



200 North Las Posas Road Project

Air Quality and Greenhouse Gas Emissions Study

prepared for

A & S Engineering, Inc.
28405 Sand Canyon Road, Suite B
Canyon Country, California 91387
Contact: Ahmad Ghaderi

prepared by

Rincon Consultants, Inc.
2215 Faraday Avenue, Suite A
Carlsbad, California 92008

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RINCON CONSULTANTS, INC.

Environmental Scientists | Planners | Engineers

rinconconsultants.com

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1 Project Description and Impact Summary

1.1 Introduction

This report details the analysis of potential air quality and greenhouse gas (GHG) impacts associated with the construction and operation of the proposed 200 North Las Posas Road Project (herein referred to as “proposed project” or “project”) in San Marcos, California. Rincon Consultants, Inc. (Rincon) prepared this study under contract to the A & S Engineering Inc. for use by the City of San Marcos in support of environmental documentation being prepared for the project pursuant to the California Environmental Quality Act (CEQA).

1.2 Project Summary

Project Location

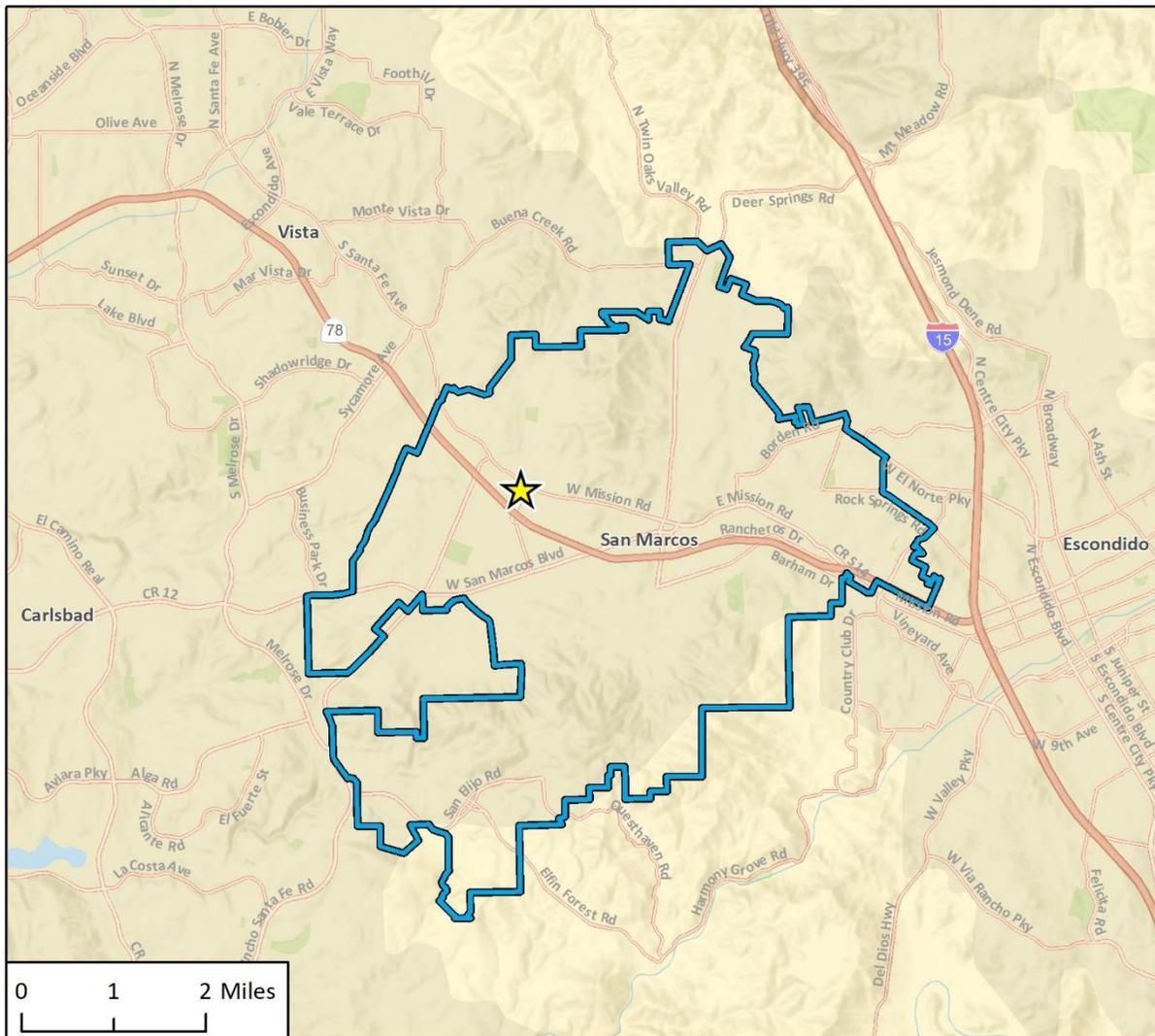
The project site is in the City of San Marcos in northern San Diego County in southern California. The regional location of the project site is shown in Figure 1. The 1.6-acre project site (Assessor’s Parcel Number 219-122-03-00) is located at the southwestern corner of North Las Posas Road and West Mission Road in the central portion of San Marcos, approximately 0.2-miles north of State Route 78. The project location is depicted in Figure 2. Surrounding land uses include industrial land uses to the south and to the west, commercial land uses to the north, and the Palomar Station Specific Plan Area to the east. The Palomar Station Specific Plan Area includes commercial, retail, and residential development.

Project Description

The project would include development of a 5,000 square foot food mart with a drive thru (3,800 square foot food mart and 1,200 square feet of retail), a 2,000 square foot car wash with an 1,000 square foot equipment room, and a 6,192 square foot gas station canopy with nine fuel dispensing stations (i.e., 18 fuel pumps). A total of 59 parking spaces would be provided in parking lot spaces with three being an electric vehicle (EV) charging space, one being a vanpool EV parking space, and two being future clean air parking spaces. Two of the 59 parking spaces would also be designated as accessible parking spaces. The three EV parking spaces would comply with the City of San Marcos’ 2020 Climate Action Plan (CAP) Consistency Checklist and would be Level 2 chargers. Other project design features, that would be included per the CAP, include a photovoltaic system with a capacity of 10 kilowatt (kW) photovoltaic system, the planting of at least nine trees onsite, and compliance with the City’s Water Efficient Landscape Ordinance. Operational hours for the car wash would be between 7:00 a.m. to 10:00 p.m., while the food mart drive thru would operate from 5:00 a.m. to 12:00 a.m. The gas station would operate daily for 24 hours.

The proposed project would be developed on a currently vacant parcel of land with a current land use designation of Mixed-Use Non-Residential (MU3). The MU3 zone does not permit gas station, car wash, or food mart uses. Instead the zone is intended for job-based mixed-use developments. Job-based mixed-use developments include commercial retail, business support services, offices, government uses, and restaurants (City of San Marcos 2012). Therefore, the development of the project would require a General Plan Amendment and Rezone to Commercial (C) to allow for these uses. See Figure 3 for the project site plan.

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2020.

- ★ Project Site
- ▭ City of San Marcos

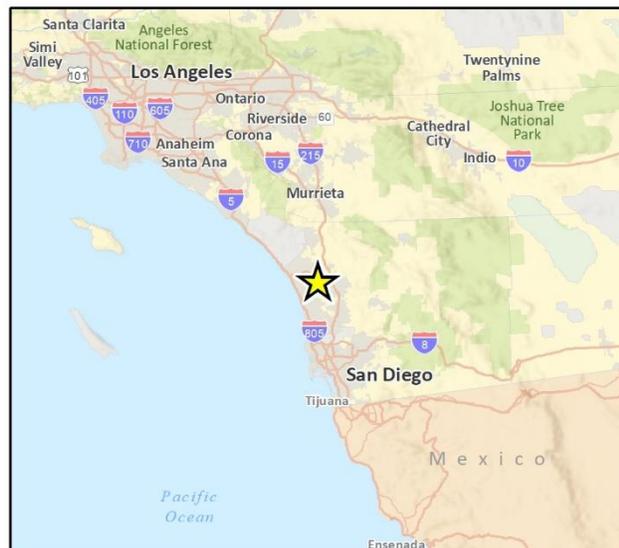
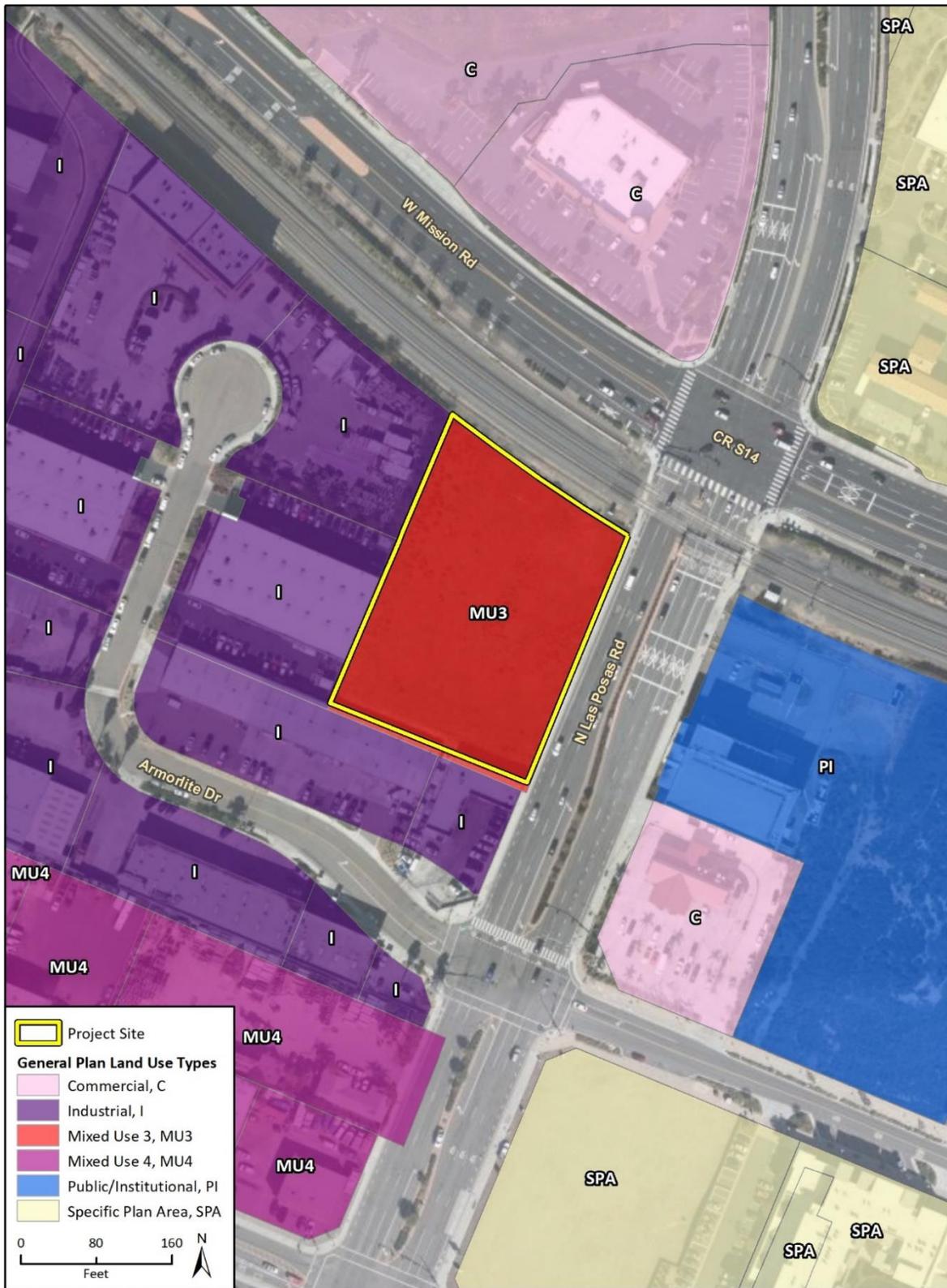


Fig 1 Project Location

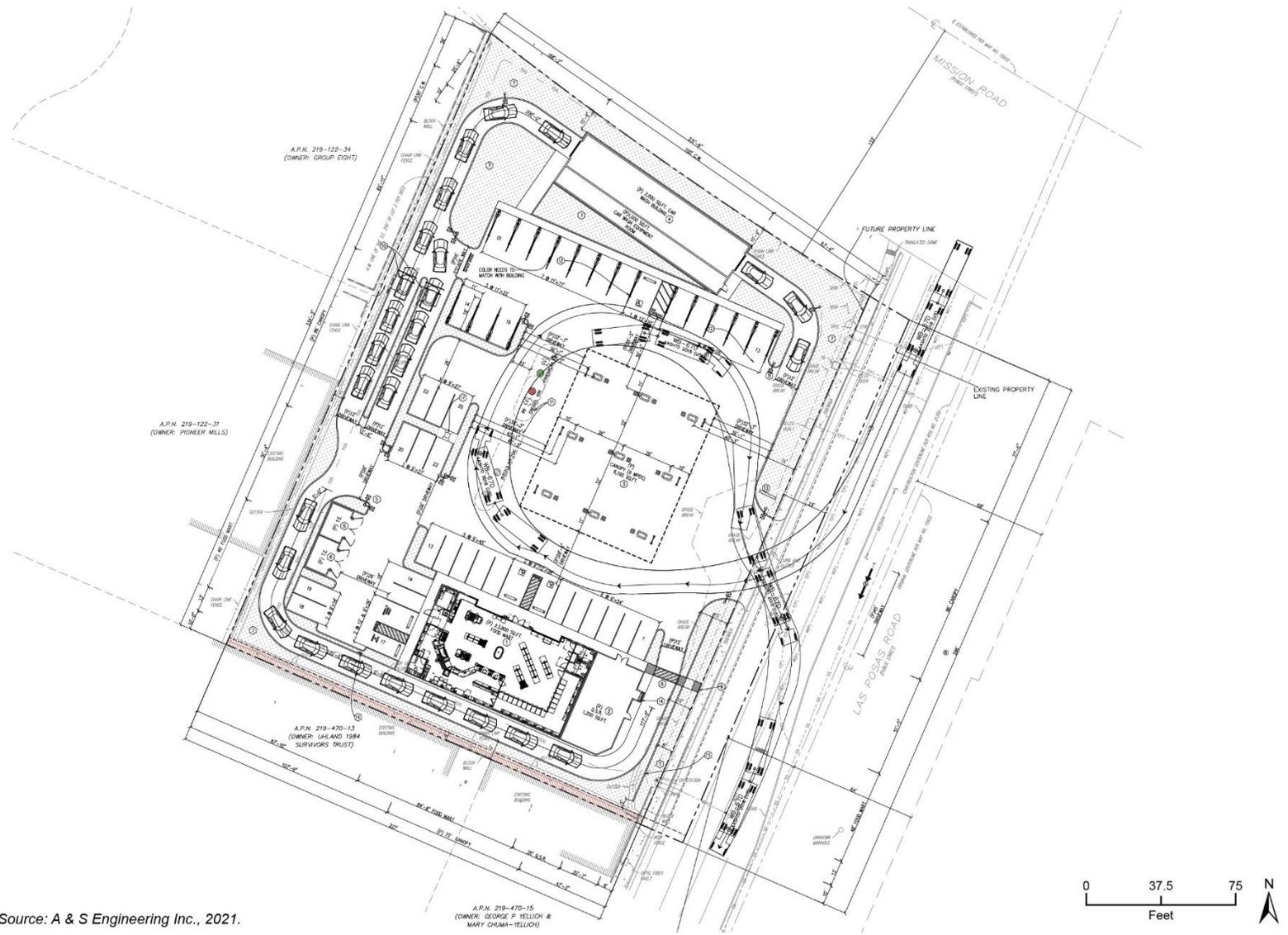
Figure 2 Project Location



Imagery provided by Microsoft Bing and its licensors © 2020.
 Additional data provided by City of San Marcos General Plan Land Use, 2018.

