.3157		3,472.060 2	3,472.060 2	0.3011		3,479.587 8
Worker	1.6047	1.0025	10.5028	0.0319	3.5992	0.0218	3.6210	0.9545	0.0201	0.9746		3,182.119 3	3,182.119 3	0.0790		3,184.095 2
Total	1.9898	14.4107	13.3900	0.0649	4.4381	0.0994	4.5374	1.1961	0.0943	1.2903		6,654.179 4	6,654.179 4	0.3802		6,663.683 0

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.4 Paving - 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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.733 4	2,207.733 4	0.7140		2,225.584 1
Paving	0.8956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2521	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.733 4	2,207.733 4	0.7140		2,225.584 1

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	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274
Total	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.4 Paving - 2020**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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.733 4	2,207.733 4	0.7140		2,225.584 1
Paving	0.8956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2521	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.733 4	2,207.733 4	0.7140		2,225.584 1

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	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274
Total	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.5 Architectural Coating - 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					
Archit. Coating	58.0738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	58.3160	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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	0.3189	0.1993	2.0875	6.3500e-003	0.7154	4.3300e-003	0.7197	0.1897	3.9900e-003	0.1937		632.4709	632.4709	0.0157		632.8636
Total	0.3189	0.1993	2.0875	6.3500e-003	0.7154	4.3300e-003	0.7197	0.1897	3.9900e-003	0.1937		632.4709	632.4709	0.0157		632.8636

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

3.5 Architectural Coating - 2020**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	58.0738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	58.3160	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

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	0.3189	0.1993	2.0875	6.3500e-003	0.7154	4.3300e-003	0.7197	0.1897	3.9900e-003	0.1937		632.4709	632.4709	0.0157		632.8636
Total	0.3189	0.1993	2.0875	6.3500e-003	0.7154	4.3300e-003	0.7197	0.1897	3.9900e-003	0.1937		632.4709	632.4709	0.0157		632.8636

4.0 Operational Detail - Mobile

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	9.9441	76.0708	85.4846	0.3114	20.9001	0.2966	21.1967	5.5927	0.2794	5.8721		31,855.08 98	31,855.08 98	2.6379		31,921.03 76
Unmitigated	10.8391	86.2813	108.6898	0.4219	30.4037	0.4066	30.8103	8.1358	0.3832	8.5190		43,091.33 11	43,091.33 11	2.9595		43,165.31 74

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	762.00	762.00	762.00	1,038,477	713,870
Industrial Park	129.41	129.41	129.41	514,641	353,774
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	5,872.63	5,872.63	5,872.63	12,701,583	8,731,322
Total	6,764.04	6,764.04	6,764.04	14,254,701	9,798,967

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

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
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
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	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Industrial Park	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Regional Shopping Center	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Install Energy Efficient Appliances

6437e Millcreek Promenade - Phase 1 - 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					
NaturalGas Mitigated	0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162
NaturalGas Unmitigated	0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162

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					
High Turnover (Sit Down Restaurant)	5993.21	0.0646	0.5876	0.4936	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.0830	705.0830	0.0135	0.0129	709.2730
Industrial Park	365.063	3.9400e-003	0.0358	0.0301	2.1000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		42.9486	42.9486	8.2000e-004	7.9000e-004	43.2038
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	746.449	8.0500e-003	0.0732	0.0615	4.4000e-004		5.5600e-003	5.5600e-003		5.5600e-003	5.5600e-003		87.8176	87.8176	1.6800e-003	1.6100e-003	88.3394
Total		0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162

6437e Millcreek Promenade - Phase 1 - 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					
High Turnover (Sit Down Restaurant)	5.99321	0.0646	0.5876	0.4936	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.0830	705.0830	0.0135	0.0129	709.2730
Industrial Park	0.365063	3.9400e-003	0.0358	0.0301	2.1000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		42.9486	42.9486	8.2000e-004	7.9000e-004	43.2038
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	0.746449	8.0500e-003	0.0732	0.0615	4.4000e-004		5.5600e-003	5.5600e-003		5.5600e-003	5.5600e-003		87.8176	87.8176	1.6800e-003	1.6100e-003	88.3394
Total		0.0766	0.6965	0.5851	4.1800e-003		0.0529	0.0529		0.0529	0.0529		835.8491	835.8491	0.0160	0.0153	840.8162

6.0 Area Detail**6.1 Mitigation Measures Area**

6437e Millcreek Promenade - Phase 1 - 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	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Unmitigated	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.7800e-003	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Total	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363

6437e Millcreek Promenade - Phase 1 - 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	0.4773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.7800e-003	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363
Total	4.0579	9.6000e-004	0.1040	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2215	0.2215	5.9000e-004		0.2363

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Winter

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

Equipment Type	Number
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11.0 Vegetation

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

6437e Millcreek Promenade - Phase 2

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.33	Acre	9.33	406,414.80	0
Other Non-Asphalt Surfaces	15.47	Acre	15.47	673,873.20	0
Parking Lot	278.00	Space	2.50	111,200.00	0
Health Club	3.75	1000sqft	0.09	3,753.00	0
Apartments Low Rise	210.00	Dwelling Unit	4.30	210,000.00	601
Single Family Housing	204.00	Dwelling Unit	5.64	367,200.00	583

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

Project Characteristics -

Land Use - P2 (37.33 ac)- 210 multi-fam low-rise DUs, 1,972 sf clubhouse, & 120 guest prkng spcs; 204 single-family DUs, 1,781 sf clubhouse, & 158 guest prkng spcs; & remainder on-site roadways (~25% site=9.33 ac) & landscaping/outdoor recreational areas (15.47 ac).

Construction Phase - Phase 2 to begin construction ~mid-December 2020 and be completed by 9/1/2022. No demo.

Grading - Phase 2 is ~37.33 ac. Site to be balanced.

Architectural Coating - SCAQMD Rule 1113 limits architectural coatings to 50 g/L VOC. Architectural coatings have been mitigated to 10 g/L VOC buildings & 100 g/L VOC parking.

Vehicle Trips - Per TIA, 6.59 trips/DU/day multi-family (w/ 10% internal capture) & 8.5 trips/DU/day single-family (w./ 10% internal capture). On-site clubhouses no additional trips.

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

Sequestration - Per applicant, 634 trees to be planted. For modeling purposes, trees were split 1/3 in P1 and 2/3 in P2 resulting in 211 trees in P1 & 423 trees P2.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - RTA Rte 61 Antelope Square ~1 mile SE, Downtown Menifee is ~2.3 miles N, project to provide sidewalks on & off site, project is mixed commercial/residential, 414 DU/37.33ac = 11.1 DU/ac.

Energy Mitigation - Energy Star appliances to be installed onsite. High efficiency lighting at least 34% more efficient than standard.

Water Mitigation - Use of low-flow fixtures and water-efficient irrigation systems.

Waste Mitigation - Ab 347 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

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
tblConstructionPhase	NumDays	55.00	45.00
tblConstructionPhase	NumDays	740.00	358.00
tblConstructionPhase	NumDays	75.00	35.00
tblConstructionPhase	NumDays	55.00	27.00
tblFireplaces	NumberGas	178.50	189.00

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

tblFireplaces	NumberGas	173.40	183.60
tblFireplaces	NumberWood	10.50	0.00
tblFireplaces	NumberWood	10.20	0.00
tblGrading	AcresOfGrading	87.50	37.33
tblLandUse	LandUseSquareFeet	3,750.00	3,753.00
tblLandUse	LotAcreage	13.13	4.30
tblLandUse	LotAcreage	66.23	5.64
tblSequestration	NumberOfNewTrees	0.00	423.00
tblVehicleTrips	ST_TR	7.16	6.59
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	9.91	8.50
tblVehicleTrips	SU_TR	6.07	6.59
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	8.62	8.50
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	9.52	8.50
tblWoodstoves	NumberCatalytic	10.50	0.00
tblWoodstoves	NumberCatalytic	10.20	0.00
tblWoodstoves	NumberNoncatalytic	10.50	0.00
tblWoodstoves	NumberNoncatalytic	10.20	0.00

2.0 Emissions Summary

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

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					
2020	4.5519	50.2577	32.7647	0.0642	7.3767	2.1753	9.5520	3.4917	2.0012	5.4929	0.0000	6,226.184 2	6,226.184 2	1.9481	0.0000	6,274.885 8
2021	5.9079	46.4539	47.4158	0.1668	9.6630	1.9867	10.7117	3.4917	1.8277	5.3194	0.0000	16,852.12 75	16,852.12 75	1.9479	0.0000	16,883.87 13
2022	26.6575	38.3366	44.8404	0.1634	9.6629	0.8912	10.5540	2.5975	0.8380	3.4356	0.0000	16,514.43 86	16,514.43 86	1.2221	0.0000	16,544.99 02
Maximum	26.6575	50.2577	47.4158	0.1668	9.6630	2.1753	10.7117	3.4917	2.0012	5.4929	0.0000	16,852.12 75	16,852.12 75	1.9481	0.0000	16,883.87 13

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5519	50.2577	32.7647	0.0642	3.0133	2.1753	5.1886	1.3979	2.0012	3.3991	0.0000	6,226.184 2	6,226.184 2	1.9481	0.0000	6,274.885 8
2021	5.9079	46.4539	47.4158	0.1668	9.6630	1.9867	10.7117	2.5976	1.8277	3.5833	0.0000	16,852.12 75	16,852.12 75	1.9479	0.0000	16,883.87 13
2022	26.6575	38.3366	44.8404	0.1634	9.6629	0.8912	10.5540	2.5975	0.8380	3.4356	0.0000	16,514.43 86	16,514.43 86	1.2221	0.0000	16,544.99 02
Maximum	26.6575	50.2577	47.4158	0.1668	9.6630	2.1753	10.7117	2.5976	2.0012	3.5833	0.0000	16,852.12 75	16,852.12 75	1.9481	0.0000	16,883.87 13

6437e Millcreek Promenade - Phase 2 - 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	0.00	0.00	0.00	0.00	16.34	0.00	14.16	31.19	0.00	26.88	0.00	0.00	0.00	0.00	0.00	0.00

6437e Millcreek Promenade - Phase 2 - 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	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969
Energy	0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.3004	3,105.3004	0.0595	0.0569	3,123.7537
Mobile	5.8494	42.1489	69.9502	0.3047	22.7211	0.1982	22.9193	6.0789	0.1857	6.2646		31,100.9379	31,100.9379	1.4434		31,137.0234
Total	20.9078	51.1587	107.8535	0.3615	22.7211	1.0836	23.8048	6.0789	1.0711	7.1500	0.0000	42,158.1591	42,158.1591	1.7137	0.2016	42,261.0740

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	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969
Energy	0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.3004	3,105.3004	0.0595	0.0569	3,123.7537
Mobile	5.1382	35.5979	48.0923	0.2049	14.3025	0.1319	14.4344	3.8266	0.1235	3.9501		20,953.5399	20,953.5399	1.1719		20,982.8371
Total	20.1965	44.6077	85.9955	0.2617	14.3025	1.0174	15.3198	3.8266	1.0090	4.8355	0.0000	32,010.7611	32,010.7611	1.4422	0.2016	32,106.8877

6437e Millcreek Promenade - Phase 2 - 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	3.40	12.81	20.27	27.59	37.05	6.11	35.64	37.05	5.80	32.37	0.00	24.07	24.07	15.84	0.00	24.03

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	12/16/2020	2/2/2021	5	35	
2	Building Construction	Building Construction	2/3/2021	6/19/2022	5	358	
3	Paving	Paving	6/20/2022	7/26/2022	5	27	
4	Architectural Coating	Architectural Coating	7/1/2022	9/1/2022	5	45	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 37.33****Acres of Paving: 27.3****Residential Indoor: 1,168,830; Residential Outdoor: 389,610; Non-Residential Indoor: 5,630; Non-Residential Outdoor: 1,877; Striped Parking Area: 71,489 (Architectural Coating – sqft)****OffRoad Equipment**

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	727.00	240.00	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	145.00	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

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.2 Grading - 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					
Fugitive Dust					7.1532	0.0000	7.1532	3.4324	0.0000	3.4324			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.865 3	6,005.865 3	1.9424		6,054.425 7
Total	4.4501	50.1975	31.9583	0.0620	7.1532	2.1739	9.3271	3.4324	2.0000	5.4324		6,005.865 3	6,005.865 3	1.9424		6,054.425 7

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	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.2 Grading - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7897	0.0000	2.7897	1.3386	0.0000	1.3386			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.865 3	6,005.865 3	1.9424		6,054.425 7
Total	4.4501	50.1975	31.9583	0.0620	2.7897	2.1739	4.9636	1.3386	2.0000	3.3386	0.0000	6,005.865 3	6,005.865 3	1.9424		6,054.425 7

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	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.2 Grading - 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					
Fugitive Dust					7.1532	0.0000	7.1532	3.4324	0.0000	3.4324			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.043 4	6,007.043 4	1.9428		6,055.613 4
Total	4.1912	46.3998	30.8785	0.0620	7.1532	1.9853	9.1385	3.4324	1.8265	5.2589		6,007.043 4	6,007.043 4	1.9428		6,055.613 4

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	0.0948	0.0540	0.7394	2.1400e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		212.9502	212.9502	5.0800e-003		213.0771
Total	0.0948	0.0540	0.7394	2.1400e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		212.9502	212.9502	5.0800e-003		213.0771

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.2 Grading - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7897	0.0000	2.7897	1.3386	0.0000	1.3386			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.043 4	6,007.043 4	1.9428		6,055.613 4
Total	4.1912	46.3998	30.8785	0.0620	2.7897	1.9853	4.7751	1.3386	1.8265	3.1651	0.0000	6,007.043 4	6,007.043 4	1.9428		6,055.613 4

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	0.0948	0.0540	0.7394	2.1400e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		212.9502	212.9502	5.0800e-003		213.0771
Total	0.0948	0.0540	0.7394	2.1400e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		212.9502	212.9502	5.0800e-003		213.0771

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.3 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
Total	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

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	0.5603	22.2094	3.9625	0.0622	1.5368	0.0423	1.5791	0.4425	0.0404	0.4829		6,558.0245	6,558.0245	0.4692		6,569.7536
Worker	3.4467	1.9635	26.8781	0.0777	8.1262	0.0479	8.1740	2.1551	0.0441	2.1992		7,740.7391	7,740.7391	0.1846		7,745.3534
Total	4.0070	24.1729	30.8406	0.1399	9.6630	0.0901	9.7531	2.5976	0.0845	2.6821		14,298.7636	14,298.7636	0.6537		14,315.1070

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.3 Building Construction - 2021**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
Total	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

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	0.5603	22.2094	3.9625	0.0622	1.5368	0.0423	1.5791	0.4425	0.0404	0.4829		6,558.0245	6,558.0245	0.4692		6,569.7536
Worker	3.4467	1.9635	26.8781	0.0777	8.1262	0.0479	8.1740	2.1551	0.0441	2.1992		7,740.7391	7,740.7391	0.1846		7,745.3534
Total	4.0070	24.1729	30.8406	0.1399	9.6630	0.0901	9.7531	2.5976	0.0845	2.6821		14,298.7636	14,298.7636	0.6537		14,315.1070

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.3 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
Total	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

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	0.5224	20.9539	3.6856	0.0616	1.5367	0.0355	1.5723	0.4425	0.0340	0.4764		6,502.2043	6,502.2043	0.4443		6,513.3125
Worker	3.2239	1.7671	24.7914	0.0748	8.1262	0.0466	8.1728	2.1551	0.0429	2.1980		7,457.9007	7,457.9007	0.1658		7,462.0455
Total	3.7464	22.7210	28.4770	0.1365	9.6629	0.0821	9.7450	2.5975	0.0769	2.6744		13,960.1050	13,960.1050	0.6101		13,975.3580

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.3 Building Construction - 2022**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
Total	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

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	0.5224	20.9539	3.6856	0.0616	1.5367	0.0355	1.5723	0.4425	0.0340	0.4764		6,502.2043	6,502.2043	0.4443		6,513.3125
Worker	3.2239	1.7671	24.7914	0.0748	8.1262	0.0466	8.1728	2.1551	0.0429	2.1980		7,457.9007	7,457.9007	0.1658		7,462.0455
Total	3.7464	22.7210	28.4770	0.1365	9.6629	0.0821	9.7450	2.5975	0.0769	2.6744		13,960.1050	13,960.1050	0.6101		13,975.3580

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.4 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		2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	1.1480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2508	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.660 3	2,207.660 3	0.7140		2,225.510 4

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
Total	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

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.4 Paving - 2022**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	2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	1.1480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2508	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4

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
Total	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

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3.5 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	23.4926					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
Total	23.6972	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.6430	0.3524	4.9447	0.0149	1.6208	9.3000e-003	1.6301	0.4298	8.5600e-003	0.4384		1,487.4768	1,487.4768	0.0331		1,488.3034
Total	0.6430	0.3524	4.9447	0.0149	1.6208	9.3000e-003	1.6301	0.4298	8.5600e-003	0.4384		1,487.4768	1,487.4768	0.0331		1,488.3034

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

3.5 Architectural Coating - 2022**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	23.4926					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
Total	23.6972	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

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	0.6430	0.3524	4.9447	0.0149	1.6208	9.3000e-003	1.6301	0.4298	8.5600e-003	0.4384		1,487.4768	1,487.4768	0.0331		1,488.3034
Total	0.6430	0.3524	4.9447	0.0149	1.6208	9.3000e-003	1.6301	0.4298	8.5600e-003	0.4384		1,487.4768	1,487.4768	0.0331		1,488.3034

4.0 Operational Detail - Mobile

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	5.1382	35.5979	48.0923	0.2049	14.3025	0.1319	14.4344	3.8266	0.1235	3.9501		20,953.5399	20,953.5399	1.1719		20,982.8371
Unmitigated	5.8494	42.1489	69.9502	0.3047	22.7211	0.1982	22.9193	6.0789	0.1857	6.2646		31,100.9379	31,100.9379	1.4434		31,137.0234

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,383.90	1,383.90	1383.90	4,728,997	2,976,799
Health Club	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Single Family Housing	1,734.00	1,734.00	1734.00	5,925,341	3,729,872
Total	3,117.90	3,117.90	3,117.90	10,654,338	6,706,670

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Health Club	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Parking Lot	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Install Energy Efficient Appliances

6437e Millcreek Promenade - Phase 2 - 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					
NaturalGas Mitigated	0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.300 4	3,105.300 4	0.0595	0.0569	3,123.753 7
NaturalGas Unmitigated	0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.300 4	3,105.300 4	0.0595	0.0569	3,123.753 7

6437e Millcreek Promenade - Phase 2 - 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	8960.67	0.0966	0.8258	0.3514	5.2700e-003		0.0668	0.0668		0.0668	0.0668		1,054.1966	1,054.1966	0.0202	0.0193	1,060.4612
Health Club	334.068	3.6000e-003	0.0328	0.0275	2.0000e-004		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003		39.3022	39.3022	7.5000e-004	7.2000e-004	39.5357
Other 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
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
Single Family Housing	17100.3	0.1844	1.5759	0.6706	0.0101		0.1274	0.1274		0.1274	0.1274		2,011.8016	2,011.8016	0.0386	0.0369	2,023.7568
Total		0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.3004	3,105.3004	0.0595	0.0569	3,123.7537

6437e Millcreek Promenade - Phase 2 - 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	8.96067	0.0966	0.8258	0.3514	5.2700e-003		0.0668	0.0668		0.0668	0.0668		1,054.1966	1,054.1966	0.0202	0.0193	1,060.4612
Health Club	0.334068	3.6000e-003	0.0328	0.0275	2.0000e-004		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003		39.3022	39.3022	7.5000e-004	7.2000e-004	39.5357
Other 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
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
Single Family Housing	17.1003	0.1844	1.5759	0.6706	0.0101		0.1274	0.1274		0.1274	0.1274		2,011.8016	2,011.8016	0.0386	0.0369	2,023.7568
Total		0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.3004	3,105.3004	0.0595	0.0569	3,123.7537

6.0 Area Detail**6.1 Mitigation Measures Area**

6437e Millcreek Promenade - Phase 2 - 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	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969
Unmitigated	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969

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	1.0898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7233	6.1808	2.6301	0.0395		0.4997	0.4997		0.4997	0.4997	0.0000	7,890.3529	7,890.3529	0.1512	0.1447	7,937.2414
Landscaping	1.0357	0.3946	34.2236	1.8100e-003		0.1890	0.1890		0.1890	0.1890		61.5678	61.5678	0.0595		63.0555
Total	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969

6437e Millcreek Promenade - Phase 2 - 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	1.0898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7233	6.1808	2.6301	0.0395		0.4997	0.4997		0.4997	0.4997	0.0000	7,890.3529	7,890.3529	0.1512	0.1447	7,937.2414
Landscaping	1.0357	0.3946	34.2236	1.8100e-003		0.1890	0.1890		0.1890	0.1890		61.5678	61.5678	0.0595		63.0555
Total	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969

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**

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Summer

Institute Recycling and Composting Services

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

Equipment Type	Number
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11.0 Vegetation

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

6437e Millcreek Promenade - Phase 2

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.33	Acre	9.33	406,414.80	0
Other Non-Asphalt Surfaces	15.47	Acre	15.47	673,873.20	0
Parking Lot	278.00	Space	2.50	111,200.00	0
Health Club	3.75	1000sqft	0.09	3,753.00	0
Apartments Low Rise	210.00	Dwelling Unit	4.30	210,000.00	601
Single Family Housing	204.00	Dwelling Unit	5.64	367,200.00	583

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

Project Characteristics -

Land Use - P2 (37.33 ac)- 210 multi-fam low-rise DUs, 1,972 sf clubhouse, & 120 guest prkng spcs; 204 single-family DUs, 1,781 sf clubhouse, & 158 guest prkng spcs; & remainder on-site roadways (~25% site=9.33 ac) & landscaping/outdoor recreational areas (15.47 ac).

Construction Phase - Phase 2 to begin construction ~mid-December 2020 and be completed by 9/1/2022. No demo.

Grading - Phase 2 is ~37.33 ac. Site to be balanced.

Architectural Coating - SCAQMD Rule 1113 limits architectural coatings to 50 g/L VOC. Architectural coatings have been mitigated to 10 g/L VOC buildings & 100 g/L VOC parking.

Vehicle Trips - Per TIA, 6.59 trips/DU/day multi-family (w/ 10% internal capture) & 8.5 trips/DU/day single-family (w./ 10% internal capture). On-site clubhouses no additional trips.

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

Sequestration - Per applicant, 634 trees to be planted. For modeling purposes, trees were split 1/3 in P1 and 2/3 in P2 resulting in 211 trees in P1 & 423 trees P2.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - RTA Rte 61 Antelope Square ~1 mile SE, Downtown Menifee is ~2.3 miles N, project to provide sidewalks on & off site, project is mixed commercial/residential, 414 DU/37.33ac = 11.1 DU/ac.