Fig. 2 Surrounding Land Uses

Figure 3 Site Plan



Source: A & S Engineering Inc., 2021.

Background

1.3 Air Quality

Local Climate and Meteorology

The project area is located in the San Diego Air Basin (SDAB), which is bordered by the Pacific Ocean to the west, the South Coast Air Basin to the north, the Salton Sea Air Basin to the east, and the United States/Mexico border to the south. Regional wind patterns are dominated by onshore sea breezes during the day, and winds generally slow or reverse direction toward the sea at night. Temperature and precipitation can vary widely in the SDAB, where average annual precipitation ranges from approximately 10 inches in the coastal and inland areas to over 30 inches in the mountains. In general, milder annual temperatures are experienced in the maritime and coastal areas, whereas the interior and desert areas experience warmer summers and cooler winters. The project site is located approximately ten miles inland from the coast in an interior valley.

High air pollution levels in coastal communities of San Diego can often occur when polluted air from the South Coast Air Basin, particularly from Los Angeles, travels southwest over the ocean at night and is brought on shore into San Diego by the sea breeze during the day (SDAPCD 2015). Air Pollutants are also transported to San Diego during relatively mild Santa Ana weather conditions, however, during strong Santa Ana weather conditions, pollutants are pushed away from San Diego far out to sea.

Air Quality Regulations

Federal Air Quality Regulations

Ambient Air Quality Standards represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the CAA [42 USC 7409].

The U.S. Environmental Protection Agency (USEPA) has set primary and secondary National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter with a diameter of up to ten microns (PM₁₀) and up to 2.5 microns (PM_{2.5}), and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. Table 1 lists the current federal and state standards for regulated pollutants.

Table 1 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	–	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.00 ppm	9.00 ppm
	1-Hour	35.00 ppm	20.00 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.180 ppm
Sulfur Dioxide	Annual	0.030 ppm	–
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM ₁₀	Annual	–	20 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
PM ₂₅	Annual	12 µg/m ³	12 µg/m ³
	24-Hour	35 µg/m ³	–
Lead	30-Day Average	–	1.5 µg/m ³
	3-Month Average	0.15 µg/m ³	–

ppm = parts per million; µg/m³ = micrograms per cubic meter

Source: CARB 2016

State Air Quality Regulations

CALIFORNIA AMBIENT AIR QUALITY STANDARDS

The California Clean Air Act (CCAA) was enacted in 1988 (California Health & Safety Code (H&SC) §39000 et seq.). While USEPA is the federal agency designated to administer air quality regulation, the California Air Resources Board (CARB) is the state equivalent in the California Environmental Protection Agency (CalEPA). Under the CCAA the State has developed the California Ambient Air Quality Standards (CAAQS), which are generally more stringent than the NAAQS. Table 1 lists the current State standards for regulated pollutants. In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Like the federal CAA, the CCAA classifies specific geographic areas as either “attainment” or “nonattainment” areas for each pollutant, based on the comparison of measured data within the CAAQS.

California is divided geographically into 15 air basins for managing the air resources of the State on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. If an air basin is not in either federal or State attainment for a criteria pollutant, the basin is classified as a nonattainment area for that pollutant. Under the CAA, once a nonattainment area has achieved the air quality standards for a criteria pollutant, it may be re-designated to an attainment area for that pollutant. To be re-designated, the area must meet air quality standards and have a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal CAA. Areas that have been re-designated to attainment are called maintenance areas.

The SDAB is designated a nonattainment area for the federal and State eight-hour ozone standards, State one-hour ozone standards, and for State PM₁₀ and PM_{2.5}. The SDAB is designated unclassifiable or in attainment for all other federal and State standards (SDAPCD 2021).

TOXIC AIR CONTAMINANTS

A toxic air contaminant (TAC) is an air pollutant that may cause or contribute to an increase in mortality or serious illness or which may pose a present or potential hazard to human health. TACs may result in long-term health effects such as cancer, birth defects, neurological damage, asthma, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation, runny nose, throat pain, and headaches. TACs are considered either carcinogenic or non-carcinogenic based on the nature of the health effects associated with exposure. For carcinogenic TACs, potential health impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Non-carcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

TACs include both organic and inorganic chemical substances. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as diesel particulate matter (DPM); however, TACs may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs commonly associated with gasoline dispensing stations include the organic compounds of benzene, toluene, and xylene. Benzene is a known human carcinogen and can result in short-term acute and long-term chronic health impacts (USEPA n.d.).

In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels. The Children's Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air quality monitoring network, and develop any additional air toxic control measures needed to protect children's health.

STATE IMPLEMENTATION PLAN

The federal CAA Amendments mandate that states submit and implement a State Implementation Plan (SIP) for areas not meeting air quality standards. The SIP includes pollution control measures to demonstrate how the standards will be met through those measures. The SIP is established by incorporating measures established during the preparation of air quality attainment plans and adopted rules and regulations by each local air district, which are submitted for approval to CARB

and the USEPA. The goal of an air quality attainment plan is to reduce pollutant concentrations below the NAAQS through the implementation of air pollutant emissions controls.

The SIP relies on information from the San Diego Association of Governments (SANDAG) to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for ozone.

Local Air Quality Regulations

SAN DIEGO REGIONAL AIR QUALITY STRATEGY

The San Diego Air Pollution Control District (SDAPCD) is the designated air quality control agency for the SDAB. The SDAPCD developed the San Diego Regional Air Quality Strategy (RAQS) pursuant to California Clean Air Act (CCAA) requirements. The RAQS was initially adopted in 1991 and was updated in 1995, 1998, 2001, 2004, 2009, 2016, and 2020 (SDAPCD 2020). The RAQS identifies feasible emission control measures to provide progress in San Diego County toward attaining the State ozone standard. The pollutants addressed in the RAQS are volatile organic compounds (VOCs) and NO_x, precursors to the photochemical formation of ozone (the primary component of smog). The RAQS was initially adopted by the SDAPCD Board on June 30, 1992, and amended on March 2, 1993, in response to CARB comments. At present, no attainment plan for PM₁₀ or PM_{2.5} is required by the state regulations. However, SDAPCD has adopted measures to reduce PM₁₀ and PM_{2.5} in San Diego County. These measures range from regulation against open burning to incentive programs that introduce cleaner technology. These measures can be found in a report titled "Measures to Reduce Particulate Matter in San Diego County" (2005).

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls.

CITY OF SAN MARCOS GENERAL PLAN

The San Marcos General Plan (2012) contains goals, policies, and recommendations that represent a shared vision for the future of the City. It establishes a framework for ensuring that changes to the built environment, whether public or private, aid in maintaining or improving specific communities while enhancing community qualities as a place for living, recreating, and working. The General Plan Conservation Open Space Element, Land Use and Community Design Element, and Mobility Element contain policies related to the City's sustainable land development goals. Policies specifically related to air quality are as follows:

COS-4.1: Continue to work with the USEPA, CARB, SANDAG, and the SDAPCD to meet State and federal ambient air quality standards.

COS-4.2: Require new sensitive-use development, such as schools, day care centers and hospitals, located near mobile and stationary TACs be designed with consideration of site and building orientation, location of trees, and incorporation of appropriate technology (i.e., ventilation and filtration) for improved air quality to lessen any potential health risks.

- COS-4.5:** Encourage energy conservation and the use of alternative energy sources within the community.
- LU-2.1:** Promote compact development patterns that reduce air pollution and automobile dependence and facilitate walking, bicycling, and transit use.
- LU-2.4:** Encourage retrofits to existing buildings to promote energy efficiency and indoor air quality.
- M-3.1:** Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and GHG emissions; and reinforces the role of the street as a public space that unites the City.

Criteria Pollutants

Ozone

Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and reactive organic gases¹ (ROG). NO_x are formed during the combustion of fuels, while ROG are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it usually occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

CO is a local pollutant produced in the incomplete combustion of carbon-containing fuels, such as gasoline, natural gas, oil, coal, and wood. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Therefore, elevated concentrations are usually found near areas of high traffic volumes. The health effects from CO are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Sulfur Dioxide

SO₂ is a combustion product, with the primary source being power plants and heavy industries that use coal or oil as fuel. SO₂ is also a product of diesel engine combustion. The health effects of SO₂ include lung disease and breathing problems for people with asthma. SO₂ in the atmosphere contributes to the formation of acid rain.

Nitrogen Dioxide

NO₂ is a byproduct of fuel combustion, with the primary sources being motor vehicles and industrial boilers and furnaces. The principal form of NO₂ produced by combustion is nitric oxide

¹ Organic compound precursors of ozone are routinely described by several variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in various acronyms, such as TOG (total organic gases), ROG (reactive organic gases), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, two groups are important from an air quality perspective: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (ROG and VOC).

(NO), but NO reacts rapidly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ is an acute irritant. A relationship between NO₂ and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. NO₂ absorbs blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility. It can also contribute to the formation of ozone/smog and acid rain.

Particulate Matter

Suspended atmospheric PM₁₀ and PM_{2.5} is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The characteristics, sources, and potential health effects associated with PM₁₀ and PM_{2.5} can be different. Major man-made sources of PM₁₀ are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer PM_{2.5} particulates are generally associated with combustion processes as well as formation in the atmosphere as a secondary pollutant through chemical reactions. PM_{2.5} is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the PM_{2.5} that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Current Air Quality

CARB operates a network of air quality monitoring stations throughout the SDAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and federal standards. The monitoring station located closest to the project site is the Camp Pendleton station (21441 West B Street, Oceanside), located approximately 17 miles northwest of the project site. This monitoring station measures only ozone, NO₂, and PM_{2.5}. No other nearby monitoring stations measure PM₁₀. The closest monitoring site is the San Diego-Kearny Villa Road station, which is approximately 30 miles south of the project site. PM₁₀ measurements from this station were included in the table below.

Table 2 reports ambient air quality measurements and indicates the number of days that each standard has been exceeded at the Camp Pendleton and San Diego-Kearny Villa Road stations. The ambient air quality in the area exceeded the State and Federal 8-hour ozone standard on three days in 2020. Data was not available for exceedance days for PM₁₀ nor PM_{2.5} emissions. The area did not exceed other air quality standards in 2018, 2019, or 2020.

Table 2 Ambient Air Quality at the Monitoring Station

Pollutant	2018	2019	2020
8 Hour Ozone (ppm), 8-Hour Average	0.068	0.064	0.074
Number of days above State and Federal standards (>0.070 ppm)	0	0	3
Ozone (ppm), Worst Hour	0.084	0.075	0.094
Number of days above State standard (>0.09 ppm)	0	0	0
Number of days above Federal standard (>0.112 ppm)	0	0	0
Nitrogen Dioxide (ppm) - Worst Hour (Federal Measurements)	0.048	0.053	0.058
Number of days above State standard (>0.18 ppm)	0	0	0
Number of days above Federal standard (0.10 ppm)	0	0	0
Particulate Matter 10 microns, $\mu\text{g}/\text{m}^3$, Worst 24 Hours	38.0	*	*
Number of days above Federal standard (>150 $\mu\text{g}/\text{m}^3$)	0	*	*
Particulate Matter <2.5 microns, $\mu\text{g}/\text{m}^3$, Worst 24 Hours	30.5	13.8	61.1
Number of days above Federal standard (>35 $\mu\text{g}/\text{m}^3$)	*	*	*

Source: CARB 2021a

Sensitive Receptors

The term “sensitive receptor” refers to a person in the population who is more susceptible to health effects due to exposure to an air contaminant than the population at large or to a land use that may reasonably be associated with such a person. Examples include residences, schools, playgrounds, childcare centers, churches, athletic facilities, retirement homes, and long-term health care facilities. Sensitive receptors that may be affected by air quality impacts associated with project construction and operation include the residents of the Palomar Station apartments and townhomes located approximately 500-600 feet southeast of the eastern project boundary, and single-family residences located 800 feet to north of the project site. Palomar College, a community college, is also located approximately 700 feet north of the project site.

1.4 Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth’s atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term “climate change” is often used interchangeably with the term “global warming,” but climate change is preferred because it conveys that other changes are happening in addition to rising temperatures. The baseline against which these changes are measured originates in historical records that identify temperature changes that occurred in the past, such as during previous ice ages. The global climate is changing continuously, as evidenced in the geologic record which indicates repeated episodes of substantial warming and cooling. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental

warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming over the past 150 years. The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed that the rise and continued growth of atmospheric CO₂ concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatonnes of anthropogenic CO₂ was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late 1700s, estimated concentrations of CO₂, methane, and nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (U.S. EPA 2021a). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O), fluorinated gases such as hydrofluorocarbons and perfluorocarbons and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are usually by-products of fossil fuel combustion, and CH₄ results from off-gassing associated with agricultural practices and landfills. Human-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆ (U.S. EPA 2021a).

Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO₂e), which is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO₂ on a molecule per molecule basis (IPCC 2021).²

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 33 degrees Celsius (°C) cooler (World Meteorological Organization 2021). However, since 1750, estimated concentrations of CO₂, CH₄, and N₂O in the atmosphere have increased by 47 percent, 156 percent, and 23 percent, respectively, primarily due to human activity (IPCC 2021). GHG emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, are believed to have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

² The Intergovernmental Panel on Climate Change's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

Greenhouse Gas Emissions Inventory

Global

In 2015, worldwide anthropogenic total 47,000 million MT of CO₂e, which is a 43 percent increase from 1990 GHG levels (U.S. EPA 2021b). Specifically, 34,522 million metric tons (MMT) of CO₂e of CO₂, 8,241 MMT of CO₂e of CH₄, 2,997 MMT of CO₂e of N₂O, and 1,001 MMT of CO₂e of fluorinated gases were emitted in 2015. The largest source of GHG emissions were energy production and use (includes fuels used by vehicles and buildings), which accounted for 75 percent of the global GHG emissions. Agriculture uses and industrial processes contributed 12 percent and six percent, respectively. Waste sources contributed for three percent and two percent was due to international transportation sources. These sources account for approximately 98 percent because there was a net sink of two percent from land-use change and forestry. (U.S. EPA 2021b).

Federal

Total U.S. GHG emissions were 6,558 MMT of CO₂e in 2019. Emissions decreased by 1.7 percent from 2018 to 2019; since 1990, total U.S. emissions have increased by an average annual rate of 0.06 percent for a total increase of 1.8 percent between 1990 and 2019. The decrease from 2018 to 2019 reflects the combined influences of several long-term trends, including population changes, economic growth, energy market shifts, technological changes such as improvements in energy efficiency, and decrease carbon intensity of energy fuel choices. In 2019, the industrial and transportation end-use sectors accounted for 30 percent and 29 percent, respectively, of nationwide GHG emissions while the commercial and residential end-use sectors accounted for 16 percent and 15 percent of nationwide GHG emissions, respectively, with electricity emissions distributed among the various sectors (U.S. EPA 2021c).

California

Based on the CARB California Greenhouse Gas Inventory for 2000-2019, California produced 418.2 MMT of CO₂e in 2019, which is 7.2 MMT of CO₂e lower than 2018 levels. The major source of GHG emissions in California is the transportation sector, which comprises 40 percent of the state's total GHG emissions. The industrial sector is the second largest source, comprising 21 percent of the state's GHG emissions while electric power accounts for approximately 14 percent (CARB 2021c). The magnitude of California's total GHG emissions is due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions as compared to other states is its relatively mild climate. In 2016, the State of California achieved its 2020 GHG emission reduction target of reducing emissions to 1990 levels as emissions fell below 431 MMT of CO₂e (CARB 2021c). The annual 2030 statewide target emissions level is 260 MMT of CO₂e (CARB 2017).

Regional

The City of San Marcos' Climate Action Plan (CAP) includes GHG inventories for the City (City of San Marcos 2020). In 2012, GHG emissions were estimated at 599,000 MT CO₂e. Out of the total 2012 GHG emissions inventory, on-road transportation (i.e., gasoline and diesel consumption from motor vehicles on local roads and highways) accounted for 54 percent of the emissions, electricity accounted for 27 percent, and natural gas accounted for 12 percent. The remaining seven percent of GHG emissions was due to solid waste, off-road transportation, water, and wastewater.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The observed global mean surface temperature for the decade from 2006 to 2015 was approximately 0.87°C (0.75°C to 0.99°C) higher than the global mean surface temperature over the period from 1850 to 1900. Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations agree that LSAT as well as sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014 and 2018).

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 1°F to 2°F higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include loss in water supply from snowpack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (State of California 2018). While there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional projections (State of California 2018). Projections under “intermediate” climate change scenario³ indicate that the average maximum daily temperatures in the San Marcos area will increase from historic (1961-1990) average of 74.2°F to 79.8°F by 2099 (State of California 2018). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. As temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have been occurring at higher elevations in the Sierra Nevada Mountains (State of California 2018). If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality would worsen. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby improving the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Natural Resources Agency 2009).

³ The specific scenario referenced is the Representative Concentration Pathway (RCP) 4.5 scenario is considered a stabilization scenario in which under which societies attempt to reduce GHG emissions. Under this scenario global emissions peak around 2040 and then gradually decline.

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. However, the average early spring snowpack in the western United States, including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 5.9 inches along the central and southern California coast (State of California 2018). The Sierra snowpack provides most of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers (April and July). The snowmelt currently provides an annual average of 15 million acre-feet of water each year, and it is predicted that the snowpack will be reduced by 25 to 40 percent compared to its historic average by 2050 (California Department of Water Resources 2013). Climate change will also result in less snowfall at lower elevations and reduce the total snowpack, resulting in less available water (California Department of Water Resources 2013). The State of California projects that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (State of California 2018).

Hydrology and Sea Level Rise

Climate change has the potential to induce substantial sea level rise in the coming century (State of California 2018). The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO] 2013). As a result, global mean sea levels averaged over the last decade were about 8 inches higher than those of 1880 (WMO 2013). Sea levels are rising faster now than in the previous two millennia and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea-level rise of 10 to 37 inches by 2100 (IPCC 2018). A rise in sea levels could completely erode 31 to 67 percent of southern California beaches, result in flooding of approximately 370 miles of coastal highways during 100-year storm events, jeopardize California's water supply due to salt water intrusion, and induce groundwater flooding and/or exposure of buried infrastructure (State of California 2018). In addition, increased CO₂ emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a \$50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2020). Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent; water demand could increase as hotter conditions lead to the loss of soil moisture; crop-yield could be threatened by water-induced stress and extreme heat waves; and plants may be susceptible to new and changing pest and disease outbreaks (State of California 2018). In addition, temperature increases could change the

time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (California Climate Change Center 2006).

Ecosystems and Wildlife

Climate change, and the potential resulting changes in weather patterns, could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the annual average maximum daily temperatures in California could rise by 4.4 to 5.8°F in the next 50 years and by 5.6 to 8.8°F in the next century (State of California 2018). Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals related to (1) timing of ecological events; (2) geographic distribution and range; (3) species' composition and the incidence of nonnative species within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006; State of California 2018). Increases in wildfire would further remove sensitive habitat; increased severity in droughts would potentially starve plants and animals of water; and sea level rise will affect sensitive coastal ecosystems.

Greenhouse Gas Regulations

Federal Regulations

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the USEPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The USEPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the USEPA issued a Final Rule that establishes the GHG permitting thresholds that determine when CAA permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that USEPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

State Regulations

ASSEMBLY BILL 1493 - CALIFORNIA ADVANCED CLEAN CARS PROGRAM

AB 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, USEPA granted the waiver of CAA preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero

Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and should provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011).

ASSEMBLY BILL 32 - CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006

California's major initiative for reducing GHG emissions is outlined in AB 32, the "California Global Warming Solutions Act of 2006," which was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and required CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 required CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO₂e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan Update defined CARB's climate change priorities for the next five years and set the groundwork to reach post-2020 statewide goals. The update highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer-term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

Senate Bill (SB) 32, signed into law on September 8, 2016, extended AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remained unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of no more than 6 metric tons (MT) CO₂e by 2030 and 2 MT CO₂e by 2050 (CARB 2017).

SENATE BILL 97 - CEQA: GREENHOUSE GAS EMISSIONS

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

SENATE BILL 375 - 2008 SUSTAINABLE COMMUNITIES AND CLIMATE PROTECTION ACT

SB 375, signed in August 2008, enhances the state’s ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the state’s 18 major Metropolitan Planning Organizations (MPOs) to prepare a “sustainable communities strategy” (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of sub regional plans by the sub regional councils of governments and the county transportation commissions to meet SB 375 requirements.

SENATE BILL 1383 - SHORT-LIVED CLIMATE POLLUTANTS

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with CARB, to adopt regulations that achieve:

- 50-percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020; and
- 75-percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2025.

The bill also mandates various state and local agencies develop of further strategies to reduce emissions generated by specific industries such as agriculture. The stated goal is to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SENATE BILL 100 - CALIFORNIA RENEWABLES PORTFOLIO STANDARD PROGRAM

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state’s Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

EXECUTIVE ORDER B-55-18 TO ACHIEVE CARBON NEUTRALITY

On September 10, 2018, Governor Brown issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

ASSEMBLY BILL 341 - CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; (2) diversion of 50 percent of all solid waste on and after January 1, 2000; and (3) diversion of 75 percent of all solid waste by 2020, and annually thereafter. CalRecycle is required to develop strategies to implement AB 341, including source reduction.

ASSEMBLY BILL 2230 - RECYCLED WATER: CAR WASHES

AB 2230, passed in 2012, required all car washes constructed after January 1, 2014, to install a water recycling system that recycles and reuses at least 60 percent of the wash and rinse water, or to use recycled water provided by a water supplier for at least 60 percent of its wash and rinse water.

California Building Standards Code

CALIFORNIA CODE OF REGULATIONS, TITLE 24 - CALIFORNIA BUILDING CODE

The California Code of Regulations (CCR), Title 24, is referred to as the California Building Code (CBC). It consists of a compilation of several distinct standards and codes related to building construction including plumbing, electrical, interior acoustics, energy efficiency, handicap accessibility, and so on. The CBC's energy efficiency and green building standards are outlined below.

PART 6 - BUILDING ENERGY EFFICIENCY STANDARDS

The CCR, Title 24, Part 6 is the Building Energy Efficiency Standards. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. The Building Energy Efficiency Standards is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available. New construction and major renovations must demonstrate their compliance with the current Building Energy Efficiency Standards through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC).

The 2019 standards took effect on January 1, 2020, and therefore would be applicable to the project. The 2019 standards focus on four key areas: (1) smart residential photovoltaic systems; (2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); (3) residential and nonresidential ventilation requirements; and (4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC 2018a). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

PART 11 - CALIFORNIA GREEN BUILDING STANDARDS

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11 first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 CBC). The 2016 CALGreen institutes mandatory minimum environmental

performance standards for all ground-up new construction of non-residential and residential structures. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory Green Building Standards and may adopt additional amendments for stricter requirements.

The mandatory standards require:

- 20 percent reduction in indoor water use relative to specified baseline levels;
- 65 percent construction/demolition waste diverted from landfills;
- Inspections of energy systems to ensure optimal working efficiency;
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards;
- Dedicated circuitry to facilitate installation of EV charging stations in newly constructed attached garages for single-family and duplex dwellings; and
- Installation of EV charging stations at least five percent of the parking spaces for new multi-family and non-residential developments.

Similar to the compliance reporting procedure for demonstrating Building Energy Efficiency Standards compliance in new buildings and major renovations, compliance with the CALGreen water-reduction requirements must be demonstrated through completion of water use reporting forms for new low-rise residential and non-residential buildings. Buildings must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

Regional and Local Regulations

SAN DIEGO FORWARD: THE REGIONAL PLAN

SANDAG adopted *San Diego Forward: The Regional Plan* in 2015, which combines the Regional Comprehensive Plan (RCP) from 2004 with the 2050 RTP/SCS (Regional Plan). The Regional Plan serves as the blueprint for growth in the San Diego region and SANDAG's planned investments in transportation infrastructure to provide more choices, strengthen the economy, promote a healthy environment, and support thriving communities. The Regional Plan sets forth the following six general objectives:

- Habitat and Open Space Preservation,
- Regional Economic Prosperity,
- Environmental Stewardship,
- Providing Mobility Choices,
- Partnerships/Collaboration with neighboring entities, and
- Creating Healthy and Complete Communities.

The Regional Plan charts a course towards lowering GHG emissions and includes the following five building blocks:

- A land use pattern that accommodates our region's future employment and housing needs, and protects sensitive habitats, cultural resources, and resource areas

- A transportation network of public transit, managed lanes and highways, local streets, bikeways, and walkways built and maintained with reasonably expected funding
- Managing demands on our transportation system (also known as Transportation Demand Management, or TDM) in ways that reduce or eliminate traffic congestion during peak periods of demand
- Managing our transportation system (also known as Transportation System Management, or TSM) through measures that maximize the overall efficiency of the transportation network
- Innovative pricing policies and other measures designed to reduce the number of miles people travel in their vehicles, as well as traffic congestion during peak periods of demand

CITY OF SAN MARCOS GENERAL PLAN

The City's General Plan Mobility Element includes smart growth and land use planning principles designed to reduce vehicle miles traveled (VMT), which would result in a reduction in GHG emissions (San Marcos 2013). Policies relevant to the project intended to encourage multimodal circulation, which subsequently contribute to GHG emission reductions, are as follows:

- Policy M-1.3:** Require new developments to prepare and implement Transportation Demand Management (TDM) programs to minimize vehicle trip generation and promote alternative modes of travel within the City.
- Policy M-3.1:** Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and GHG emissions; and reinforces the role of the street as a public space that unites the City.

The City's General Plan Conservation Open Space Element also contains policies relevant to the project in addressing GHG reductions, which are provided below (San Marcos 2013).

- Policy COS-4.5:** Encourage energy conservation and the use of alternative energy sources within the community.
- Policy COS-4.9:** Encourage use and retrofitting of existing buildings under Title 24 of the California Building Energy Code.

CITY OF SAN MARCOS CLIMATE ACTION PLAN

The City of San Marcos adopted its updated Climate Action Plan (CAP) in December 2020 (City of San Marcos 2020). The City's updated CAP establishes GHG emissions targets for years 2020 and 2030, consistent with statewide goals identified in AB 32, Executive Order S-03-05, and SB 32. The CAP contains comprehensive implementation actions related to transportation, land, energy, and water uses, as well as managing wastewater and solid waste generation. The City's goals are to reduce GHG emissions four percent below 2012 levels by 2020 and 42 percent below 2012 levels by 2030.