Energy Mitigation - Energy Star appliances to be installed onsite. High efficiency lighting at least 34% more efficient than standard.

Water Mitigation - Use of low-flow fixtures and water-efficient irrigation systems.

Waste Mitigation - Ab 347 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

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
tblConstructionPhase	NumDays	55.00	45.00
tblConstructionPhase	NumDays	740.00	358.00
tblConstructionPhase	NumDays	75.00	35.00
tblConstructionPhase	NumDays	55.00	27.00
tblFireplaces	NumberGas	178.50	189.00

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

tblFireplaces	NumberGas	173.40	183.60
tblFireplaces	NumberWood	10.50	0.00
tblFireplaces	NumberWood	10.20	0.00
tblGrading	AcresOfGrading	87.50	37.33
tblLandUse	LandUseSquareFeet	3,750.00	3,753.00
tblLandUse	LotAcreage	13.13	4.30
tblLandUse	LotAcreage	66.23	5.64
tblSequestration	NumberOfNewTrees	0.00	423.00
tblVehicleTrips	ST_TR	7.16	6.59
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	9.91	8.50
tblVehicleTrips	SU_TR	6.07	6.59
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	8.62	8.50
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	9.52	8.50
tblWoodstoves	NumberCatalytic	10.50	0.00
tblWoodstoves	NumberCatalytic	10.20	0.00
tblWoodstoves	NumberNoncatalytic	10.50	0.00
tblWoodstoves	NumberNoncatalytic	10.20	0.00

2.0 Emissions Summary

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

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					
2020	4.5498	50.2598	32.6106	0.0640	7.3767	2.1753	9.5520	3.4917	2.0012	5.4929	0.0000	6,203.512 4	6,203.512 4	1.9473	0.0000	6,252.195 6
2021	5.8784	46.4557	42.9585	0.1564	9.6630	1.9867	10.7130	3.4917	1.8277	5.3194	0.0000	15,808.97 83	15,808.97 83	1.9472	0.0000	15,841.45 94
2022	26.6463	38.1864	40.7202	0.1533	9.6629	0.8923	10.5552	2.5975	0.8391	3.4367	0.0000	15,501.44 86	15,501.44 86	1.2519	0.0000	15,532.74 47
Maximum	26.6463	50.2598	42.9585	0.1564	9.6630	2.1753	10.7130	3.4917	2.0012	5.4929	0.0000	15,808.97 83	15,808.97 83	1.9473	0.0000	15,841.45 94

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5498	50.2598	32.6106	0.0640	3.0133	2.1753	5.1886	1.3979	2.0012	3.3991	0.0000	6,203.512 4	6,203.512 4	1.9473	0.0000	6,252.195 6
2021	5.8784	46.4557	42.9585	0.1564	9.6630	1.9867	10.7130	2.5976	1.8277	3.5846	0.0000	15,808.97 83	15,808.97 83	1.9472	0.0000	15,841.45 94
2022	26.6463	38.1864	40.7202	0.1533	9.6629	0.8923	10.5552	2.5975	0.8391	3.4367	0.0000	15,501.44 86	15,501.44 86	1.2519	0.0000	15,532.74 47
Maximum	26.6463	50.2598	42.9585	0.1564	9.6630	2.1753	10.7130	2.5976	2.0012	3.5846	0.0000	15,808.97 83	15,808.97 83	1.9473	0.0000	15,841.45 94

6437e Millcreek Promenade - Phase 2 - 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	0.00	0.00	0.00	0.00	16.34	0.00	14.16	31.19	0.00	26.87	0.00	0.00	0.00	0.00	0.00	0.00

6437e Millcreek Promenade - Phase 2 - 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	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969
Energy	0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.3004	3,105.3004	0.0595	0.0569	3,123.7537
Mobile	4.9631	42.1369	60.4490	0.2812	22.7211	0.2001	22.9213	6.0789	0.1876	6.2665		28,736.0705	28,736.0705	1.4907		28,773.3367
Total	20.0214	51.1468	98.3523	0.3379	22.7211	1.0856	23.8067	6.0789	1.0730	7.1519	0.0000	39,793.2917	39,793.2917	1.7609	0.2016	39,897.3873

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	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969
Energy	0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.3004	3,105.3004	0.0595	0.0569	3,123.7537
Mobile	4.2983	35.2625	42.9890	0.1886	14.3025	0.1339	14.4363	3.8266	0.1254	3.9520		19,302.8077	19,302.8077	1.2382		19,333.7633
Total	19.3566	44.2723	80.8923	0.2454	14.3025	1.0193	15.3218	3.8266	1.0108	4.8374	0.0000	30,360.0289	30,360.0289	1.5085	0.2016	30,457.8139

6437e Millcreek Promenade - Phase 2 - 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	3.32	13.44	17.75	27.38	37.05	6.10	35.64	37.05	5.79	32.36	0.00	23.71	23.71	14.34	0.00	23.66

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	12/16/2020	2/2/2021	5	35	
2	Building Construction	Building Construction	2/3/2021	6/19/2022	5	358	
3	Paving	Paving	6/20/2022	7/26/2022	5	27	
4	Architectural Coating	Architectural Coating	7/1/2022	9/1/2022	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 37.33

Acres of Paving: 27.3

Residential Indoor: 1,168,830; Residential Outdoor: 389,610; Non-Residential Indoor: 5,630; Non-Residential Outdoor: 1,877; Striped Parking Area: 71,489 (Architectural Coating – sqft)

OffRoad Equipment

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	727.00	240.00	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	145.00	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

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

3.2 Grading - 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					
Fugitive Dust					7.1532	0.0000	7.1532	3.4324	0.0000	3.4324			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.865 3	6,005.865 3	1.9424		6,054.425 7
Total	4.4501	50.1975	31.9583	0.0620	7.1532	2.1739	9.3271	3.4324	2.0000	5.4324		6,005.865 3	6,005.865 3	1.9424		6,054.425 7

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	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699
Total	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

3.2 Grading - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7897	0.0000	2.7897	1.3386	0.0000	1.3386			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.865 3	6,005.865 3	1.9424		6,054.425 7
Total	4.4501	50.1975	31.9583	0.0620	2.7897	2.1739	4.9636	1.3386	2.0000	3.3386	0.0000	6,005.865 3	6,005.865 3	1.9424		6,054.425 7

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	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699
Total	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

3.2 Grading - 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					
Fugitive Dust					7.1532	0.0000	7.1532	3.4324	0.0000	3.4324			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.043 4	6,007.043 4	1.9428		6,055.613 4
Total	4.1912	46.3998	30.8785	0.0620	7.1532	1.9853	9.1385	3.4324	1.8265	5.2589		6,007.043 4	6,007.043 4	1.9428		6,055.613 4

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	0.0931	0.0559	0.5969	1.9200e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		191.0387	191.0387	4.4100e-003		191.1491
Total	0.0931	0.0559	0.5969	1.9200e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		191.0387	191.0387	4.4100e-003		191.1491

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

3.2 Grading - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7897	0.0000	2.7897	1.3386	0.0000	1.3386			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.043 4	6,007.043 4	1.9428		6,055.613 4
Total	4.1912	46.3998	30.8785	0.0620	2.7897	1.9853	4.7751	1.3386	1.8265	3.1651	0.0000	6,007.043 4	6,007.043 4	1.9428		6,055.613 4

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	0.0931	0.0559	0.5969	1.9200e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		191.0387	191.0387	4.4100e-003		191.1491
Total	0.0931	0.0559	0.5969	1.9200e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		191.0387	191.0387	4.4100e-003		191.1491

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

3.3 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
Total	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

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	0.5951	22.0182	4.6875	0.0599	1.5368	0.0435	1.5803	0.4425	0.0416	0.4841		6,311.357 3	6,311.357 3	0.5228		6,324.426 4
Worker	3.3824	2.0307	21.6958	0.0697	8.1262	0.0479	8.1740	2.1551	0.0441	2.1992		6,944.257 1	6,944.257 1	0.1605		6,948.268 8
Total	3.9775	24.0488	26.3833	0.1295	9.6630	0.0914	9.7544	2.5976	0.0857	2.6833		13,255.61 44	13,255.61 44	0.6832		13,272.69 51

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

3.3 Building Construction - 2021**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
Total	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

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	0.5951	22.0182	4.6875	0.0599	1.5368	0.0435	1.5803	0.4425	0.0416	0.4841		6,311.357 3	6,311.357 3	0.5228		6,324.426 4
Worker	3.3824	2.0307	21.6958	0.0697	8.1262	0.0479	8.1740	2.1551	0.0441	2.1992		6,944.257 1	6,944.257 1	0.1605		6,948.268 8
Total	3.9775	24.0488	26.3833	0.1295	9.6630	0.0914	9.7544	2.5976	0.0857	2.6833		13,255.61 44	13,255.61 44	0.6832		13,272.69 51

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

3.3 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
Total	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

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	0.5556	20.7441	4.3757	0.0593	1.5367	0.0367	1.5734	0.4425	0.0351	0.4775		6,256.2513	6,256.2513	0.4956		6,268.6413
Worker	3.1731	1.8267	19.9812	0.0671	8.1262	0.0466	8.1728	2.1551	0.0429	2.1980		6,690.8637	6,690.8637	0.1443		6,694.4712
Total	3.7288	22.5708	24.3568	0.1264	9.6629	0.0833	9.7462	2.5975	0.0780	2.6755		12,947.1150	12,947.1150	0.6399		12,963.1125

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3.3 Building Construction - 2022**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
Total	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

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	0.5556	20.7441	4.3757	0.0593	1.5367	0.0367	1.5734	0.4425	0.0351	0.4775		6,256.2513	6,256.2513	0.4956		6,268.6413
Worker	3.1731	1.8267	19.9812	0.0671	8.1262	0.0466	8.1728	2.1551	0.0429	2.1980		6,690.8637	6,690.8637	0.1443		6,694.4712
Total	3.7288	22.5708	24.3568	0.1264	9.6629	0.0833	9.7462	2.5975	0.0780	2.6755		12,947.1150	12,947.1150	0.6399		12,963.1125

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

3.4 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		2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	1.1480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2508	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.660 3	2,207.660 3	0.7140		2,225.510 4

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
Total	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

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3.4 Paving - 2022**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	2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	1.1480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2508	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4

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
Total	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

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3.5 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	23.4926					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
Total	23.6972	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.6329	0.3643	3.9852	0.0134	1.6208	9.3000e-003	1.6301	0.4298	8.5600e-003	0.4384		1,334.4914	1,334.4914	0.0288		1,335.2109
Total	0.6329	0.3643	3.9852	0.0134	1.6208	9.3000e-003	1.6301	0.4298	8.5600e-003	0.4384		1,334.4914	1,334.4914	0.0288		1,335.2109

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

3.5 Architectural Coating - 2022**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	23.4926					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
Total	23.6972	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

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	0.6329	0.3643	3.9852	0.0134	1.6208	9.3000e-003	1.6301	0.4298	8.5600e-003	0.4384		1,334.4914	1,334.4914	0.0288		1,335.2109
Total	0.6329	0.3643	3.9852	0.0134	1.6208	9.3000e-003	1.6301	0.4298	8.5600e-003	0.4384		1,334.4914	1,334.4914	0.0288		1,335.2109