The City's CAP includes three methods to evaluate the GHG impacts associated with proposed development projects in the City. The first method is to screen out projects that would be too small to make a considerable contribution to the cumulative impact of climate change and would not need to provide additional analysis to demonstrate consistency with the CAP. The City developed a list of project screening thresholds for various project types that would be anticipated to emit less than 500 MT CO₂e per year. The second method is to evaluate whether a project would incorporate applicable GHG reduction measures from the CAP. The City prepared a CAP Consistency Checklist

200 North Las Posas Road Project

to simplify this review; where a project complies with the checklist, no further analysis is required. The third method is intended to accommodate projects that cannot use the Checklist due to unique land uses or circumstances but are otherwise consistent with CAP projections. These projects may incorporate project-specific GHG reduction measures and demonstrate consistency with the CAP through comparison to a numerical threshold of 2.1 MT CO₂e per service population per year, where service population is defined as the sum of the number of residents and jobs generated by the project.

2 Impact Analysis

2.1 Methodology

Criteria pollutant and GHG emissions for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The model is used to estimate criteria pollutant and GHGs emissions. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2021). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. CalEEMod output files for the project are included in Appendix A to this report.

Construction Emissions

Project construction would primarily generate temporary criteria pollutant and GHG emissions from construction equipment operation on-site, construction worker vehicle trips to and from the site, and from export of materials off-site. Construction input data for CalEEMod include, but are not limited to: (1) the anticipated start and finish dates of construction activity; (2) inventories of construction equipment to be used; (3) areas to be excavated and graded; and (4) volumes of materials to be exported from and imported to the project site. The analysis assessed maximum daily emissions from individual construction activities, including site preparation, grading, building construction, paving, and architectural coating. Construction would require heavy equipment during demolition, site preparation, grading, building construction, and paving. Construction equipment estimates are based on surveys of construction projects within California conducted by members of CAPCOA. Note that there would be no demolition phase since the existing site is vacant.

Construction emissions were modeled in CalEEMod to start in April 2023 based on applicant provided information with completion anticipated in February 2024 based on CalEEMod default assumptions. Construction emissions associated with development of the proposed project were quantified by estimating the types and quantity of equipment that would be used on site during each of the construction phases, as provided by the model defaults. CalEEMod also estimates off-site emissions from worker, vendor, and hauling truck trips. The number of worker and vendor trips would be based on CalEEMod defaults. Hauling trips are anticipated for import of approximately 7,961 cubic yards of fill material.

The quantity, duration, and the intensity of construction activity influences the amount of construction emissions and their related pollutant concentrations that occur at any one time. The emission forecasts modeled for this report reflect conservative assumptions where a relatively large amount of construction is occurring in a relatively intensive manner. If construction is delayed

or occurs over a longer period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix than assumed in the CalEEMod, and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

Consistent with the industry standard, total construction GHG emissions resulting from a project were amortized over 30 years and added to operational GHG emissions to account for their contribution to GHG emissions over the lifetime of the project.

Operational Emissions

In CalEEMod, operational sources of criteria pollutant emissions include area, energy, and mobile sources; GHG emissions include water and solid waste sources in addition to area, energy, and mobile sources. The project's 3,000-square foot car wash was attributed to the "Automobile Care Center" land use subtype, while the gas station and food mart were modeled as a 4,800-square foot "Convenience Market with Gas Pumps".

Energy Sources

Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on USEPA's AP-42 (*Compilation of Air Pollutant Emissions Factors*) and California Climate Action Registry General Reporting Protocol (California Climate Action Registry 2009). Electricity emissions only apply to GHG emissions (as the energy is generated off-site and therefore may not be relevant for local and regional air quality conditions) and are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CAPCOA 2021). The default electricity consumption values in CalEEMod include the CEC-sponsored California Commercial End Use Survey and Residential Appliance Saturation Survey studies.

Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CAPCOA 2021). The project would be served by San Diego Gas & Electric (SDGE). Therefore, SDGE's specific energy intensity factors (i.e., the amount of CO₂, CH₄, and N₂O per kilowatt-hour) are used in the calculations of GHG emissions. Data from professional car wash industry surveys and reports were used to estimate the energy requirements for the proposed car wash. The annual number of vehicles that would be washed for the project was estimated based on a 2015 industry survey, which reported an average of approximately 80,000 vehicles per year for exterior-only automated conveyor car washes (Professional Car Washing 2017). The energy requirements for the car wash were estimated using car wash industry survey cost averages of \$0.50 per vehicle for electricity and \$0.12 per vehicle for natural gas (Essenburg 2014). The cost of \$0.50 for electricity was converted to 4.69 kilowatt hours (kwh) per vehicle for electricity based on an average cost of \$0.1059 per kwh for commercial customers in the U.S. in 2020 (U.S. Energy Information Administration [USEIA] 2022) for a total annual electricity use of 377,715 kwh per year. The cost of \$0.12 for natural gas was converted to 15.79 kilo-British Thermal Units (kBtu) per vehicle for natural gas based average cost of \$7.49 per 1,000 cubic feet⁴ for commercial customers in the U.S. in 2020 (USEIA 2022b) for a total annual natural gas use of 1,329,132 kBtu per year.

⁴ For natural gas, 1,000 cubic feet = 1,037 kBtu

Area Sources

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from CARB, USEPA, and emission factor values provided by the local air district (CAPCOA 2021).

Waste Sources

Operational emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CAPCOA 2021). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Water and Wastewater Sources

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

Data from professional car wash industry surveys and reports were used to estimate the water requirements for the proposed car wash. The annual number of vehicles washed for the project was estimated based on a 2015 industry survey which reported an average of approximately 80,000 vehicles per year for exterior-only automated conveyor car washes (Professional Car Washing 2017). According to a report on water conservation from the International Carwash Association, typical freshwater use for a friction type of conveyor car wash without water reclamation is 65.8 gallons per vehicle (International Carwash Association 2002). AB 2230, signed by the Governor in 2012, requires that any conveyor car wash installed after 2013 reuse a minimum of 60 percent of the water previously used in the wash or rinse cycles. Therefore, the proposed car wash would reclaim at least 39.5 gallons per vehicle for a total water use of 26.3 gallon per vehicle. Based on 80,000 vehicles washed per year, the estimated water use for the proposed car wash would be 2,104,000 gallons per year.

Mobile Sources

Mobile emissions are estimated by multiplying the project trip rate, average trip length, and the vehicle emission factors. The traffic consultant, Linscott, Law & Greenspan, provided project-specific trip generations based on SANDAG rates for a "Gas Station with Food Mart and Car Wash." The trip rate was estimated to be 155 trips per fuel station, and the average daily traffic (ADT) was predicted to be 1,395 vehicles for nine fueling stations. However, to account for the food mart drive-thru traffic, Linscott, Law & Greenspan increased the ADT by 20 percent for an ADT of 1,674 vehicles. The daily rate was also changed to be per 1,000 square feet instead of per pump. The adjusted daily rate would be 334.87 trips per 1,000 square feet using the square footage of the food mart (i.e., 5,000 square feet) and the increased ADT of 1,674 trips. The project-specific trip generation rates provided are included in Appendix A.

2.2 Significance Thresholds

Air Quality

To determine whether a project would result in a significant impact to air quality, Appendix G of the CEQA Guidelines requires consideration of whether a project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SDAPCD has adopted numerical air quality impact analysis trigger levels to determine whether an air pollution source could contribute individually or cumulatively to the worsening local or regional air quality. These trigger levels are also used by planning agencies and local jurisdictions as screening level thresholds for comparative purposes when evaluating projects under CEQA. Thus, a project that does not exceed these SDAPCD screening level thresholds would have a less than significant impact in regard to the second air quality impact criteria. The screening level thresholds for temporary construction and long-term operational emissions in the SDAB are shown in Table 3.

Table 3 SDAPCD Screening Thresholds

Pollutant	Total Emissions (lbs. per day)
ROG/VOCs	250
NO _x	250
CO	550
SO _x	250
PM ₁₀	100
PM _{2.5}	67

Source: SDAPCD Rule 20.2.

The SDAPCD does not have a specified threshold for health risk impacts from TACs. Rule 1200 for the SDAPCD is related to review of new sources for TACs. The rule states that new sources with a maximum incremental cancer risk greater than 10 in one million shall conduct the following to obtain an Authority to Construct or Permit to Operate: implementation of Toxics Best Available Control Technology (T-BACT) and a report in support of approving an Authority to Construct the project, which includes methods to reduce cancer risk. As the maximum incremental cancer risk greater than 10 in one million is used by SDAPCD to determine projects that must meet a high standard for Authority to Construct, that limit is used for the determination of impacts in this analysis.

Greenhouse Gas Emissions

Based on Appendix G of the CEQA Guidelines, impacts related to GHG emissions from the project would be significant if the project would:

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

The majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

According to the CEQA Guidelines, projects can tier off a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (AEP) in their white paper, *Beyond Newhall and 2020*, to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions impact on the environment (2016). The CEQA Guidelines define the requirements necessary to qualify as a comprehensive plan for the reduction of GHG emissions (CEQA Guidelines, Section 15183.5):

1. Quantify existing and projected GHG emissions within the plan area
2. Establish a reduction target based on substantial evidence, where GHG emission are not cumulatively considerable)
3. Identify and analyze sector specific GHG emissions from Plan activities
4. Specify policies and actions (measures) that local jurisdictions will enact and implement over time to achieve the specified reduction target
5. Establish a tool to monitor progress and amend if necessary
6. Adopt in a public process following environmental review

A key aspect of a qualified GHG reduction plan is substantial evidence that the identified reduction target establishes a threshold where GHG emissions are not cumulatively considerable. The AEP *Beyond Newhall White Paper* identifies this criterion as being a local target that aligns with the statewide legislative targets.

The updated San Marcos CAP, with a 2030 target that is consistent with SB 32, is a qualified GHG reduction plan consistent with the requirements of CEQA Guidelines Section 15183.5. The CAP provides a CAP Consistency Checklist; however, since this project requires a General Plan Amendment, GHG emissions were also quantified for the project and the existing land use designation to determine consistency.

2.3 Impact Analysis

Air Quality

Air Quality Threshold 1

Would the project conflict with or obstruct implementation of the applicable air quality plan? (*Less Than Significant*).

The SDAPCD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the SDAB is in nonattainment. Strategies to achieve these emissions reductions are developed in the RAQS, prepared by the SDAPCD for the region. Forecasts used in the RAQS are developed by SANDAG. SANDAG forecasts are based on local general plans and other related documents that are used to develop population, employment, and traffic projections. Consistency with the RAQS is determined by analyzing a project with the assumptions in the RAQS. As such, projects that propose development that is consistent with the growth anticipated by the local land use plan would be consistent with the SANDAG's growth projections and the RAQS emissions estimates. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the RAQS. In the event a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS for the specific subregional area.

The project would be zoned Commercial (C), but the General Plan land use designation for the project site is Mixed Use 3 (MU3). A MU3 land use designation allows for non-residential commercial and office uses that can be mixed vertically (i.e., located on separate floors in the same building) or horizontally (i.e., located in separate buildings on the same site). The project proposes development of a food mart, a gas station, and an automated car wash. Since the project would not include MU3 land uses, then a General Plan Amendment (GPA) would be needed. As demonstrated in Section 2.3, *Greenhouse Gas Emissions*, under Table 6, the project's proposed use would result in a less intensive project regarding GHG emissions than the current designated use, mostly due to a reduction in vehicle trips from the proposed use. This would also have the effect of the project resulting in lower criteria pollutant emissions than the current designated use. With a less intensive use than the existing designation, the proposed project would be consistent with RAQS growth projections. In addition, the project is in compliance with the SDAPCD air quality standards as shown in Table 4 and Table 5 for construction and operation emissions. The project would not result in a cumulatively considerable net increase of any criteria air pollutants. Given the aforementioned, the project would not interfere with the SDCAPCD's goal of reducing air pollutant emissions for ozone within the region. Impacts to the San Diego RAQS would be less than significant.

Air Quality Threshold 2

Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (*Less Than Significant*).

Construction

Table 4 summarizes maximum daily and annual emissions of pollutants throughout the construction period of the project. Detailed modeling results are provided in Appendix A. Emissions

would not exceed SDAPCD screening level thresholds during project construction. Therefore, project construction would not result in a cumulatively considerable net increase of a criteria pollutant, and impacts would be less than significant.

Table 4 Construction Criteria Pollutant Emissions

	Maximum Emissions (lbs/day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Construction Year 2023	2	48	18	<1	9	4
Construction Year 2024	25	12	14	<1	1	1
Maximum Emissions	25	48	18	<1	9	4
SDAPCD Regional Thresholds	250	250	550	250	100	67
Threshold Exceeded?	No	No	No	No	No	No

Source: Table 2.1 "Overall Construction-Unmitigated" emissions. Highest of summer and winter emissions results are shown for maximum daily emissions. See CalEEMod worksheets in Appendix A.

Operational

Table 5 summarizes emissions associated with operation of the project. The majority of operational emissions generated would be due to mobile emissions from vehicle trips to and from the project site. As shown in Table 5, emissions generated during the operation of project would not exceed SDAPCD screening level thresholds. Therefore, the project would not result in a cumulatively considerable net increase of a criteria pollutant, and impacts would be less than significant.

Table 5 Operational Criteria Pollutant Emissions

Emission Source	Maximum Daily Emissions (lbs/day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	<1	<1	<1	0	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	3	2	16	<1	2	1
Project Emissions	3	2	16	<1	2	1
SDAPCD Regional Thresholds	250	250	550	250	100	67
Threshold Exceeded?	No	No	No	No	No	No

Note: Project emissions may not sum exactly due to rounding

Source: Table 2.2 "Overall Operational-Unmitigated" emissions. Highest of summer and winter emissions results are shown for maximum daily emissions. See CalEEMod worksheets in Appendix A.

Air Quality Threshold 3

Expose sensitive receptors to substantial pollutant concentrations (*Less Than Significant*).

Toxic Air Contaminants

CONSTRUCTION

Construction-related activities would result in short-term, project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM (discussed in the following paragraphs) outweighs the potential non-cancer health impacts (CARB 2021b). At this time, SDAPCD has not adopted a methodology for analyzing such impacts.

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed project would occur over approximately six months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period (assumed to be the approximate time that a person spends in a household). OEHHA recommends this risk be bracketed with 9-year and 70-year exposure periods. Health risk assessments should be limited to the period/duration of activities associated with the project.

The maximum PM_{2.5} emissions, which is used to represent DPM emissions for this analysis, would occur during grading and building construction activities. While grading and building construction emissions represent the worst-case condition, such activities would only occur for five months, less than five percent for a 9-year health risk calculation period and less than one percent for a 30-year and 70-year health risk calculation period. PM_{2.5} emissions would decrease for the remaining construction period because construction activities such as architectural coating and paving would require less construction equipment. Therefore, given the aforementioned, DPM generated by project construction is not expected to create conditions where the probability that the Maximally Exposed Individual would contract cancer is greater than 10 in one million. This impact would be less than significant.

OPERATION

The automotive fueling station would require Authority to Construct and Permit to Operate approval from the SDAPCD, which would review the facility design and location for compliance with applicable air quality standards. All tanks and dispensers would be equipped with the latest Phase I and Phase II Enhanced Vapor Recovery (EVR) air pollution control equipment technology per CARB regulations and associated Executive Orders. The Phase I EVR equipment controls the vapors in the return path from the on-site fuel storage tanks back to the tanker truck during offloading filling operations. Phase I EVR systems are 98 percent effective in controlling fugitive emissions from escaping into the environment. The Phase II EVR equipment, which also includes “in-station diagnostics,” controls and monitors the vapors in the return path from the fuel dispensers back to

the on-site fuel storage tanks. Phase II EVR systems are 95 percent effective in controlling fugitive emissions from escaping into the environment.

Applicant provided information indicates that the annual fuel throughput of the proposed gasoline station service would be approximately 4.8 million gallons (MG) a year, that the project would include Phase I and Phase II vapor recovery systems, and that the project's gas station would be located in an urban area approximately 570 feet (173 meters) from the nearest sensitive receptor, a multi-family development in the Palomar Station Specific Plan Area. Because it is unknown whether the Phase I and Phase II vapor recovery systems would include a vent valve, Scenario 6A under urban conditions was assumed. Based on a distance of 173 meters to the nearest receptor, the default cancer risk is <0.01 per one million for a station with an annual throughput of 1 MG (CAPCOA 1997).⁵ As such, the estimated cancer risk for the station with a 4.8 MG annual throughput is estimated to be 0.67 per one million.⁶ The screening risk assessment does not indicate that the gasoline station would cause a risk of concern nor does it exceed the threshold of 10 in a million. In addition, the proposed gasoline station meets the CAPCOA land-use guidelines such that the nearest sensitive receptors are located greater than the recommended 50-foot separation between residences and typical gas dispensing facilities (CARB 2005).

Furthermore, gas station permit applications with the SDAPCD fall under a general HRA that is in place with the SDAPCD and a project-specific HRA is not required (Creaven 2018) since use categories such as gas stations are considered small foot-print facilities with small zones of impact (OEHHA 2015).

Other long-term operational emissions include toxic substances such as cleaning agents in use on site. Compliance with State and federal handling regulations would ensure that emissions remain below a level of significance. The use of such substances such as cleaning agents is regulated by the 1990 federal Clean Air Act Amendments as well as State-adopted regulations for the chemical composition of consumer products. Given the aforementioned, project-related TAC emission impacts during operation would be less than significant.

Air Quality Threshold 4

Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (*Less Than Significant*).

As discussed previously, sensitive receptors in the project vicinity include apartments and townhomes at the Palomar Station development to the southeast (approximately 500-600 feet), single-family residences to the north (approximately 800 feet), and Palomar College to the northeast (approximately 700 feet)

Construction activities would be temporary and transitory and associated odors would cease upon construction completion. Such odors disperse rapidly with distance. Accordingly, the proposed project would not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be less than significant.

The project does not include land uses typically associated with odor complaints such as sewage treatment plants, landfills, recycling facilities, and agricultural uses.

⁵ Note "Table 2B: Scenarios 4, 5A, 5B, 6A, 6B – Urban Dispersion Coefficients" only provides concentrations and cancer risk up to 100 meters. The cancer risk at 150 meters was extrapolated using the data provided in Table 2B. The formula used as $Y(x) = Y(1) + [x - x(1)]/x(2) - x(1)] + [Y(2) - Y(1)]$

⁶ (4.8 MG/1 MG * 0.14 = 0.67 cancer risk)

As discussed previously, on-site fuel storage tanks and dispensers would be equipped with vapor recovery systems to minimize fugitive emissions of fuel vapors. Nonetheless, as no system is perfect, minor amounts of odorous fuel vapors may be released. Additionally, vehicles approaching, idling, and leaving the site may release odorous exhaust emissions. Odors of this nature disperse rapidly with distance and do not typically result in odor impacts. Additionally, as the project site is located at the intersection of two arterial roads, North Las Posas Road and West Mission Road, vehicle exhaust is already prevalent. For these reasons, operational odor impacts would be less than significant.

Greenhouse Gas Emissions

GHG Emissions Threshold 1

Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? (*Less Than Significant*).

GHG Emissions Threshold 2

Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions? (*Less Than Significant*).

As previously discussed under Local Regulations, the City of San Marcos CAP is a qualified GHG reduction plan consistent with the requirements of CEQA Guidelines Section 15183.5. Project GHG emissions would be less than significant if it can be demonstrated that the project would be consistent with the CAP and generate less GHG emissions than the General Plan land use designation for the existing site. The CAP Consistency Checklist for the project is included as Appendix B and a summary is included in the section below.

Emissions were provided for both the proposed project and the existing designation to determine if the project would generate GHG emissions equal to or less than the General Plan land use designation. If the project's GHG emissions exceed the existing designation's GHG emissions, then the impact is potentially significant and consistency with the CAP measures would need to be provided.

CAP Checklist Overview

Step 1: Land Use Consistency

Step 1 of the CAP Consistency Checklist evaluates the land use consistency of a project. If a project is consistent with the existing General Plan land use and specific/master plan or zoning designations, then the project proceeds to Step 2 of the Checklist.

However, the General Plan land use designation for the project site is MU3. The project proposes development of a food mart with a drive thru, a service station with nine fuel dispensers, and an automated car wash. MU3 is designated for commercial retail, business support services, offices, government uses, and restaurants. Therefore, the project would be inconsistent with the City's existing General Plan land use designation. According to the CAP Consistency Checklist, in this situation a comparison of GHG emissions between the proposed project and a project that would fit the existing land use designation is completed; if the project's GHG emissions exceed the emissions from the existing land use, then the project would be inconsistent with the CAP. If the project's GHG emissions do not exceed the emissions from the existing land use, then the project proceeds to Step 2 of the Checklist.

PROJECT AND EXISTING LAND USE DESIGNATION GHG EMISSIONS

Since the project is not consistent with the existing General Plan land use designation, GHG emissions were estimated for the proposed project and for a project that would fit the existing MU3 development. Note that the current project site is vacant; therefore, land use type and size were assumed using the maximum Floor Area Ratio (FAR) for a MU3 development per the City of San Marcos General Plan (i.e., a FAR of 1.5) and the parcel acreage (i.e., 1.6 acres).

The FAR is the dividend of the total development square footage divided by the square footage of the parcel. To predict the square footage of the MU3 development, the FAR of 1.5 was multiplied against the square footage of the parcel, which is approximately 68,894 square feet. As a result, the estimated MU3 development would be approximately 104,842 square feet. For the purpose of this analysis, it was then assumed that 50 percent of the MU3 development would be retail use and the other 50 percent would be office use. These land uses were assumed since MU3 development only includes nonresidential commercial and offices uses; no residential development is allowed under this designation. It was also assumed that the development would occupy half of the parcel (approximately 0.8 acre), while the other half of the parcel would be a parking lot. Therefore, the MU3 development was modeled in CalEEMod as the following land uses:

- 54,421 square feet entered in as “General Office Building” and 52,421 square feet entered as “Strip Mall” on 0.8 acre, and
- 34,947 square feet entered as “Parking Lot” on 0.8 acre

Consistent with the trip generation rates used for the project, the weekday vehicle trip generation rates from the SANDAG’s *(Not So) Brief guide of Vehicular Traffic Generation Rates for the San Diego Region* were used, specifically the standard commercial office weekday rate of 20 trips per 1,000 square feet and the specialty retail/strip commercial rate of 40 trips per 1,000 square feet (SANDAG 2002). In addition, indoor water use was reduced by 20 percent to comply with 2019 CALGreen (Part 11 of Title 24) standards.

Project-generated Greenhouse Gas Emissions

The GHG emissions from this existing land use designation model were then compared to the GHG emissions from the proposed project. Table 6 shows GHG emissions associated with the proposed project and the existing land use designation. As shown, the project would generate approximately 552 MT CO₂e per year, while the MU3 development would generate approximately 2,223 MT CO₂e per year. The project would generate 1,671 less MT CO₂e per year compared to the MU3 development. This is due to a reduction in development intensity and a reduction in vehicle trips associated with the proposed project. Therefore, the project would generate GHG emissions less than the estimated emissions generated under the existing designation and would proceed to Step 2 of the CAP Consistency Checklist.

Table 6 Project Annual Equivalent Emissions

Emission Source	Annual Proposed Project Emissions (MT CO₂e)	Annual Existing Land Use Designation Emissions (MT CO₂e)
Construction¹	9	N/A
Operational	543	2,223
Area	<1	<1
Energy	184	390
Solid Waste	13	52
Water	10	82
Mobile	337	1,699
Total Project Emissions	552	2,223
Project Net Emissions (Project – Existing Emissions)	-1,671	

MT CO₂e = Metric Tons of Carbon Dioxide Equivalent; CO₂ = Carbon Dioxide; CH₄ = Methane; N₂O = Nitrous Oxide

¹Construction emissions were estimated to be 292 MT CO₂e. Results were amortized over a 30-year period.

Source: Appendix A CalEEMod worksheets

Step 2: CAP Measures Consistency

Step 2 of the CAP Consistency Checklist evaluates a project’s implementation of applicable GHG reduction measures from the CAP.

2.1 ELECTRIC VEHICLE CHARGING STATIONS (MEASURE T-2)

This measure applies to multi-family residential and non-residential projects. Where applicable, projects shall install electric vehicle charging stations (Level 2 or better) in at least five percent of the total parking spaces provided on-site.

The project would include 59 on-site parking spaces; five percent of this amount would equate to three spaces. The project would comply with this requirement by providing three electric vehicle charging stations parking spaces which are proposed to be Level 2 chargers.

2.2 BICYCLE INFRASTRUCTURE (MEASURE T-8)

This measure applies to residential and non-residential projects which would either propose intersection or roadway improvements or the City’s General Plan Mobility Element identifies bicycle infrastructure improvements at an intersection or roadway segment improved as part of the project.

This measure would not be applicable to the project because the project does not propose any intersection or roadway segment improvements.

2.3 TRANSPORTATION DEMAND MANAGEMENT (MEASURE T-9)

This measure applies to multi-family residential and non-residential projects that would be subject to the City’s TDM Ordinance. Where applicable, projects shall develop and implement a TDM Plan.

This measure was developed based on a 1-2% application rate. Thus 1-2% of the total tenant-occupants are subject to comply. If the 1-2% application rate results in less than 1 tenant-occupant then this measure would not be applicable. The project is anticipated to have approximately 20

employees. 1-2% of 20 employees would represent less than half an employee. Therefore, measures such as providing discounted transit passes or bicycle spaces would not see adoption of at least one employee. The project does provide a vanpool parking space and pedestrian connections to external streets. In addition, a retail type use is not coherent with telecommuting.

2.4 REDUCE PARKING NEAR TRANSIT (MEASURE T-12)

This measure applies to multi-family residential projects which would be located within one half-mile of a major transit stop. Where applicable, projects shall provide at least 27 percent fewer parking spaces than required based on the City's municipal code parking requirements.

This measure would not be applicable because the project proposes non-residential uses.

2.5 WATER HEATERS (MEASURE E-L)

This measure applies to residential projects. Where applicable, projects shall install one, or a combination of, specified water heater types.

This measure would not be applicable because the project proposes non-residential uses.

2.6 PHOTOVOLTAIC INSTALLATION (MEASURE E-2L)

This measure applies to non-residential projects. Where applicable, projects shall install photovoltaic systems with a minimum capacity of two watts per square foot of gross floor area.

The project proposes a 5,000 square foot food mart; a 3,000 square foot car wash; and a 6,192 square foot gas station canopy. Consistency with this item would require a photovoltaic system with a capacity of approximately 28.4 kW. The project would comply with this item through installation of solar panels with a rated capacity of at least 28.4 kW.

2.7 LANDSCAPING WATER USE (MEASURE W-L)

This measure applies to residential and non-residential projects which are subject to the City's Water Efficient Landscape Ordinance. Where applicable, projects shall comply with the Water Efficient Landscape Ordinance.

The project would comply with the City's Water Efficient Landscape Ordinance; the project's estimated total water use is 154,563 gallons per year, while the maximum applied water allowance is 197,067 gallons per year.

2.8 URBAN TREE CANOPY (MEASURE C-2)

This measure applies to single-family residential projects and to multi-family and non-residential projects which provide more than 10 parking spaces. Where applicable, single family residential projects shall plant one tree per unit and multi-family and non-residential projects shall provide one tree per five parking spaces.

The project would include 59 on-site parking spaces; one tree per five spaces would equate to 12 trees. The project would include 49 total trees, which would exceed the requirements of Measure T 2. Proposed trees include 14 Art's Seedless Dessert Willows, 12 Shoestring Acacias, 9 Engelmann Oaks, 6 Desert Museum Palo Verde, 4 Guadalupe Palms, and 4 Cootamura Wattles.

Conclusions

As demonstrated above, the proposed project would not generate greater GHG emissions than the existing land use designation and would therefore be consistent with Step 1 of the CAP Consistency Checklist. In addition, the project would be consistent with all applicable GHG reduction measures contained in Step 2 of the CAP Consistency Checklist. Therefore, the project's incremental contribution to a global climate would be less than significant and the project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

3 Conclusions

3.1 Air Quality Summary

As shown in Table 4 and Table 5, project construction and operational emissions would not exceed applicable screening level thresholds for all criteria pollutants. The project's GHG emissions would also be less than the current land use designation since the project is a less intensive use and would generate fewer trips (see Table 6). Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant and would be consistent with RAQS growth projections. The project's criteria pollutant emissions impacts would be less than significant.