4.0 Operational Detail - Mobile

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	4.2983	35.2625	42.9890	0.1886	14.3025	0.1339	14.4363	3.8266	0.1254	3.9520		19,302.8077	19,302.8077	1.2382		19,333.7633
Unmitigated	4.9631	42.1369	60.4490	0.2812	22.7211	0.2001	22.9213	6.0789	0.1876	6.2665		28,736.0705	28,736.0705	1.4907		28,773.3367

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,383.90	1,383.90	1383.90	4,728,997	2,976,799
Health Club	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Single Family Housing	1,734.00	1,734.00	1734.00	5,925,341	3,729,872
Total	3,117.90	3,117.90	3,117.90	10,654,338	6,706,670

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Health Club	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Parking Lot	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Install Energy Efficient Appliances

6437e Millcreek Promenade - Phase 2 - 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					
NaturalGas Mitigated	0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.300 4	3,105.300 4	0.0595	0.0569	3,123.753 7
NaturalGas Unmitigated	0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.300 4	3,105.300 4	0.0595	0.0569	3,123.753 7

6437e Millcreek Promenade - Phase 2 - 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	8960.67	0.0966	0.8258	0.3514	5.2700e-003		0.0668	0.0668		0.0668	0.0668		1,054.1966	1,054.1966	0.0202	0.0193	1,060.4612
Health Club	334.068	3.6000e-003	0.0328	0.0275	2.0000e-004		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003		39.3022	39.3022	7.5000e-004	7.2000e-004	39.5357
Other 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
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
Single Family Housing	17100.3	0.1844	1.5759	0.6706	0.0101		0.1274	0.1274		0.1274	0.1274		2,011.8016	2,011.8016	0.0386	0.0369	2,023.7568
Total		0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.3004	3,105.3004	0.0595	0.0569	3,123.7537

6437e Millcreek Promenade - Phase 2 - 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	8.96067	0.0966	0.8258	0.3514	5.2700e-003		0.0668	0.0668		0.0668	0.0668		1,054.1966	1,054.1966	0.0202	0.0193	1,060.4612
Health Club	0.334068	3.6000e-003	0.0328	0.0275	2.0000e-004		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003		39.3022	39.3022	7.5000e-004	7.2000e-004	39.5357
Other 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
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
Single Family Housing	17.1003	0.1844	1.5759	0.6706	0.0101		0.1274	0.1274		0.1274	0.1274		2,011.8016	2,011.8016	0.0386	0.0369	2,023.7568
Total		0.2847	2.4345	1.0495	0.0155		0.1967	0.1967		0.1967	0.1967		3,105.3004	3,105.3004	0.0595	0.0569	3,123.7537

6.0 Area Detail**6.1 Mitigation Measures Area**

6437e Millcreek Promenade - Phase 2 - 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	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969
Unmitigated	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969

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	1.0898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7233	6.1808	2.6301	0.0395		0.4997	0.4997		0.4997	0.4997	0.0000	7,890.3529	7,890.3529	0.1512	0.1447	7,937.2414
Landscaping	1.0357	0.3946	34.2236	1.8100e-003		0.1890	0.1890		0.1890	0.1890		61.5678	61.5678	0.0595		63.0555
Total	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969

6437e Millcreek Promenade - Phase 2 - 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	1.0898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7233	6.1808	2.6301	0.0395		0.4997	0.4997		0.4997	0.4997	0.0000	7,890.3529	7,890.3529	0.1512	0.1447	7,937.2414
Landscaping	1.0357	0.3946	34.2236	1.8100e-003		0.1890	0.1890		0.1890	0.1890		61.5678	61.5678	0.0595		63.0555
Total	14.7737	6.5754	36.8538	0.0413		0.6888	0.6888		0.6888	0.6888	0.0000	7,951.9207	7,951.9207	0.2107	0.1447	8,000.2969

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**

6437e Millcreek Promenade - Phase 2 - Riverside-South Coast County, Winter

Institute Recycling and Composting Services

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

Equipment Type	Number
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11.0 Vegetation

APPENDIX C

CalEEMod Model Annual Emissions Printouts

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Annual

6437e Millcreek Promenade - Phase 1

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	38.40	1000sqft	0.88	38,400.00	0
Other Non-Asphalt Surfaces	6.72	Acre	6.72	292,723.20	0
Parking Lot	836.00	Space	7.52	334,400.00	0
High Turnover (Sit Down Restaurant)	8.00	1000sqft	0.18	8,000.00	0
Regional Shopping Center	122.73	1000sqft	2.82	122,727.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Annual

Project Characteristics -

Land Use - P1 (18.12 ac total)- 38.4 TSF industrial park over 2.82 ac w/ 80 prk spcs, 122.727 sf retail & 8 TSF restaurant over 15.3 ac w/ 756 prk spcs, & remainder landscaping/open space (6.72 ac).

Construction Phase - Phase 1 anticipated to begin construction 6/1/19 and be completed by mid-December 2020. No demo.

Grading - Phase 1 covers ~18.12 acres. Site to balance.

Vehicle Trips - Per TIA, 3.37 trips/TSF/day industrial park, 47.85 trips/TSF/day retail (w/ 15% pass-by reduction), & 95.25 trips/TSF/day restaurant (w/ 15% pass-by reduction).

Sequestration - Per applicant, 634 trees to be planted. For modeling purposes, trees were split 1/3 in P1 and 2/3 in P2 resulting in 211 trees in P1 & 423 trees P2.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - RTA Rte 61 Antelope Square ~1 mile SE, Downtown Menifee is ~2.3 miles N, project to provide sidewalks on & off site, project is mixed commercial/residential, retail = 1emp/500sf, industrial = 1 emp/1,030sf.

Energy Mitigation - Energy Star appliances to be installed onsite. High efficiency lighting at least 34% more efficient than standard.

Water Mitigation - Use of low-flow fixtures and water-efficient irrigation systems.

Waste Mitigation - Ab 347 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	300.00	326.00
tblConstructionPhase	NumDays	30.00	32.00
tblConstructionPhase	NumDays	20.00	22.00
tblGrading	AcresOfGrading	80.00	18.12
tblLandUse	LandUseSquareFeet	122,730.00	122,727.00
tblSequestration	NumberOfNewTrees	0.00	211.00
tblVehicleTrips	ST_TR	158.37	95.25
tblVehicleTrips	ST_TR	2.49	3.37
tblVehicleTrips	ST_TR	49.97	47.85
tblVehicleTrips	SU_TR	131.84	95.25
tblVehicleTrips	SU_TR	0.73	3.37
tblVehicleTrips	SU_TR	25.24	47.85
tblVehicleTrips	WD_TR	127.15	95.25
tblVehicleTrips	WD_TR	6.83	3.37
tblVehicleTrips	WD_TR	42.70	47.85

2.0 Emissions Summary

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Annual

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	0.3417	3.1152	2.4896	6.7100e-003	0.3715	0.1237	0.4952	0.1257	0.1156	0.2413	0.0000	611.3138	611.3138	0.0843	0.0000	613.4200
2020	1.3138	3.6700	3.3777	0.0100	0.4621	0.1353	0.5974	0.1247	0.1272	0.2519	0.0000	911.5329	911.5329	0.1000	0.0000	914.0339
Maximum	1.3138	3.6700	3.3777	0.0100	0.4621	0.1353	0.5974	0.1257	0.1272	0.2519	0.0000	911.5329	911.5329	0.1000	0.0000	914.0339

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	0.3417	3.1152	2.4896	6.7100e-003	0.3068	0.1237	0.4305	0.0927	0.1156	0.2083	0.0000	611.3135	611.3135	0.0843	0.0000	613.4197
2020	1.3138	3.6700	3.3777	0.0100	0.4621	0.1353	0.5974	0.1247	0.1272	0.2519	0.0000	911.5326	911.5326	0.1000	0.0000	914.0335
Maximum	1.3138	3.6700	3.3777	0.0100	0.4621	0.1353	0.5974	0.1247	0.1272	0.2519	0.0000	911.5326	911.5326	0.1000	0.0000	914.0335

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	7.75	0.00	5.92	13.16	0.00	6.68	0.00	0.00	0.00	0.00	0.00	0.00

6437e Millcreek Promenade - Phase 1 - Riverside-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2019	8-31-2019	1.6607	1.6607
2	9-1-2019	11-30-2019	1.3533	1.3533
3	12-1-2019	2-29-2020	1.2690	1.2690
4	3-1-2020	5-31-2020	1.2400	1.2400
5	6-1-2020	8-31-2020	1.2406	1.2406
6	9-1-2020	9-30-2020	0.4045	0.4045
		Highest	1.6607	1.6607

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7400	1.2000e-004	0.0130	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0251	0.0251	7.0000e-005	0.0000	0.0268
Energy	0.0140	0.1271	0.1068	7.6000e-004		9.6600e-003	9.6600e-003		9.6600e-003	9.6600e-003	0.0000	907.0552	907.0552	0.0344	9.1000e-003	910.6275
Mobile	1.9696	15.9930	20.1848	0.0788	5.4431	0.0734	5.5165	1.4585	0.0691	1.5277	0.0000	7,298.2923	7,298.2923	0.4709	0.0000	7,310.0652
Waste						0.0000	0.0000		0.0000	0.0000	55.1506	0.0000	55.1506	3.2593	0.0000	136.6333
Water						0.0000	0.0000		0.0000	0.0000	6.4717	104.9039	111.3757	0.6690	0.0166	133.0458
Total	2.7236	16.1202	20.3046	0.0795	5.4431	0.0831	5.5262	1.4585	0.0788	1.5374	61.6223	8,310.2766	8,371.8989	4.4337	0.0257	8,490.3986

6437e Millcreek Promenade - Phase 1 - 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	0.7400	1.2000e-004	0.0130	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0251	0.0251	7.0000e-005	0.0000	0.0268
Energy	0.0140	0.1271	0.1068	7.6000e-004		9.6600e-003	9.6600e-003		9.6600e-003	9.6600e-003	0.0000	794.2183	794.2183	0.0297	8.1400e-003	797.3870
Mobile	1.8038	14.1117	15.7270	0.0583	3.7417	0.0534	3.7951	1.0026	0.0503	1.0529	0.0000	5,413.1816	5,413.1816	0.4169	0.0000	5,423.6043
Waste						0.0000	0.0000		0.0000	0.0000	13.7877	0.0000	13.7877	0.8148	0.0000	34.1583
Water						0.0000	0.0000		0.0000	0.0000	5.1774	86.7410	91.9184	0.5354	0.0133	109.2646
Total	2.5578	14.2389	15.8468	0.0591	3.7417	0.0631	3.8048	1.0026	0.0600	1.0626	18.9650	6,294.1660	6,313.1311	1.7969	0.0214	6,364.4410

	ROG	NOx	CO	SO2	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	6.09	11.67	21.95	25.68	31.26	24.08	31.15	31.26	23.94	30.88	69.22	24.26	24.59	59.47	16.54	25.04

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2.3 Vegetation**Vegetation**

	CO2e
Category	MT
New Trees	149.3880
Total	149.3880

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/1/2019	7/16/2019	5	32	
2	Building Construction	Building Construction	7/17/2019	10/14/2020	5	326	
3	Paving	Paving	10/15/2020	11/15/2020	5	22	
4	Architectural Coating	Architectural Coating	11/4/2020	12/15/2020	5	30	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 18.12****Acres of Paving: 14.24**

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 253,691; Non-Residential Outdoor: 84,564; Striped Parking Area: 37,627
(Architectural Coating – sqft)