The project would generate TAC emissions including DPM exhaust emissions associated with use of heavy-duty diesel construction equipment, exhaust from vehicles idling during operation of the automotive fuel station, as well as fugitive fuel vapors from fuel dispensers. As discussed under Air Quality Threshold 3, health risks at the nearest sensitive receptors resulting from construction and operation of the project would be well below applicable thresholds. Thus, impacts from the project's TAC emissions would be less than significant.

The project does not include land uses typically associated with odor complaints such as sewage treatment plants, landfills, recycling facilities, and agricultural uses. During construction, the project would temporarily generate diesel exhaust odors from use of heavy-duty equipment and during operation the project would generate vehicle exhaust and fugitive fuel vapors may be released. These types of odors dissipate quickly with distance and do not typically result in odor impacts. Additionally, as the project site is located at the intersection of two arterial roads, West Mission Road and North Las Posas Road, vehicle exhaust is already prevalent. For these reasons, operational odor impacts would be less than significant.

As detailed above, construction and operation of the project would not result in significant air quality impacts.

3.2 Greenhouse Gas Emissions Summary

The project would result in an overall GHG emissions of 552 MT CO₂e per year. The majority of these emissions would result from vehicle trips to and from the site.

The City of San Marcos has adopted a CAP that meets the requirements under CEQA Guidelines Section 15183.5 for a qualified GHG reduction plan. Therefore, this project-level analysis is streamlined by tiering off the San Marcos CAP. As demonstrated through preparation of the CAP Consistency Checklist, the project would (1) emit less GHG emissions than the existing land use designation and (2) be consistent with the CAP. Therefore, the project's incremental contribution to a global climate would be less than significant and the project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

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Appendix A

California Emission Estimator Model (CalEEMod) Outputs

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

200 N Las Posas Rd

San Diego County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	55.50	1000sqft	0.00	55,500.00	0
Other Non-Asphalt Surfaces	14.72	1000sqft	0.00	14,720.00	0
Parking Lot	59.00	Space	0.00	23,600.00	0
Automobile Care Center	3.00	1000sqft	0.00	3,000.00	0
Convenience Market with Gas Pumps	5.00	1000sqft	1.76	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	539.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project located in San Marcos > SDAPCD. Applicant provided start date: Q2 2023.

Land Use - 5,000 sf food mart with drive thru and gas station modeled as convience market, 3000 sf car wash modeled as automobile care center. Pervious/impervious square footage from site plan

Construction Phase - Default construction schedule; no demolition since existiting lot is vacant

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Default construction equipment

Trips and VMT -

Grading - net import estimates from site plan 'preliminary grading plan'

Architectural Coating -

Vehicle Trips - Traffic accounts for gas station, food mart, and car wash trips. Project-specific trip rates based on SANDAG trip generation rates. 1674 trips/5.0 ksf = 334.87

Area Coating -

Energy Use - Car wash specific energy use (3000 sf car wash). 377,715 kWh per year and 1,329,132 kBtu per year.

Water And Wastewater - Car wash specific use - 2,104,000 gal/yr

Solid Waste -

Construction Off-road Equipment Mitigation - Water exposed 2x day

Water Mitigation - T24 20% reduction for indoor water use

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	4.27	125.91
tblEnergyUse	NT24NG	7.25	443.04
tblEnergyUse	T24E	1.08	0.00
tblEnergyUse	T24NG	4.27	0.00
tblGrading	MaterialImported	0.00	7,961.00
tblLandUse	LotAcreage	1.27	0.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	0.53	0.00
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.11	1.76
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	624.20	334.80
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	624.20	334.80
tblVehicleTrips	WD_TR	23.72	0.00

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	624.20	334.80
tblWater	IndoorWaterUseRate	282,243.32	2,104,000.00
tblWater	OutdoorWaterUseRate	172,987.84	0.00

2.0 Emissions Summary

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	1.9237	47.0246	17.8832	0.1702	11.7951	0.8810	12.6761	4.6814	0.8206	5.5020	0.0000	18,519.17 39	18,519.17 39	1.4764	2.6177	19,336.15 45
2024	25.2639	11.8518	13.7181	0.0284	0.4602	0.4568	0.9170	0.1247	0.4407	0.5653	0.0000	2,675.295 9	2,675.295 9	0.4138	0.0606	2,702.181 7
Maximum	25.2639	47.0246	17.8832	0.1702	11.7951	0.8810	12.6761	4.6814	0.8206	5.5020	0.0000	18,519.17 39	18,519.17 39	1.4764	2.6177	19,336.15 45

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					
2023	1.9237	47.0246	17.8832	0.1702	7.7459	0.8810	8.6268	2.7745	0.8206	3.5951	0.0000	18,519.17 39	18,519.17 39	1.4764	2.6177	19,336.15 45
2024	25.2639	11.8518	13.7181	0.0284	0.4602	0.4568	0.9170	0.1247	0.4407	0.5653	0.0000	2,675.295 9	2,675.295 9	0.4138	0.0606	2,702.181 7
Maximum	25.2639	47.0246	17.8832	0.1702	7.7459	0.8810	8.6268	2.7745	0.8206	3.5951	0.0000	18,519.17 39	18,519.17 39	1.4764	2.6177	19,336.15 45

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	33.04	0.00	29.79	39.68	0.00	31.43	0.00	0.00	0.00	0.00	0.00	0.00

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Energy	0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477
Mobile	2.9092	1.6958	14.1999	0.0198	1.8903	0.0188	1.9091	0.5035	0.0175	0.5210		2,052.3838	2,052.3838	0.2670	0.1509	2,104.0174
Total	3.2232	2.0559	14.5163	0.0220	1.8903	0.0462	1.9365	0.5035	0.0449	0.5484		2,484.3945	2,484.3945	0.2753	0.1588	2,538.5971

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Energy	0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477
Mobile	2.9092	1.6958	14.1999	0.0198	1.8903	0.0188	1.9091	0.5035	0.0175	0.5210		2,052.3838	2,052.3838	0.2670	0.1509	2,104.0174
Total	3.2232	2.0559	14.5163	0.0220	1.8903	0.0462	1.9365	0.5035	0.0449	0.5484		2,484.3945	2,484.3945	0.2753	0.1588	2,538.5971

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2023	4/4/2023	5	2	
2	Grading	Grading	4/5/2023	4/10/2023	5	4	
3	Building Construction	Building Construction	4/11/2023	1/15/2024	5	200	
4	Paving	Paving	1/16/2024	1/29/2024	5	10	
5	Architectural Coating	Architectural Coating	1/30/2024	2/12/2024	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,000; Non-Residential Outdoor: 4,000; Striped Parking Area: 5,629 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	995.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	42.00	17.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084		942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.5303	0.2266	0.7568	0.0573	0.2084	0.2657		942.4317	942.4317	0.3048		950.0517

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	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
Worker	0.0137	8.4900e-003	0.1203	3.6000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		37.1427	37.1427	9.9000e-004	9.1000e-004	37.4400
Total	0.0137	8.4900e-003	0.1203	3.6000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		37.1427	37.1427	9.9000e-004	9.1000e-004	37.4400

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084	0.0000	942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.2386	0.2266	0.4652	0.0258	0.2084	0.2342	0.0000	942.4317	942.4317	0.3048		950.0517

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	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
Worker	0.0137	8.4900e-003	0.1203	3.6000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		37.1427	37.1427	9.9000e-004	9.1000e-004	37.4400
Total	0.0137	8.4900e-003	0.1203	3.6000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		37.1427	37.1427	9.9000e-004	9.1000e-004	37.4400

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

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					7.3623	0.0000	7.3623	3.4671	0.0000	3.4671			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	7.3623	0.6044	7.9666	3.4671	0.5560	4.0231		1,995.6147	1,995.6147	0.6454		2,011.7503

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	0.5633	32.5400	8.9388	0.1488	4.3507	0.2762	4.6269	1.1925	0.2642	1.4568		16,449.2738	16,449.2738	0.8290	2.6159	17,249.5242
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
Worker	0.0274	0.0170	0.2406	7.3000e-004	0.0822	4.4000e-004	0.0826	0.0218	4.1000e-004	0.0222		74.2854	74.2854	1.9900e-003	1.8300e-003	74.8801
Total	0.5907	32.5570	9.1794	0.1496	4.4328	0.2766	4.7095	1.2143	0.2646	1.4790		16,523.5592	16,523.5592	0.8310	2.6177	17,324.4042

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3130	0.0000	3.3130	1.5602	0.0000	1.5602			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	3.3130	0.6044	3.9174	1.5602	0.5560	2.1162	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503

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	0.5633	32.5400	8.9388	0.1488	4.3507	0.2762	4.6269	1.1925	0.2642	1.4568		16,449.2738	16,449.2738	0.8290	2.6159	17,249.5242
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
Worker	0.0274	0.0170	0.2406	7.3000e-004	0.0822	4.4000e-004	0.0826	0.0218	4.1000e-004	0.0222		74.2854	74.2854	1.9900e-003	1.8300e-003	74.8801
Total	0.5907	32.5570	9.1794	0.1496	4.4328	0.2766	4.7095	1.2143	0.2646	1.4790		16,523.5592	16,523.5592	0.8310	2.6177	17,324.4042

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

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	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858

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	0.0000
Vendor	0.0203	0.7288	0.2626	3.4800e-003	0.1151	4.4400e-003	0.1196	0.0332	4.2500e-003	0.0374		375.7798	375.7798	0.0114	0.0544	392.2787
Worker	0.1149	0.0713	1.0107	3.0500e-003	0.3450	1.8600e-003	0.3469	0.0915	1.7100e-003	0.0932		311.9985	311.9985	8.3500e-003	7.6800e-003	314.4963
Total	0.1352	0.8001	1.2733	6.5300e-003	0.4602	6.3000e-003	0.4665	0.1247	5.9600e-003	0.1306		687.7783	687.7783	0.0197	0.0621	706.7751

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

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	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858

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	0.0000
Vendor	0.0203	0.7288	0.2626	3.4800e-003	0.1151	4.4400e-003	0.1196	0.0332	4.2500e-003	0.0374		375.7798	375.7798	0.0114	0.0544	392.2787
Worker	0.1149	0.0713	1.0107	3.0500e-003	0.3450	1.8600e-003	0.3469	0.0915	1.7100e-003	0.0932		311.9985	311.9985	8.3500e-003	7.6800e-003	314.4963
Total	0.1352	0.8001	1.2733	6.5300e-003	0.4602	6.3000e-003	0.4665	0.1247	5.9600e-003	0.1306		687.7783	687.7783	0.0197	0.0621	706.7751

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

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	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563

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	0.0000
Vendor	0.0196	0.7238	0.2565	3.4200e-003	0.1151	4.4600e-003	0.1196	0.0332	4.2700e-003	0.0374		369.2282	369.2282	0.0117	0.0535	385.4500
Worker	0.1079	0.0642	0.9445	2.9500e-003	0.3450	1.7700e-003	0.3468	0.0915	1.6300e-003	0.0931		304.1463	304.1463	7.6000e-003	7.1800e-003	306.4755
Total	0.1274	0.7879	1.2010	6.3700e-003	0.4602	6.2300e-003	0.4664	0.1247	5.9000e-003	0.1306		673.3745	673.3745	0.0193	0.0606	691.9255

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

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	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563

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	0.0000
Vendor	0.0196	0.7238	0.2565	3.4200e-003	0.1151	4.4600e-003	0.1196	0.0332	4.2700e-003	0.0374		369.2282	369.2282	0.0117	0.0535	385.4500
Worker	0.1079	0.0642	0.9445	2.9500e-003	0.3450	1.7700e-003	0.3468	0.0915	1.6300e-003	0.0931		304.1463	304.1463	7.6000e-003	7.1800e-003	306.4755
Total	0.1274	0.7879	1.2010	6.3700e-003	0.4602	6.2300e-003	0.4664	0.1247	5.9000e-003	0.1306		673.3745	673.3745	0.0193	0.0606	691.9255

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547

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	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
Worker	0.0334	0.0199	0.2923	9.1000e-004	0.1068	5.5000e-004	0.1073	0.0283	5.0000e-004	0.0288		94.1405	94.1405	2.3500e-003	2.2200e-003	94.8615
Total	0.0334	0.0199	0.2923	9.1000e-004	0.1068	5.5000e-004	0.1073	0.0283	5.0000e-004	0.0288		94.1405	94.1405	2.3500e-003	2.2200e-003	94.8615

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547

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	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
Worker	0.0334	0.0199	0.2923	9.1000e-004	0.1068	5.5000e-004	0.1073	0.0283	5.0000e-004	0.0288		94.1405	94.1405	2.3500e-003	2.2200e-003	94.8615
Total	0.0334	0.0199	0.2923	9.1000e-004	0.1068	5.5000e-004	0.1073	0.0283	5.0000e-004	0.0288		94.1405	94.1405	2.3500e-003	2.2200e-003	94.8615

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

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	25.0626					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	25.2434	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

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	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
Worker	0.0206	0.0122	0.1799	5.6000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.1000e-004	0.0177		57.9326	57.9326	1.4500e-003	1.3700e-003	58.3763
Total	0.0206	0.0122	0.1799	5.6000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.1000e-004	0.0177		57.9326	57.9326	1.4500e-003	1.3700e-003	58.3763

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

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	25.0626					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	25.2434	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

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	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
Worker	0.0206	0.0122	0.1799	5.6000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.1000e-004	0.0177		57.9326	57.9326	1.4500e-003	1.3700e-003	58.3763
Total	0.0206	0.0122	0.1799	5.6000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.1000e-004	0.0177		57.9326	57.9326	1.4500e-003	1.3700e-003	58.3763

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9092	1.6958	14.1999	0.0198	1.8903	0.0188	1.9091	0.5035	0.0175	0.5210		2,052.3838	2,052.3838	0.2670	0.1509	2,104.0174
Unmitigated	2.9092	1.6958	14.1999	0.0198	1.8903	0.0188	1.9091	0.5035	0.0175	0.5210		2,052.3838	2,052.3838	0.2670	0.1509	2,104.0174

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Convenience Market with Gas Pumps	1,674.00	1,674.00	1,674.00	897,941	897,941
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		
Total	1,674.00	1,674.00	1,674.00	897,941	897,941

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
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Convenience Market with Gas Pumps	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Other Asphalt Surfaces	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Other Non-Asphalt Surfaces	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477
NaturalGas Unmitigated	0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477

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					
Automobile Care Center	3641.42	0.0393	0.3570	0.2999	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.4029	428.4029	8.2100e-003	7.8500e-003	430.9487
Convenience Market with Gas Pumps	30.411	3.3000e-004	2.9800e-003	2.5000e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		3.5778	3.5778	7.0000e-005	7.0000e-005	3.5990
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
Total		0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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					
Automobile Care Center	3.64142	0.0393	0.3570	0.2999	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.4029	428.4029	8.2100e-003	7.8500e-003	430.9487
Convenience Market with Gas Pumps	0.030411	3.3000e-004	2.9800e-003	2.5000e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		3.5778	3.5778	7.0000e-005	7.0000e-005	3.5990
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
Total		0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477

6.0 Area Detail

6.1 Mitigation Measures Area

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Unmitigated	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320

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	0.0687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2044					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2900e-003	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Total	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2044					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2900e-003	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Total	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

200 N Las Posas Rd - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**200 N Las Posas Rd
San Diego County APCD Air District, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	55.50	1000sqft	0.00	55,500.00	0
Other Non-Asphalt Surfaces	14.72	1000sqft	0.00	14,720.00	0
Parking Lot	59.00	Space	0.00	23,600.00	0
Automobile Care Center	3.00	1000sqft	0.00	3,000.00	0
Convenience Market with Gas Pumps	5.00	1000sqft	1.76	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	539.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project located in San Marcos > SDAPCD. Applicant provided start date: Q2 2023.