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OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	322.00	131.00	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	64.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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					0.1060	0.0000	0.1060	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0758	0.8723	0.5340	9.9000e-004		0.0381	0.0381		0.0351	0.0351	0.0000	89.1221	89.1221	0.0282	0.0000	89.8270
Total	0.0758	0.8723	0.5340	9.9000e-004	0.1060	0.0381	0.1441	0.0540	0.0351	0.0891	0.0000	89.1221	89.1221	0.0282	0.0000	89.8270

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3.2 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	1.5900e-003	1.1600e-003	0.0121	3.0000e-005	3.5200e-003	2.0000e-005	3.5400e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.0388	3.0388	8.0000e-005	0.0000	3.0408
Total	1.5900e-003	1.1600e-003	0.0121	3.0000e-005	3.5200e-003	2.0000e-005	3.5400e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.0388	3.0388	8.0000e-005	0.0000	3.0408

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					0.0413	0.0000	0.0413	0.0211	0.0000	0.0211	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0758	0.8723	0.5340	9.9000e-004		0.0381	0.0381		0.0351	0.0351	0.0000	89.1220	89.1220	0.0282	0.0000	89.8269
Total	0.0758	0.8723	0.5340	9.9000e-004	0.0413	0.0381	0.0794	0.0211	0.0351	0.0561	0.0000	89.1220	89.1220	0.0282	0.0000	89.8269

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3.2 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	1.5900e-003	1.1600e-003	0.0121	3.0000e-005	3.5200e-003	2.0000e-005	3.5400e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.0388	3.0388	8.0000e-005	0.0000	3.0408
Total	1.5900e-003	1.1600e-003	0.0121	3.0000e-005	3.5200e-003	2.0000e-005	3.5400e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.0388	3.0388	8.0000e-005	0.0000	3.0408

3.3 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	0.1417	1.2647	1.0298	1.6100e-003		0.0774	0.0774		0.0728	0.0728	0.0000	141.0625	141.0625	0.0344	0.0000	141.9216
Total	0.1417	1.2647	1.0298	1.6100e-003		0.0774	0.0774		0.0728	0.0728	0.0000	141.0625	141.0625	0.0344	0.0000	141.9216

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3.3 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	0.0266	0.9071	0.1806	2.0400e-003	0.0497	6.8300e-003	0.0565	0.0143	6.5400e-003	0.0209	0.0000	194.6261	194.6261	0.0166	0.0000	195.0407
Worker	0.0960	0.0699	0.7331	2.0300e-003	0.2124	1.3300e-003	0.2137	0.0564	1.2300e-003	0.0576	0.0000	183.4643	183.4643	5.0200e-003	0.0000	183.5898
Total	0.1226	0.9770	0.9136	4.0700e-003	0.2620	8.1600e-003	0.2702	0.0707	7.7700e-003	0.0785	0.0000	378.0904	378.0904	0.0216	0.0000	378.6305

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	0.1417	1.2647	1.0298	1.6100e-003		0.0774	0.0774		0.0728	0.0728	0.0000	141.0624	141.0624	0.0344	0.0000	141.9215
Total	0.1417	1.2647	1.0298	1.6100e-003		0.0774	0.0774		0.0728	0.0728	0.0000	141.0624	141.0624	0.0344	0.0000	141.9215

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3.3 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	0.0266	0.9071	0.1806	2.0400e-003	0.0497	6.8300e-003	0.0565	0.0143	6.5400e-003	0.0209	0.0000	194.6261	194.6261	0.0166	0.0000	195.0407
Worker	0.0960	0.0699	0.7331	2.0300e-003	0.2124	1.3300e-003	0.2137	0.0564	1.2300e-003	0.0576	0.0000	183.4643	183.4643	5.0200e-003	0.0000	183.5898
Total	0.1226	0.9770	0.9136	4.0700e-003	0.2620	8.1600e-003	0.2702	0.0707	7.7700e-003	0.0785	0.0000	378.0904	378.0904	0.0216	0.0000	378.6305

3.3 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	0.2183	1.9762	1.7354	2.7700e-003		0.1151	0.1151		0.1082	0.1082	0.0000	238.5583	238.5583	0.0582	0.0000	240.0133
Total	0.2183	1.9762	1.7354	2.7700e-003		0.1151	0.1151		0.1082	0.1082	0.0000	238.5583	238.5583	0.0582	0.0000	240.0133

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3.3 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	0.0383	1.4034	0.2746	3.4700e-003	0.0852	7.9400e-003	0.0932	0.0246	7.5900e-003	0.0322	0.0000	331.7762	331.7762	0.0265	0.0000	332.4393
Worker	0.1524	0.1068	1.1404	3.3700e-003	0.3645	2.2400e-003	0.3668	0.0968	2.0700e-003	0.0989	0.0000	304.9920	304.9920	7.6400e-003	0.0000	305.1830
Total	0.1908	1.5102	1.4150	6.8400e-003	0.4498	0.0102	0.4599	0.1214	9.6600e-003	0.1311	0.0000	636.7683	636.7683	0.0342	0.0000	637.6222

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	0.2183	1.9762	1.7354	2.7700e-003		0.1151	0.1151		0.1082	0.1082	0.0000	238.5580	238.5580	0.0582	0.0000	240.0130
Total	0.2183	1.9762	1.7354	2.7700e-003		0.1151	0.1151		0.1082	0.1082	0.0000	238.5580	238.5580	0.0582	0.0000	240.0130

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3.3 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	0.0383	1.4034	0.2746	3.4700e-003	0.0852	7.9400e-003	0.0932	0.0246	7.5900e-003	0.0322	0.0000	331.7762	331.7762	0.0265	0.0000	332.4393
Worker	0.1524	0.1068	1.1404	3.3700e-003	0.3645	2.2400e-003	0.3668	0.0968	2.0700e-003	0.0989	0.0000	304.9920	304.9920	7.6400e-003	0.0000	305.1830
Total	0.1908	1.5102	1.4150	6.8400e-003	0.4498	0.0102	0.4599	0.1214	9.6600e-003	0.1311	0.0000	636.7683	636.7683	0.0342	0.0000	637.6222

3.4 Paving - 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	0.0149	0.1547	0.1612	2.5000e-004		8.2800e-003	8.2800e-003		7.6200e-003	7.6200e-003	0.0000	22.0310	22.0310	7.1300e-003	0.0000	22.2092
Paving	9.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0248	0.1547	0.1612	2.5000e-004		8.2800e-003	8.2800e-003		7.6200e-003	7.6200e-003	0.0000	22.0310	22.0310	7.1300e-003	0.0000	22.2092

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3.4 Paving - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6000e-004	5.3000e-004	5.6700e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5173	1.5173	4.0000e-005	0.0000	1.5183
Total	7.6000e-004	5.3000e-004	5.6700e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5173	1.5173	4.0000e-005	0.0000	1.5183

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	0.0149	0.1547	0.1612	2.5000e-004		8.2800e-003	8.2800e-003		7.6200e-003	7.6200e-003	0.0000	22.0310	22.0310	7.1300e-003	0.0000	22.2092
Paving	9.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0248	0.1547	0.1612	2.5000e-004		8.2800e-003	8.2800e-003		7.6200e-003	7.6200e-003	0.0000	22.0310	22.0310	7.1300e-003	0.0000	22.2092

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3.4 Paving - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6000e-004	5.3000e-004	5.6700e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5173	1.5173	4.0000e-005	0.0000	1.5183
Total	7.6000e-004	5.3000e-004	5.6700e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5173	1.5173	4.0000e-005	0.0000	1.5183

3.5 Architectural Coating - 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					
Archit. Coating	0.8711					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6300e-003	0.0253	0.0275	4.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	3.8299	3.8299	3.0000e-004	0.0000	3.8373
Total	0.8747	0.0253	0.0275	4.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	3.8299	3.8299	3.0000e-004	0.0000	3.8373

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3.5 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4100e-003	3.0900e-003	0.0330	1.0000e-004	0.0106	6.0000e-005	0.0106	2.8000e-003	6.0000e-005	2.8600e-003	0.0000	8.8281	8.8281	2.2000e-004	0.0000	8.8336
Total	4.4100e-003	3.0900e-003	0.0330	1.0000e-004	0.0106	6.0000e-005	0.0106	2.8000e-003	6.0000e-005	2.8600e-003	0.0000	8.8281	8.8281	2.2000e-004	0.0000	8.8336

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	0.8711					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6300e-003	0.0253	0.0275	4.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	3.8299	3.8299	3.0000e-004	0.0000	3.8373
Total	0.8747	0.0253	0.0275	4.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	3.8299	3.8299	3.0000e-004	0.0000	3.8373

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3.5 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4100e-003	3.0900e-003	0.0330	1.0000e-004	0.0106	6.0000e-005	0.0106	2.8000e-003	6.0000e-005	2.8600e-003	0.0000	8.8281	8.8281	2.2000e-004	0.0000	8.8336
Total	4.4100e-003	3.0900e-003	0.0330	1.0000e-004	0.0106	6.0000e-005	0.0106	2.8000e-003	6.0000e-005	2.8600e-003	0.0000	8.8281	8.8281	2.2000e-004	0.0000	8.8336

4.0 Operational Detail - Mobile**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	1.8038	14.1117	15.7270	0.0583	3.7417	0.0534	3.7951	1.0026	0.0503	1.0529	0.0000	5,413.1816	5,413.1816	0.4169	0.0000	5,423.6043
Unmitigated	1.9696	15.9930	20.1848	0.0788	5.4431	0.0734	5.5165	1.4585	0.0691	1.5277	0.0000	7,298.2923	7,298.2923	0.4709	0.0000	7,310.0652

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	762.00	762.00	762.00	1,038,477	713,870
Industrial Park	129.41	129.41	129.41	514,641	353,774
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	5,872.63	5,872.63	5,872.63	12,701,583	8,731,322
Total	6,764.04	6,764.04	6,764.04	14,254,701	9,798,967

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
High Turnover (Sit Down)	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
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	54	35	11

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Industrial Park	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Regional Shopping Center	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Install Energy Efficient Appliances

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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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	655.8341	655.8341	0.0271	5.6000e-003	658.1804
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	768.6710	768.6710	0.0317	6.5700e-003	771.4210
NaturalGas Mitigated	0.0140	0.1271	0.1068	7.6000e-004		9.6600e-003	9.6600e-003		9.6600e-003	9.6600e-003	0.0000	138.3842	138.3842	2.6500e-003	2.5400e-003	139.2066
NaturalGas Unmitigated	0.0140	0.1271	0.1068	7.6000e-004		9.6600e-003	9.6600e-003		9.6600e-003	9.6600e-003	0.0000	138.3842	138.3842	2.6500e-003	2.5400e-003	139.2066

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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					
High Turnover (Sit Down Restaurant)	2.18752e+006	0.0118	0.1072	0.0901	6.4000e-004		8.1500e-003	8.1500e-003		8.1500e-003	8.1500e-003	0.0000	116.7344	116.7344	2.2400e-003	2.1400e-003	117.4281
Industrial Park	133248	7.2000e-004	6.5300e-003	5.4900e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.1106	7.1106	1.4000e-004	1.3000e-004	7.1529
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	272454	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	14.5392	14.5392	2.8000e-004	2.7000e-004	14.6256
Total		0.0140	0.1271	0.1068	7.6000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	138.3842	138.3842	2.6600e-003	2.5400e-003	139.2066

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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					
High Turnover (Sit Down Restaurant)	2.18752e+006	0.0118	0.1072	0.0901	6.4000e-004		8.1500e-003	8.1500e-003		8.1500e-003	8.1500e-003	0.0000	116.7344	116.7344	2.2400e-003	2.1400e-003	117.4281
Industrial Park	133248	7.2000e-004	6.5300e-003	5.4900e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.1106	7.1106	1.4000e-004	1.3000e-004	7.1529
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	272454	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	14.5392	14.5392	2.8000e-004	2.7000e-004	14.6256
Total		0.0140	0.1271	0.1068	7.6000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	138.3842	138.3842	2.6600e-003	2.5400e-003	139.2066

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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			
High Turnover (Sit Down Restaurant)	379840	121.0252	5.0000e-003	1.0300e-003	121.4581
Industrial Park	365568	116.4778	4.8100e-003	9.9000e-004	116.8945
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	117040	37.2915	1.5400e-003	3.2000e-004	37.4249
Regional Shopping Center	1.55004e+006	493.8766	0.0204	4.2200e-003	495.6435
Total		768.6710	0.0317	6.5600e-003	771.4209

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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			
High Turnover (Sit Down Restaurant)	361834	115.2879	4.7600e-003	9.8000e-004	115.7004
Industrial Park	314730	100.2798	4.1400e-003	8.6000e-004	100.6386
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	77246.4	24.6124	1.0200e-003	2.1000e-004	24.7004
Regional Shopping Center	1.30454e+006	415.6541	0.0172	3.5500e-003	417.1411
Total		655.8342	0.0271	5.6000e-003	658.1804

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	0.7400	1.2000e-004	0.0130	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0251	0.0251	7.0000e-005	0.0000	0.0268
Unmitigated	0.7400	1.2000e-004	0.0130	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0251	0.0251	7.0000e-005	0.0000	0.0268

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	0.0871					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6517					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2200e-003	1.2000e-004	0.0130	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0251	0.0251	7.0000e-005	0.0000	0.0268
Total	0.7400	1.2000e-004	0.0130	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0251	0.0251	7.0000e-005	0.0000	0.0268

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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	0.0871					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6517					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2200e-003	1.2000e-004	0.0130	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0251	0.0251	7.0000e-005	0.0000	0.0268
Total	0.7400	1.2000e-004	0.0130	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0251	0.0251	7.0000e-005	0.0000	0.0268

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	91.9184	0.5354	0.0133	109.2646
Unmitigated	111.3757	0.6690	0.0166	133.0458

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Industrial Park	8.88 / 0	39.6583	0.2909	7.1500e-003	49.0600
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	9.09092 / 5.57185	60.3240	0.2986	7.4900e-003	70.0196
Total		111.3757	0.6690	0.0166	133.0458

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	1.94262 / 0.145541	9.1910	0.0637	1.5700e-003	11.2496
Industrial Park	7.104 / 0	31.7266	0.2327	5.7200e-003	39.2480
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	7.27274 / 5.23197	51.0008	0.2390	6.0100e-003	58.7671
Total		91.9184	0.5353	0.0133	109.2646

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.7877	0.8148	0.0000	34.1583
Unmitigated	55.1506	3.2593	0.0000	136.6333

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	95.2	19.3247	1.1421	0.0000	47.8762
Industrial Park	47.62	9.6664	0.5713	0.0000	23.9482
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	128.87	26.1595	1.5460	0.0000	64.8089
Total		55.1506	3.2593	0.0000	136.6333

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	23.8	4.8312	0.2855	0.0000	11.9691
Industrial Park	11.905	2.4166	0.1428	0.0000	5.9870
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	32.2175	6.5399	0.3865	0.0000	16.2022
Total		13.7877	0.8148	0.0000	34.1583

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

Equipment Type	Number
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11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	149.3880	0.0000	0.0000	149.3880

11.2 Net New Trees**Species Class**

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	211	149.3880	0.0000	0.0000	149.3880
Total		149.3880	0.0000	0.0000	149.3880

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.33	Acre	9.33	406,414.80	0
Other Non-Asphalt Surfaces	15.47	Acre	15.47	673,873.20	0
Parking Lot	278.00	Space	2.50	111,200.00	0
Health Club	3.75	1000sqft	0.09	3,753.00	0
Apartments Low Rise	210.00	Dwelling Unit	4.30	210,000.00	601
Single Family Housing	204.00	Dwelling Unit	5.64	367,200.00	583

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use - P2 (37.33 ac)- 210 multi-fam low-rise DUs, 1,972 sf clubhouse, & 120 guest prkng spcs; 204 single-family DUs, 1,781 sf clubhouse, & 158 guest prkng spcs; & remainder on-site roadways (~25% site=9.33 ac) & landscaping/outdoor recreational areas (15.47 ac).

Construction Phase - Phase 2 to begin construction ~mid-December 2020 and be completed by 9/1/2022. No demo.

Grading - Phase 2 is ~37.33 ac. Site to be balanced.

Architectural Coating - SCAQMD Rule 1113 limits architectural coatings to 50 g/L VOC. Architectural coatings have been mitigated to 10 g/L VOC buildings & 100 g/L VOC parking.

Vehicle Trips - Per TIA, 6.59 trips/DU/day multi-family (w/ 10% internal capture) & 8.5 trips/DU/day single-family (w./ 10% internal capture). On-site clubhouses no additional trips.

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

Sequestration - Per applicant, 634 trees to be planted. For modeling purposes, trees were split 1/3 in P1 and 2/3 in P2 resulting in 211 trees in P1 & 423 trees P2.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - RTA Rte 61 Antelope Square ~1 mile SE, Downtown Menifee is ~2.3 miles N, project to provide sidewalks on & off site, project is mixed commercial/residential, 414 DU/37.33ac = 11.1 DU/ac.

Energy Mitigation - Energy Star appliances to be installed onsite. High efficiency lighting at least 34% more efficient than standard.

Water Mitigation - Use of low-flow fixtures and water-efficient irrigation systems.

Waste Mitigation - Ab 347 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

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
tblConstructionPhase	NumDays	55.00	45.00
tblConstructionPhase	NumDays	740.00	358.00
tblConstructionPhase	NumDays	75.00	35.00
tblConstructionPhase	NumDays	55.00	27.00
tblFireplaces	NumberGas	178.50	189.00

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tblFireplaces	NumberGas	173.40	183.60
tblFireplaces	NumberWood	10.50	0.00
tblFireplaces	NumberWood	10.20	0.00
tblGrading	AcresOfGrading	87.50	37.33
tblLandUse	LandUseSquareFeet	3,750.00	3,753.00
tblLandUse	LotAcreage	13.13	4.30
tblLandUse	LotAcreage	66.23	5.64
tblSequestration	NumberOfNewTrees	0.00	423.00
tblVehicleTrips	ST_TR	7.16	6.59
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	9.91	8.50
tblVehicleTrips	SU_TR	6.07	6.59
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	8.62	8.50
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	9.52	8.50
tblWoodstoves	NumberCatalytic	10.50	0.00
tblWoodstoves	NumberCatalytic	10.20	0.00
tblWoodstoves	NumberNoncatalytic	10.50	0.00
tblWoodstoves	NumberNoncatalytic	10.20	0.00

2.0 Emissions Summary

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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					
2020	0.0273	0.3016	0.1959	3.8000e-004	0.0573	0.0131	0.0703	0.0224	0.0120	0.0344	0.0000	33.7941	33.7941	0.0106	0.0000	34.0591
2021	0.7145	5.5216	5.5706	0.0197	1.2229	0.1477	1.3706	0.3454	0.1384	0.4838	0.0000	1,806.1170	1,806.1170	0.1579	0.0000	1,810.0641
2022	0.8872	2.5062	2.8255	0.0101	0.6085	0.0632	0.6717	0.1637	0.0594	0.2231	0.0000	923.3577	923.3577	0.0766	0.0000	925.2722
Maximum	0.8872	5.5216	5.5706	0.0197	1.2229	0.1477	1.3706	0.3454	0.1384	0.4838	0.0000	1,806.1170	1,806.1170	0.1579	0.0000	1,810.0641

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					
2020	0.0273	0.3016	0.1959	3.8000e-004	0.0231	0.0131	0.0362	8.9300e-003	0.0120	0.0209	0.0000	33.7941	33.7941	0.0106	0.0000	34.0591
2021	0.7145	5.5216	5.5706	0.0197	1.1685	0.1477	1.3162	0.3209	0.1384	0.4593	0.0000	1,806.1166	1,806.1166	0.1579	0.0000	1,810.0637
2022	0.8871	2.5062	2.8255	0.0101	0.6085	0.0632	0.6717	0.1637	0.0594	0.2231	0.0000	923.3575	923.3575	0.0766	0.0000	925.2720
Maximum	0.8871	5.5216	5.5706	0.0197	1.1685	0.1477	1.3162	0.3209	0.1384	0.4593	0.0000	1,806.1166	1,806.1166	0.1579	0.0000	1,810.0637

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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
Percent Reduction	0.00	0.00	0.00	0.00	4.68	0.00	4.19	7.14	0.00	5.12	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-16-2020	3-15-2021	1.6047	1.6047
2	3-16-2021	6-15-2021	1.5603	1.5603
3	6-16-2021	9-15-2021	1.5611	1.5611
4	9-16-2021	12-15-2021	1.5400	1.5400
5	12-16-2021	3-15-2022	1.4235	1.4235
6	3-16-2022	6-15-2022	1.4378	1.4378
7	6-16-2022	9-15-2022	0.8279	0.8279
		Highest	1.6047	1.6047

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2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.5137	0.1266	4.3108	7.2000e-004		0.0299	0.0299		0.0299	0.0299	0.0000	96.4568	96.4568	8.4600e-003	1.6400e-003	97.1572
Energy	0.0520	0.4443	0.1915	2.8300e-003		0.0359	0.0359		0.0359	0.0359	0.0000	1,430.4182	1,430.4182	0.0477	0.0173	1,436.7514
Mobile	0.9050	7.8037	11.3352	0.0523	4.0677	0.0362	4.1039	1.0898	0.0339	1.1237	0.0000	4,851.8227	4,851.8227	0.2389	0.0000	4,857.7963
Waste						0.0000	0.0000		0.0000	0.0000	72.4698	0.0000	72.4698	4.2828	0.0000	179.5409
Water						0.0000	0.0000		0.0000	0.0000	8.6279	173.5057	182.1336	0.8933	0.0224	211.1440
Total	3.4706	8.3746	15.8375	0.0559	4.0677	0.1020	4.1697	1.0898	0.0997	1.1895	81.0977	6,552.2034	6,633.3011	5.4713	0.0413	6,782.3898

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.5137	0.1266	4.3108	7.2000e-004		0.0299	0.0299		0.0299	0.0299	0.0000	96.4568	96.4568	8.4600e-003	1.6400e-003	97.1572
Energy	0.0520	0.4443	0.1915	2.8300e-003		0.0359	0.0359		0.0359	0.0359	0.0000	1,352.5973	1,352.5973	0.0445	0.0166	1,358.6522
Mobile	0.7819	6.5366	7.9802	0.0352	2.5605	0.0241	2.5847	0.6860	0.0226	0.7086	0.0000	3,269.8364	3,269.8364	0.1966	0.0000	3,274.7517
Waste						0.0000	0.0000		0.0000	0.0000	18.1175	0.0000	18.1175	1.0707	0.0000	44.8852
Water						0.0000	0.0000		0.0000	0.0000	6.9023	147.2388	154.1411	0.7150	0.0180	177.3795
Total	3.3475	7.1075	12.4826	0.0388	2.5605	0.0899	2.6504	0.6860	0.0884	0.7744	25.0198	4,866.1292	4,891.1490	2.0353	0.0362	4,952.8258