Land Use - 5,000 sf food mart with drive thru and gas station modeled as convience market, 3000 sf car wash modeled as automobile care center. Pervious/impervious square footage from site plan

Construction Phase - Default construction schedule; no demolition since existings lot is vacant

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Default construction equipment

Trips and VMT -

Grading - net import estimates from site plan 'preliminary grading plan'

Architectural Coating -

Vehicle Trips - Traffic accounts for gas station, food mart, and car wash trips. Project-specific trip rates based on SANDAG trip generation rates. 1674 trips/5.0 ksf = 334.87

Area Coating -

Energy Use - Car wash specific energy use (3000 sf car wash). 377,715 kWh per year and 1,329,132 kBtu per year.

Water And Wastewater - Car wash specific use - 2,104,000 gal/yr

Solid Waste -

Construction Off-road Equipment Mitigation - Water exposed 2x day

Water Mitigation - T24 20% reduction for indoor water use

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	4.27	125.91
tblEnergyUse	NT24NG	7.25	443.04
tblEnergyUse	T24E	1.08	0.00
tblEnergyUse	T24NG	4.27	0.00
tblGrading	MaterialImported	0.00	7,961.00
tblLandUse	LotAcreage	1.27	0.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	0.53	0.00
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.11	1.76
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	624.20	334.80
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	624.20	334.80
tblVehicleTrips	WD_TR	23.72	0.00

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	624.20	334.80
tblWater	IndoorWaterUseRate	282,243.32	2,104,000.00
tblWater	OutdoorWaterUseRate	172,987.84	0.00

2.0 Emissions Summary

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	1.8923	48.3392	17.9826	0.1703	11.7951	0.8815	12.6766	4.6814	0.8211	5.5026	0.0000	18,531.07 49	18,531.07 49	1.4746	2.6205	19,348.84 26
2024	25.2657	11.8903	13.6808	0.0283	0.4602	0.4568	0.9170	0.1247	0.4407	0.5654	0.0000	2,659.154 7	2,659.154 7	0.4140	0.0613	2,686.262 8
Maximum	25.2657	48.3392	17.9826	0.1703	11.7951	0.8815	12.6766	4.6814	0.8211	5.5026	0.0000	18,531.07 49	18,531.07 49	1.4746	2.6205	19,348.84 26

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					
2023	1.8923	48.3392	17.9826	0.1703	7.7459	0.8815	8.6274	2.7745	0.8211	3.5957	0.0000	18,531.07 49	18,531.07 49	1.4746	2.6205	19,348.84 26
2024	25.2657	11.8903	13.6808	0.0283	0.4602	0.4568	0.9170	0.1247	0.4407	0.5654	0.0000	2,659.154 7	2,659.154 7	0.4140	0.0613	2,686.262 8
Maximum	25.2657	48.3392	17.9826	0.1703	7.7459	0.8815	8.6274	2.7745	0.8211	3.5957	0.0000	18,531.07 49	18,531.07 49	1.4746	2.6205	19,348.84 26

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	33.04	0.00	29.79	39.68	0.00	31.43	0.00	0.00	0.00	0.00	0.00	0.00

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Energy	0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477
Mobile	2.7463	1.8566	16.0676	0.0191	1.8903	0.0189	1.9091	0.5035	0.0175	0.5211		1,974.9457	1,974.9457	0.3013	0.1617	2,030.6526
Total	3.0603	2.2167	16.3840	0.0212	1.8903	0.0463	1.9365	0.5035	0.0449	0.5485		2,406.9564	2,406.9564	0.3096	0.1696	2,465.2323

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Energy	0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477
Mobile	2.7463	1.8566	16.0676	0.0191	1.8903	0.0189	1.9091	0.5035	0.0175	0.5211		1,974.9457	1,974.9457	0.3013	0.1617	2,030.6526
Total	3.0603	2.2167	16.3840	0.0212	1.8903	0.0463	1.9365	0.5035	0.0449	0.5485		2,406.9564	2,406.9564	0.3096	0.1696	2,465.2323

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2023	4/4/2023	5	2	
2	Grading	Grading	4/5/2023	4/10/2023	5	4	
3	Building Construction	Building Construction	4/11/2023	1/15/2024	5	200	
4	Paving	Paving	1/16/2024	1/29/2024	5	10	
5	Architectural Coating	Architectural Coating	1/30/2024	2/12/2024	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,000; Non-Residential Outdoor: 4,000; Striped Parking Area: 5,629 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	995.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	42.00	17.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084		942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.5303	0.2266	0.7568	0.0573	0.2084	0.2657		942.4317	942.4317	0.3048		950.0517

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	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
Worker	0.0148	9.5500e-003	0.1143	3.4000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		35.1010	35.1010	1.0600e-003	9.9000e-004	35.4222
Total	0.0148	9.5500e-003	0.1143	3.4000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		35.1010	35.1010	1.0600e-003	9.9000e-004	35.4222

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084	0.0000	942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.2386	0.2266	0.4652	0.0258	0.2084	0.2342	0.0000	942.4317	942.4317	0.3048		950.0517

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	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
Worker	0.0148	9.5500e-003	0.1143	3.4000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		35.1010	35.1010	1.0600e-003	9.9000e-004	35.4222
Total	0.0148	9.5500e-003	0.1143	3.4000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		35.1010	35.1010	1.0600e-003	9.9000e-004	35.4222

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

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					7.3623	0.0000	7.3623	3.4671	0.0000	3.4671			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	7.3623	0.6044	7.9666	3.4671	0.5560	4.0231		1,995.6147	1,995.6147	0.6454		2,011.7503

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	0.5296	33.8525	9.0502	0.1490	4.3507	0.2767	4.6274	1.1925	0.2647	1.4573		16,465.2582	16,465.2582	0.8270	2.6185	17,266.2479
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
Worker	0.0297	0.0191	0.2287	6.9000e-004	0.0822	4.4000e-004	0.0826	0.0218	4.1000e-004	0.0222		70.2020	70.2020	2.1200e-003	1.9800e-003	70.8444
Total	0.5592	33.8716	9.2789	0.1497	4.4328	0.2771	4.7100	1.2143	0.2651	1.4795		16,535.4602	16,535.4602	0.8291	2.6205	17,337.0923

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3130	0.0000	3.3130	1.5602	0.0000	1.5602			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	3.3130	0.6044	3.9174	1.5602	0.5560	2.1162	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503

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	0.5296	33.8525	9.0502	0.1490	4.3507	0.2767	4.6274	1.1925	0.2647	1.4573		16,465.2582	16,465.2582	0.8270	2.6185	17,266.2479
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
Worker	0.0297	0.0191	0.2287	6.9000e-004	0.0822	4.4000e-004	0.0826	0.0218	4.1000e-004	0.0222		70.2020	70.2020	2.1200e-003	1.9800e-003	70.8444
Total	0.5592	33.8716	9.2789	0.1497	4.4328	0.2771	4.7100	1.2143	0.2651	1.4795		16,535.4602	16,535.4602	0.8291	2.6205	17,337.0923

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

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	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858

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	0.0000
Vendor	0.0197	0.7594	0.2706	3.4900e-003	0.1151	4.4600e-003	0.1196	0.0332	4.2700e-003	0.0374		376.3141	376.3141	0.0113	0.0545	392.8495
Worker	0.1245	0.0802	0.9604	2.8800e-003	0.3450	1.8600e-003	0.3469	0.0915	1.7100e-003	0.0932		294.8485	294.8485	8.9000e-003	8.3100e-003	297.5466
Total	0.1443	0.8396	1.2309	6.3700e-003	0.4602	6.3200e-003	0.4665	0.1247	5.9800e-003	0.1306		671.1626	671.1626	0.0202	0.0629	690.3961

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

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	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858

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	0.0000
Vendor	0.0197	0.7594	0.2706	3.4900e-003	0.1151	4.4600e-003	0.1196	0.0332	4.2700e-003	0.0374		376.3141	376.3141	0.0113	0.0545	392.8495
Worker	0.1245	0.0802	0.9604	2.8800e-003	0.3450	1.8600e-003	0.3469	0.0915	1.7100e-003	0.0932		294.8485	294.8485	8.9000e-003	8.3100e-003	297.5466
Total	0.1443	0.8396	1.2309	6.3700e-003	0.4602	6.3200e-003	0.4665	0.1247	5.9800e-003	0.1306		671.1626	671.1626	0.0202	0.0629	690.3961

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

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	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563

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	0.0000
Vendor	0.0190	0.7543	0.2644	3.4200e-003	0.1151	4.4800e-003	0.1196	0.0332	4.2900e-003	0.0374		369.7682	369.7682	0.0116	0.0536	386.0255
Worker	0.1173	0.0722	0.8992	2.7900e-003	0.3450	1.7700e-003	0.3468	0.0915	1.6300e-003	0.0931		287.4651	287.4651	8.1100e-003	7.7600e-003	289.9810
Total	0.1362	0.8265	1.1636	6.2100e-003	0.4602	6.2500e-003	0.4664	0.1247	5.9200e-003	0.1306		657.2333	657.2333	0.0197	0.0613	676.0066

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

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	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563

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	0.0000
Vendor	0.0190	0.7543	0.2644	3.4200e-003	0.1151	4.4800e-003	0.1196	0.0332	4.2900e-003	0.0374		369.7682	369.7682	0.0116	0.0536	386.0255
Worker	0.1173	0.0722	0.8992	2.7900e-003	0.3450	1.7700e-003	0.3468	0.0915	1.6300e-003	0.0931		287.4651	287.4651	8.1100e-003	7.7600e-003	289.9810
Total	0.1362	0.8265	1.1636	6.2100e-003	0.4602	6.2500e-003	0.4664	0.1247	5.9200e-003	0.1306		657.2333	657.2333	0.0197	0.0613	676.0066

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547

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	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
Worker	0.0363	0.0223	0.2783	8.6000e-004	0.1068	5.5000e-004	0.1073	0.0283	5.0000e-004	0.0288		88.9773	88.9773	2.5100e-003	2.4000e-003	89.7560
Total	0.0363	0.0223	0.2783	8.6000e-004	0.1068	5.5000e-004	0.1073	0.0283	5.0000e-004	0.0288		88.9773	88.9773	2.5100e-003	2.4000e-003	89.7560

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547

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	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
Worker	0.0363	0.0223	0.2783	8.6000e-004	0.1068	5.5000e-004	0.1073	0.0283	5.0000e-004	0.0288		88.9773	88.9773	2.5100e-003	2.4000e-003	89.7560
Total	0.0363	0.0223	0.2783	8.6000e-004	0.1068	5.5000e-004	0.1073	0.0283	5.0000e-004	0.0288		88.9773	88.9773	2.5100e-003	2.4000e-003	89.7560

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

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	25.0626					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	25.2434	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

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	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
Worker	0.0223	0.0137	0.1713	5.3000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.1000e-004	0.0177		54.7553	54.7553	1.5500e-003	1.4800e-003	55.2345
Total	0.0223	0.0137	0.1713	5.3000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.1000e-004	0.0177		54.7553	54.7553	1.5500e-003	1.4800e-003	55.2345

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

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	25.0626					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	25.2434	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

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	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
Worker	0.0223	0.0137	0.1713	5.3000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.1000e-004	0.0177		54.7553	54.7553	1.5500e-003	1.4800e-003	55.2345
Total	0.0223	0.0137	0.1713	5.3000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.1000e-004	0.0177		54.7553	54.7553	1.5500e-003	1.4800e-003	55.2345

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7463	1.8566	16.0676	0.0191	1.8903	0.0189	1.9091	0.5035	0.0175	0.5211		1,974.9457	1,974.9457	0.3013	0.1617	2,030.6526
Unmitigated	2.7463	1.8566	16.0676	0.0191	1.8903	0.0189	1.9091	0.5035	0.0175	0.5211		1,974.9457	1,974.9457	0.3013	0.1617	2,030.6526

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Convenience Market with Gas Pumps	1,674.00	1,674.00	1,674.00	897,941	897,941
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		
Total	1,674.00	1,674.00	1,674.00	897,941	897,941

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
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Convenience Market with Gas Pumps	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Other Asphalt Surfaces	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Other Non-Asphalt Surfaces	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477
NaturalGas Unmitigated	0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477

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					
Automobile Care Center	3641.42	0.0393	0.3570	0.2999	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.4029	428.4029	8.2100e-003	7.8500e-003	430.9487
Convenience Market with Gas Pumps	30.411	3.3000e-004	2.9800e-003	2.5000e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		3.5778	3.5778	7.0000e-005	7.0000e-005	3.5990
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
Total		0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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					
Automobile Care Center	3.64142	0.0393	0.3570	0.2999	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.4029	428.4029	8.2100e-003	7.8500e-003	430.9487
Convenience Market with Gas Pumps	0.030411	3.3000e-004	2.9800e-003	2.5000e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		3.5778	3.5778	7.0000e-005	7.0000e-005	3.5990
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
Total		0.0396	0.3600	0.3024	2.1600e-003		0.0274	0.0274		0.0274	0.0274		431.9807	431.9807	8.2800e-003	7.9200e-003	434.5477

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Unmitigated	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320

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	0.0687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2044					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2900e-003	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Total	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2044					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2900e-003	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320
Total	0.2744	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0300	0.0300	8.0000e-005		0.0320

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

200 N Las Posas Rd - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**200 N Las Posas Rd
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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	55.50	1000sqft	0.00	55,500.00	0
Other Non-Asphalt Surfaces	14.72	1000sqft	0.00	14,720.00	0
Parking Lot	59.00	Space	0.00	23,600.00	0
Automobile Care Center	3.00	1000sqft	0.00	3,000.00	0
Convenience Market with Gas Pumps	5.00	1000sqft	1.76	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	539.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project located in San Marcos > SDAPCD. Applicant provided start date: Q2 2023.