	ROG	NOx	CO	SO2	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	3.55	15.13	21.18	30.62	37.05	11.82	36.44	37.05	11.34	34.90	69.15	25.73	26.26	62.80	12.28	26.98

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2.3 Vegetation**Vegetation**

	CO2e
Category	MT
New Trees	299.4840
Total	299.4840

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	12/16/2020	2/2/2021	5	35	
2	Building Construction	Building Construction	2/3/2021	6/19/2022	5	358	
3	Paving	Paving	6/20/2022	7/26/2022	5	27	
4	Architectural Coating	Architectural Coating	7/1/2022	9/1/2022	5	45	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 37.33****Acres of Paving: 27.3****Residential Indoor: 1,168,830; Residential Outdoor: 389,610; Non-Residential Indoor: 5,630; Non-Residential Outdoor: 1,877; Striped Parking Area: 71,489 (Architectural Coating – sqft)**

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OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	727.00	240.00	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	145.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 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					
Fugitive Dust					0.0559	0.0000	0.0559	0.0220	0.0000	0.0220	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0267	0.3012	0.1918	3.7000e-004		0.0130	0.0130		0.0120	0.0120	0.0000	32.6906	32.6906	0.0106	0.0000	32.9549
Total	0.0267	0.3012	0.1918	3.7000e-004	0.0559	0.0130	0.0690	0.0220	0.0120	0.0340	0.0000	32.6906	32.6906	0.0106	0.0000	32.9549

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3.2 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	5.5000e-004	3.9000e-004	4.1300e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1035	1.1035	3.0000e-005	0.0000	1.1042
Total	5.5000e-004	3.9000e-004	4.1300e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1035	1.1035	3.0000e-005	0.0000	1.1042

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					0.0218	0.0000	0.0218	8.5800e-003	0.0000	8.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0267	0.3012	0.1918	3.7000e-004		0.0130	0.0130		0.0120	0.0120	0.0000	32.6905	32.6905	0.0106	0.0000	32.9549
Total	0.0267	0.3012	0.1918	3.7000e-004	0.0218	0.0130	0.0349	8.5800e-003	0.0120	0.0206	0.0000	32.6905	32.6905	0.0106	0.0000	32.9549

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3.2 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	5.5000e-004	3.9000e-004	4.1300e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1035	1.1035	3.0000e-005	0.0000	1.1042
Total	5.5000e-004	3.9000e-004	4.1300e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1035	1.1035	3.0000e-005	0.0000	1.1042

3.2 Grading - 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					
Fugitive Dust					0.0891	0.0000	0.0891	0.0402	0.0000	0.0402	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0482	0.5336	0.3551	7.1000e-004		0.0228	0.0228		0.0210	0.0210	0.0000	62.6692	62.6692	0.0203	0.0000	63.1759
Total	0.0482	0.5336	0.3551	7.1000e-004	0.0891	0.0228	0.1119	0.0402	0.0210	0.0612	0.0000	62.6692	62.6692	0.0203	0.0000	63.1759

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3.2 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	9.9000e-004	6.6000e-004	7.2400e-003	2.0000e-005	2.5300e-003	2.0000e-005	2.5400e-003	6.7000e-004	1.0000e-005	6.9000e-004	0.0000	2.0444	2.0444	5.0000e-005	0.0000	2.0455
Total	9.9000e-004	6.6000e-004	7.2400e-003	2.0000e-005	2.5300e-003	2.0000e-005	2.5400e-003	6.7000e-004	1.0000e-005	6.9000e-004	0.0000	2.0444	2.0444	5.0000e-005	0.0000	2.0455

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					0.0347	0.0000	0.0347	0.0157	0.0000	0.0157	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0482	0.5336	0.3551	7.1000e-004		0.0228	0.0228		0.0210	0.0210	0.0000	62.6692	62.6692	0.0203	0.0000	63.1759
Total	0.0482	0.5336	0.3551	7.1000e-004	0.0347	0.0228	0.0576	0.0157	0.0210	0.0367	0.0000	62.6692	62.6692	0.0203	0.0000	63.1759

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3.2 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	9.9000e-004	6.6000e-004	7.2400e-003	2.0000e-005	2.5300e-003	2.0000e-005	2.5400e-003	6.7000e-004	1.0000e-005	6.9000e-004	0.0000	2.0444	2.0444	5.0000e-005	0.0000	2.0455
Total	9.9000e-004	6.6000e-004	7.2400e-003	2.0000e-005	2.5300e-003	2.0000e-005	2.5400e-003	6.7000e-004	1.0000e-005	6.9000e-004	0.0000	2.0444	2.0444	5.0000e-005	0.0000	2.0455

3.3 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	0.2262	2.0744	1.9725	3.2000e-003		0.1141	0.1141		0.1073	0.1073	0.0000	275.6484	275.6484	0.0665	0.0000	277.3109
Total	0.2262	2.0744	1.9725	3.2000e-003		0.1141	0.1141		0.1073	0.1073	0.0000	275.6484	275.6484	0.0665	0.0000	277.3109

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3.3 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	0.0681	2.6630	0.5124	7.2800e-003	0.1804	5.0900e-003	0.1855	0.0520	4.8700e-003	0.0569	0.0000	696.7874	696.7874	0.0532	0.0000	698.1163
Worker	0.3709	0.2500	2.7235	8.5000e-003	0.9509	5.7000e-003	0.9566	0.2525	5.2500e-003	0.2578	0.0000	768.9677	768.9677	0.0179	0.0000	769.4155
Total	0.4391	2.9130	3.2358	0.0158	1.1313	0.0108	1.1421	0.3045	0.0101	0.3147	0.0000	1,465.7551	1,465.7551	0.0711	0.0000	1,467.5318

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	0.2262	2.0744	1.9725	3.2000e-003		0.1141	0.1141		0.1073	0.1073	0.0000	275.6480	275.6480	0.0665	0.0000	277.3106
Total	0.2262	2.0744	1.9725	3.2000e-003		0.1141	0.1141		0.1073	0.1073	0.0000	275.6480	275.6480	0.0665	0.0000	277.3106

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3.3 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	0.0681	2.6630	0.5124	7.2800e-003	0.1804	5.0900e-003	0.1855	0.0520	4.8700e-003	0.0569	0.0000	696.7874	696.7874	0.0532	0.0000	698.1163
Worker	0.3709	0.2500	2.7235	8.5000e-003	0.9509	5.7000e-003	0.9566	0.2525	5.2500e-003	0.2578	0.0000	768.9677	768.9677	0.0179	0.0000	769.4155
Total	0.4391	2.9130	3.2358	0.0158	1.1313	0.0108	1.1421	0.3045	0.0101	0.3147	0.0000	1,465.7551	1,465.7551	0.0711	0.0000	1,467.5318

3.3 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	0.1024	0.9369	0.9818	1.6200e-003		0.0485	0.0485		0.0457	0.0457	0.0000	139.0352	139.0352	0.0333	0.0000	139.8679
Total	0.1024	0.9369	0.9818	1.6200e-003		0.0485	0.0485		0.0457	0.0457	0.0000	139.0352	139.0352	0.0333	0.0000	139.8679

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3.3 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	0.0321	1.2650	0.2406	3.6400e-003	0.0909	2.1600e-003	0.0931	0.0262	2.0700e-003	0.0283	0.0000	348.2994	348.2994	0.0254	0.0000	348.9341
Worker	0.1752	0.1134	1.2650	4.1300e-003	0.4794	2.8000e-003	0.4822	0.1273	2.5800e-003	0.1299	0.0000	373.5665	373.5665	8.1200e-003	0.0000	373.7695
Total	0.2073	1.3783	1.5056	7.7700e-003	0.5704	4.9600e-003	0.5753	0.1536	4.6500e-003	0.1582	0.0000	721.8659	721.8659	0.0335	0.0000	722.7036

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	0.1024	0.9369	0.9818	1.6200e-003		0.0485	0.0485		0.0457	0.0457	0.0000	139.0350	139.0350	0.0333	0.0000	139.8677
Total	0.1024	0.9369	0.9818	1.6200e-003		0.0485	0.0485		0.0457	0.0457	0.0000	139.0350	139.0350	0.0333	0.0000	139.8677

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3.3 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	0.0321	1.2650	0.2406	3.6400e-003	0.0909	2.1600e-003	0.0931	0.0262	2.0700e-003	0.0283	0.0000	348.2994	348.2994	0.0254	0.0000	348.9341
Worker	0.1752	0.1134	1.2650	4.1300e-003	0.4794	2.8000e-003	0.4822	0.1273	2.5800e-003	0.1299	0.0000	373.5665	373.5665	8.1200e-003	0.0000	373.7695
Total	0.2073	1.3783	1.5056	7.7700e-003	0.5704	4.9600e-003	0.5753	0.1536	4.6500e-003	0.1582	0.0000	721.8659	721.8659	0.0335	0.0000	722.7036

3.4 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	0.0149	0.1502	0.1968	3.1000e-004		7.6700e-003	7.6700e-003		7.0500e-003	7.0500e-003	0.0000	27.0372	27.0372	8.7400e-003	0.0000	27.2558
Paving	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0304	0.1502	0.1968	3.1000e-004		7.6700e-003	7.6700e-003		7.0500e-003	7.0500e-003	0.0000	27.0372	27.0372	8.7400e-003	0.0000	27.2558

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3.4 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	8.1000e-004	5.3000e-004	5.8700e-003	2.0000e-005	2.2300e-003	1.0000e-005	2.2400e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7342	1.7342	4.0000e-005	0.0000	1.7352
Total	8.1000e-004	5.3000e-004	5.8700e-003	2.0000e-005	2.2300e-003	1.0000e-005	2.2400e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7342	1.7342	4.0000e-005	0.0000	1.7352

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	0.0149	0.1502	0.1968	3.1000e-004		7.6700e-003	7.6700e-003		7.0500e-003	7.0500e-003	0.0000	27.0372	27.0372	8.7400e-003	0.0000	27.2558
Paving	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0304	0.1502	0.1968	3.1000e-004		7.6700e-003	7.6700e-003		7.0500e-003	7.0500e-003	0.0000	27.0372	27.0372	8.7400e-003	0.0000	27.2558

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3.4 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	8.1000e-004	5.3000e-004	5.8700e-003	2.0000e-005	2.2300e-003	1.0000e-005	2.2400e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7342	1.7342	4.0000e-005	0.0000	1.7352
Total	8.1000e-004	5.3000e-004	5.8700e-003	2.0000e-005	2.2300e-003	1.0000e-005	2.2400e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7342	1.7342	4.0000e-005	0.0000	1.7352

3.5 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	0.5286					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-003	0.0317	0.0408	7.0000e-005		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	5.7448	5.7448	3.7000e-004	0.0000	5.7542
Total	0.5332	0.0317	0.0408	7.0000e-005		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	5.7448	5.7448	3.7000e-004	0.0000	5.7542

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3.5 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	0.0131	8.4800e-003	0.0946	3.1000e-004	0.0359	2.1000e-004	0.0361	9.5200e-003	1.9000e-004	9.7100e-003	0.0000	27.9404	27.9404	6.1000e-004	0.0000	27.9556
Total	0.0131	8.4800e-003	0.0946	3.1000e-004	0.0359	2.1000e-004	0.0361	9.5200e-003	1.9000e-004	9.7100e-003	0.0000	27.9404	27.9404	6.1000e-004	0.0000	27.9556

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	0.5286					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-003	0.0317	0.0408	7.0000e-005		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	5.7448	5.7448	3.7000e-004	0.0000	5.7542
Total	0.5332	0.0317	0.0408	7.0000e-005		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	5.7448	5.7448	3.7000e-004	0.0000	5.7542

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3.5 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	0.0131	8.4800e-003	0.0946	3.1000e-004	0.0359	2.1000e-004	0.0361	9.5200e-003	1.9000e-004	9.7100e-003	0.0000	27.9404	27.9404	6.1000e-004	0.0000	27.9556
Total	0.0131	8.4800e-003	0.0946	3.1000e-004	0.0359	2.1000e-004	0.0361	9.5200e-003	1.9000e-004	9.7100e-003	0.0000	27.9404	27.9404	6.1000e-004	0.0000	27.9556

4.0 Operational Detail - Mobile**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	0.7819	6.5366	7.9802	0.0352	2.5605	0.0241	2.5847	0.6860	0.0226	0.7086	0.0000	3,269.836 4	3,269.836 4	0.1966	0.0000	3,274.751 7
Unmitigated	0.9050	7.8037	11.3352	0.0523	4.0677	0.0362	4.1039	1.0898	0.0339	1.1237	0.0000	4,851.822 7	4,851.822 7	0.2389	0.0000	4,857.796 3

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,383.90	1,383.90	1383.90	4,728,997	2,976,799
Health Club	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Single Family Housing	1,734.00	1,734.00	1734.00	5,925,341	3,729,872
Total	3,117.90	3,117.90	3,117.90	10,654,338	6,706,670

4.3 Trip Type Information

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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	86	11	3
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Health Club	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Parking Lot	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Install Energy Efficient Appliances

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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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	838.4800	838.4800	0.0346	7.1600e-003	841.4797
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	916.3009	916.3009	0.0378	7.8300e-003	919.5790
NaturalGas Mitigated	0.0520	0.4443	0.1915	2.8300e-003		0.0359	0.0359		0.0359	0.0359	0.0000	514.1173	514.1173	9.8500e-003	9.4300e-003	517.1725
NaturalGas Unmitigated	0.0520	0.4443	0.1915	2.8300e-003		0.0359	0.0359		0.0359	0.0359	0.0000	514.1173	514.1173	9.8500e-003	9.4300e-003	517.1725

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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	3.27065e+006	0.0176	0.1507	0.0641	9.6000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	174.5341	174.5341	3.3500e-003	3.2000e-003	175.5712
Health Club	121935	6.6000e-004	5.9800e-003	5.0200e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.5069	6.5069	1.2000e-004	1.2000e-004	6.5456
Other 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
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
Single Family Housing	6.24161e+006	0.0337	0.2876	0.1224	1.8400e-003		0.0233	0.0233		0.0233	0.0233	0.0000	333.0763	333.0763	6.3800e-003	6.1100e-003	335.0556
Total		0.0520	0.4443	0.1915	2.8400e-003		0.0359	0.0359		0.0359	0.0359	0.0000	514.1173	514.1173	9.8500e-003	9.4300e-003	517.1725

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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	3.27065e+006	0.0176	0.1507	0.0641	9.6000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	174.5341	174.5341	3.3500e-003	3.2000e-003	175.5712
Health Club	121935	6.6000e-004	5.9800e-003	5.0200e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.5069	6.5069	1.2000e-004	1.2000e-004	6.5456
Other 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
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
Single Family Housing	6.24161e+006	0.0337	0.2876	0.1224	1.8400e-003		0.0233	0.0233		0.0233	0.0233	0.0000	333.0763	333.0763	6.3800e-003	6.1100e-003	335.0556
Total		0.0520	0.4443	0.1915	2.8400e-003		0.0359	0.0359		0.0359	0.0359	0.0000	514.1173	514.1173	9.8500e-003	9.4300e-003	517.1725

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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	1.02065e+006	325.2024	0.0134	2.7800e-003	326.3658
Health Club	38093	12.1372	5.0000e-004	1.0000e-004	12.1807
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	38920	12.4008	5.1000e-004	1.1000e-004	12.4451
Single Family Housing	1.77816e+006	566.5605	0.0234	4.8400e-003	568.5874
Total		916.3009	0.0378	7.8300e-003	919.5790

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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	939875	299.4645	0.0124	2.5600e-003	300.5358
Health Club	33746.2	10.7523	4.4000e-004	9.0000e-005	10.7907
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	25687.2	8.1845	3.4000e-004	7.0000e-005	8.2138
Single Family Housing	1.63228e+006	520.0788	0.0215	4.4400e-003	521.9394
Total		838.4800	0.0346	7.1600e-003	841.4797

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	2.5137	0.1266	4.3108	7.2000e-004		0.0299	0.0299		0.0299	0.0299	0.0000	96.4568	96.4568	8.4600e-003	1.6400e-003	97.1572
Unmitigated	2.5137	0.1266	4.3108	7.2000e-004		0.0299	0.0299		0.0299	0.0299	0.0000	96.4568	96.4568	8.4600e-003	1.6400e-003	97.1572

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	0.1989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1763					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.0400e-003	0.0773	0.0329	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	89.4751	89.4751	1.7100e-003	1.6400e-003	90.0068
Landscaping	0.1295	0.0493	4.2780	2.3000e-004		0.0236	0.0236		0.0236	0.0236	0.0000	6.9817	6.9817	6.7500e-003	0.0000	7.1504
Total	2.5137	0.1266	4.3108	7.2000e-004		0.0299	0.0299		0.0299	0.0299	0.0000	96.4568	96.4568	8.4600e-003	1.6400e-003	97.1572

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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	0.1989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1763					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.0400e-003	0.0773	0.0329	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	89.4751	89.4751	1.7100e-003	1.6400e-003	90.0068
Landscaping	0.1295	0.0493	4.2780	2.3000e-004		0.0236	0.0236		0.0236	0.0236	0.0000	6.9817	6.9817	6.7500e-003	0.0000	7.1504
Total	2.5137	0.1266	4.3108	7.2000e-004		0.0299	0.0299		0.0299	0.0299	0.0000	96.4568	96.4568	8.4600e-003	1.6400e-003	97.1572

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	154.1411	0.7150	0.0180	177.3795
Unmitigated	182.1336	0.8933	0.0224	211.1440

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7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.6823 / 8.62583	91.6401	0.4494	0.0113	106.2355
Health Club	0.221787 / 0.135934	1.4717	7.2800e-003	1.8000e-004	1.7082
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
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
Single Family Housing	13.2914 / 8.37937	89.0218	0.4366	0.0110	103.2002
Total		182.1336	0.8933	0.0224	211.1440

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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	10.9459 / 8.09965	77.5564	0.3597	9.0500e-003	89.2479
Health Club	0.177429 / 0.127642	1.2442	5.8300e-003	1.5000e-004	1.4337
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
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
Single Family Housing	10.6331 / 7.86823	75.3405	0.3495	8.8000e-003	86.6979
Total		154.1411	0.7150	0.0180	177.3795

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.1175	1.0707	0.0000	44.8852
Unmitigated	72.4698	4.2828	0.0000	179.5409

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	96.6	19.6089	1.1589	0.0000	48.5803
Health Club	21.38	4.3400	0.2565	0.0000	10.7520
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	239.03	48.5209	2.8675	0.0000	120.2086
Total		72.4698	4.2828	0.0000	179.5409

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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	24.15	4.9022	0.2897	0.0000	12.1451
Health Club	5.345	1.0850	0.0641	0.0000	2.6880
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	59.7575	12.1302	0.7169	0.0000	30.0521
Total		18.1175	1.0707	0.0000	44.8852

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

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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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	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	299.4840	0.0000	0.0000	299.4840

11.2 Net New Trees**Species Class**

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	423	299.4840	0.0000	0.0000	299.4840
Total		299.4840	0.0000	0.0000	299.4840



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Consistency Analysis with Table 5.7-9 of the City General Plan EIR

- Action C13: The Mill Creek project incorporates all of the bicycle and pedestrian connections offsite and a comprehensive system onsite.
- Action C14: Applies to City and site-specific development. The proposed project includes dedications from the project developer in accordance with City GP Exhibit C-4. It is consistent with the action.
- Action C15: Applies to the City, and the project is no in or near a Connectivity Analysis Zone
- Action C16: applies to City, not site-specific development
- Action C17: applies to City, not site-specific development
- Action C18: applies to City, not site-specific development
- Action C19: applies to City, not site-specific development
- Action C20: applies to City, not site-specific development; however, the proposed project incorporates bicycle parking facilities throughout the Mill Creek project.
- Action C21: A mitigation measure is included to support extension of bus service to the intersection of Haun and Garbani and to provide support for a bus shelter and turnout.
- Action C22: applies to City, not site-specific development. However by incorporating the higher density development the project enhances the potential to increase extension of transit services to the project area and offers to facilitate such transit services to Garbani and Haun.
- Action C23: applies to City, not site-specific development. The project does not include a specific commitment to a local transit route, but the mix of retail commercial, business and light industrial uses could function as a destination and be a part of enhanced mobility options.
- Action C24: applies to City, not site-specific development
- Action C25: applies to City, not site-specific development
- Action C26: applies to City, not site-specific development. However, the project incorporates a mitigation measure that requires installation of electric vehicle charging stations.

- Action C27: applies to City, not site-specific development. However, the project incorporates a mitigation measure that requires installation of electric vehicle charging stations, which must include a parking space.
- Action C28: applies to City, not site-specific development.
- Action C29: applies to City, not site-specific development.
- Action OSC59: applies to City, not site-specific development. However, project incorporates circulation system improvements that will enhance the flow of traffic.
- Action OSC72: applies to City, not site-specific development. However, by providing a robust set of internal mobility options and commitment to enhance mass transit service, this project fully supports the VMT reduction goal.
- Action OSC73: applies to City, not site-specific development. However, by providing a commitment to enhance mass transit service, this project fully supports the goal of enhancing transit service in the City.
- Action OSC75: applies to City, not site-specific development. However, the project is required to include car pool parking, bike parking, and if feasible, a bus stop.
- Action OSC76: applies to City, not site-specific development.
- Action OSC65: applies to City, not site-specific development.
- Action OSC66: applies to City, not site-specific development.
- Action OSC67: applies to City, not site-specific development. However, the project includes a commitment to install solar facilities in conjunction with covered parking areas.
- Action OSC68: applies to City, not site-specific development.
- Action OSC69: applies to City, not site-specific development. However, mitigation is incorporated to ensure that energy efficient lighting is used within the proposed project.
- Action OSC71: applies to City, not site-specific development.
- Action OSC74: applies to City, not site-specific development. However, mitigation is incorporated to ensure that water saving systems are incorporated into both exterior landscape watering systems and internal water efficient equipment.

Action OSC77: applies to City, not site-specific development. However, mitigation is incorporated to ensure that water saving systems are incorporated into both exterior landscape watering systems and internal water efficient equipment.

Action OSC60: applies to City, not site-specific development.

Action OSC61: applies to City, not site-specific development.

Action OSC62: applies to City, not site-specific development. However, mitigation is included to ensure the proposed project prepares and implements a construction waste management plan.

Action OSC63: applies to City, not site-specific development.

Action OSC64: applies to City, not site-specific development.

Action OSC70: applies to City, not site-specific development.