Land Use - 5,000 sf food mart with drive thru and gas station modeled as convenience market, 3000 sf car wash modeled as automobile care center. Pervious/impervious square footage from site plan

Construction Phase - Default construction schedule; no demolition since existing lot is vacant

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Default construction equipment

Trips and VMT -

Grading - net import estimates from site plan 'preliminary grading plan'

Architectural Coating -

Vehicle Trips - Traffic accounts for gas station, food mart, and car wash trips. Project-specific trip rates based on SANDAG trip generation rates. 1674 trips/5.0 ksf = 334.87

Area Coating -

Energy Use - Car wash specific energy use (3000 sf car wash). 377,715 kWh per year and 1,329,132 kBtu per year.

Water And Wastewater - Car wash specific use - 2,104,000 gal/yr

Solid Waste -

Construction Off-road Equipment Mitigation - Water exposed 2x day

Water Mitigation - T24 20% reduction for indoor water use

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	4.27	125.91
tblEnergyUse	NT24NG	7.25	443.04
tblEnergyUse	T24E	1.08	0.00
tblEnergyUse	T24NG	4.27	0.00
tblGrading	MaterialImported	0.00	7,961.00
tblLandUse	LotAcreage	1.27	0.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	0.53	0.00
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.11	1.76
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	624.20	334.80
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	624.20	334.80
tblVehicleTrips	WD_TR	23.72	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	624.20	334.80
tblWater	IndoorWaterUseRate	282,243.32	2,104,000.00
tblWater	OutdoorWaterUseRate	172,987.84	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	0.1609	1.2881	1.3475	3.0400e-003	0.0665	0.0512	0.1177	0.0209	0.0494	0.0703	0.0000	263.8403	263.8403	0.0338	0.0101	267.7033
2024	0.1381	0.1009	0.1306	2.5000e-004	3.3200e-003	4.2300e-003	7.5400e-003	9.0000e-004	4.0300e-003	4.9200e-003	0.0000	21.1004	21.1004	3.7200e-003	3.2000e-004	21.2895
Maximum	0.1609	1.2881	1.3475	3.0400e-003	0.0665	0.0512	0.1177	0.0209	0.0494	0.0703	0.0000	263.8403	263.8403	0.0338	0.0101	267.7033

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					
2023	0.1609	1.2881	1.3475	3.0400e-003	0.0581	0.0512	0.1093	0.0171	0.0494	0.0664	0.0000	263.8401	263.8401	0.0338	0.0101	267.7031
2024	0.1381	0.1009	0.1306	2.5000e-004	3.3200e-003	4.2300e-003	7.5400e-003	9.0000e-004	4.0300e-003	4.9200e-003	0.0000	21.1004	21.1004	3.7200e-003	3.2000e-004	21.2895
Maximum	0.1609	1.2881	1.3475	3.0400e-003	0.0581	0.0512	0.1093	0.0171	0.0494	0.0664	0.0000	263.8401	263.8401	0.0338	0.0101	267.7031

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	12.02	0.00	6.70	17.60	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	4-1-2023	6-30-2023	0.5244	0.5244
2	7-1-2023	9-30-2023	0.4655	0.4655
3	10-1-2023	12-31-2023	0.4671	0.4671
4	1-1-2024	3-31-2024	0.2372	0.2372
		Highest	0.5244	0.5244

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	0.0500	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4500e-003	2.4500e-003	1.0000e-005	0.0000	2.6100e-003
Energy	7.2300e-003	0.0657	0.0552	3.9000e-004		4.9900e-003	4.9900e-003		4.9900e-003	4.9900e-003	0.0000	183.1048	183.1048	8.1900e-003	2.1400e-003	183.9466
Mobile	0.4877	0.3308	2.8016	3.4800e-003	0.3359	3.4200e-003	0.3393	0.0897	3.1800e-003	0.0928	0.0000	327.4943	327.4943	0.0480	0.0262	336.5033
Waste						0.0000	0.0000		0.0000	0.0000	5.3772	0.0000	5.3772	0.3178	0.0000	13.3219
Water						0.0000	0.0000		0.0000	0.0000	0.7850	8.5090	9.2941	0.0812	1.9700e-003	11.9088
Total	0.5449	0.3965	2.8580	3.8700e-003	0.3359	8.4100e-003	0.3443	0.0897	8.1700e-003	0.0978	6.1622	519.1106	525.2729	0.4552	0.0303	545.6832

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0500	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4500e-003	2.4500e-003	1.0000e-005	0.0000	2.6100e-003
Energy	7.2300e-003	0.0657	0.0552	3.9000e-004		4.9900e-003	4.9900e-003		4.9900e-003	4.9900e-003	0.0000	183.1048	183.1048	8.1900e-003	2.1400e-003	183.9466
Mobile	0.4877	0.3308	2.8016	3.4800e-003	0.3359	3.4200e-003	0.3393	0.0897	3.1800e-003	0.0928	0.0000	327.4943	327.4943	0.0480	0.0262	336.5033
Waste						0.0000	0.0000		0.0000	0.0000	5.3772	0.0000	5.3772	0.3178	0.0000	13.3219
Water						0.0000	0.0000		0.0000	0.0000	0.6280	6.9308	7.5588	0.0649	1.5700e-003	9.6511
Total	0.5449	0.3965	2.8580	3.8700e-003	0.3359	8.4100e-003	0.3443	0.0897	8.1700e-003	0.0978	6.0052	517.5324	523.5376	0.4389	0.0299	543.4255

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	0.00	0.00	2.55	0.30	0.33	3.56	1.32	0.41

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2023	4/4/2023	5	2	
2	Grading	Grading	4/5/2023	4/10/2023	5	4	
3	Building Construction	Building Construction	4/11/2023	1/15/2024	5	200	

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4	Paving	Paving	1/16/2024	1/29/2024	5	10
5	Architectural Coating	Architectural Coating	1/30/2024	2/12/2024	5	10

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,000; Non-Residential Outdoor: 4,000; Striped Parking Area: 5,629 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	995.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	42.00	17.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2023

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					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3000e-004	6.1900e-003	3.9200e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.8550	0.8550	2.8000e-004	0.0000	0.8619
Total	5.3000e-004	6.1900e-003	3.9200e-003	1.0000e-005	5.3000e-004	2.3000e-004	7.6000e-004	6.0000e-005	2.1000e-004	2.7000e-004	0.0000	0.8550	0.8550	2.8000e-004	0.0000	0.8619

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3.2 Site Preparation - 2023

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	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0321	0.0321	0.0000	0.0000	0.0324
Total	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0321	0.0321	0.0000	0.0000	0.0324

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					2.4000e-004	0.0000	2.4000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3000e-004	6.1900e-003	3.9200e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.8550	0.8550	2.8000e-004	0.0000	0.8619
Total	5.3000e-004	6.1900e-003	3.9200e-003	1.0000e-005	2.4000e-004	2.3000e-004	4.7000e-004	3.0000e-005	2.1000e-004	2.4000e-004	0.0000	0.8550	0.8550	2.8000e-004	0.0000	0.8619

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3.2 Site Preparation - 2023

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	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0321	0.0321	0.0000	0.0000	0.0324
Total	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0321	0.0321	0.0000	0.0000	0.0324

3.3 Grading - 2023

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					0.0147	0.0000	0.0147	6.9300e-003	0.0000	6.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6700e-003	0.0289	0.0174	4.0000e-005		1.2100e-003	1.2100e-003		1.1100e-003	1.1100e-003	0.0000	3.6208	3.6208	1.1700e-003	0.0000	3.6501
Total	2.6700e-003	0.0289	0.0174	4.0000e-005	0.0147	1.2100e-003	0.0159	6.9300e-003	1.1100e-003	8.0400e-003	0.0000	3.6208	3.6208	1.1700e-003	0.0000	3.6501

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3.3 Grading - 2023

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	1.1000e-003	0.0675	0.0180	3.0000e-004	8.5200e-003	5.5000e-004	9.0700e-003	2.3400e-003	5.3000e-004	2.8700e-003	0.0000	29.8572	29.8572	1.5000e-003	4.7500e-003	31.3098
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	5.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1285	0.1285	0.0000	0.0000	0.1297
Total	1.1500e-003	0.0676	0.0184	3.0000e-004	8.6800e-003	5.5000e-004	9.2300e-003	2.3800e-003	5.3000e-004	2.9100e-003	0.0000	29.9857	29.9857	1.5000e-003	4.7500e-003	31.4394

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					6.6300e-003	0.0000	6.6300e-003	3.1200e-003	0.0000	3.1200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6700e-003	0.0289	0.0174	4.0000e-005		1.2100e-003	1.2100e-003		1.1100e-003	1.1100e-003	0.0000	3.6208	3.6208	1.1700e-003	0.0000	3.6501
Total	2.6700e-003	0.0289	0.0174	4.0000e-005	6.6300e-003	1.2100e-003	7.8400e-003	3.1200e-003	1.1100e-003	4.2300e-003	0.0000	3.6208	3.6208	1.1700e-003	0.0000	3.6501

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3.3 Grading - 2023

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	1.1000e-003	0.0675	0.0180	3.0000e-004	8.5200e-003	5.5000e-004	9.0700e-003	2.3400e-003	5.3000e-004	2.8700e-003	0.0000	29.8572	29.8572	1.5000e-003	4.7500e-003	31.3098
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	5.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1285	0.1285	0.0000	0.0000	0.1297
Total	1.1500e-003	0.0676	0.0184	3.0000e-004	8.6800e-003	5.5000e-004	9.2300e-003	2.3800e-003	5.3000e-004	2.9100e-003	0.0000	29.9857	29.9857	1.5000e-003	4.7500e-003	31.4394

3.4 Building Construction - 2023

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	0.1440	1.1066	1.1918	2.0800e-003		0.0486	0.0486		0.0470	0.0470	0.0000	171.6112	171.6112	0.0291	0.0000	172.3397
Total	0.1440	1.1066	1.1918	2.0800e-003		0.0486	0.0486		0.0470	0.0470	0.0000	171.6112	171.6112	0.0291	0.0000	172.3397

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3.4 Building Construction - 2023

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	1.8900e-003	0.0713	0.0252	3.3000e-004	0.0107	4.2000e-004	0.0111	3.0800e-003	4.0000e-004	3.4800e-003	0.0000	32.2345	32.2345	9.7000e-004	4.6700e-003	33.6507
Worker	0.0107	7.4300e-003	0.0907	2.7000e-004	0.0318	1.8000e-004	0.0320	8.4600e-003	1.6000e-004	8.6200e-003	0.0000	25.5010	25.5010	7.5000e-004	7.0000e-004	25.7291
Total	0.0126	0.0788	0.1158	6.0000e-004	0.0425	6.0000e-004	0.0431	0.0115	5.6000e-004	0.0121	0.0000	57.7355	57.7355	1.7200e-003	5.3700e-003	59.3798

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	0.1440	1.1066	1.1917	2.0800e-003		0.0486	0.0486		0.0470	0.0470	0.0000	171.6110	171.6110	0.0291	0.0000	172.3395
Total	0.1440	1.1066	1.1917	2.0800e-003		0.0486	0.0486		0.0470	0.0470	0.0000	171.6110	171.6110	0.0291	0.0000	172.3395

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3.4 Building Construction - 2023

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	1.8900e-003	0.0713	0.0252	3.3000e-004	0.0107	4.2000e-004	0.0111	3.0800e-003	4.0000e-004	3.4800e-003	0.0000	32.2345	32.2345	9.7000e-004	4.6700e-003	33.6507
Worker	0.0107	7.4300e-003	0.0907	2.7000e-004	0.0318	1.8000e-004	0.0320	8.4600e-003	1.6000e-004	8.6200e-003	0.0000	25.5010	25.5010	7.5000e-004	7.0000e-004	25.7291
Total	0.0126	0.0788	0.1158	6.0000e-004	0.0425	6.0000e-004	0.0431	0.0115	5.6000e-004	0.0121	0.0000	57.7355	57.7355	1.7200e-003	5.3700e-003	59.3798

3.4 Building Construction - 2024

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	7.8100e-003	0.0609	0.0688	1.2000e-004		2.4800e-003	2.4800e-003		2.3900e-003	2.3900e-003	0.0000	9.9886	9.9886	1.6600e-003	0.0000	10.0302
Total	7.8100e-003	0.0609	0.0688	1.2000e-004		2.4800e-003	2.4800e-003		2.3900e-003	2.3900e-003	0.0000	9.9886	9.9886	1.6600e-003	0.0000	10.0302

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3.4 Building Construction - 2024

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	1.1000e-004	4.1200e-003	1.4300e-003	2.0000e-005	6.2000e-004	2.0000e-005	6.5000e-004	1.8000e-004	2.0000e-005	2.0000e-004	0.0000	1.8434	1.8434	6.0000e-005	2.7000e-004	1.9244
Worker	5.9000e-004	3.9000e-004	4.9400e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8600e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4470	1.4470	4.0000e-005	4.0000e-005	1.4594
Total	7.0000e-004	4.5100e-003	6.3700e-003	4.0000e-005	2.4700e-003	3.0000e-005	2.5100e-003	6.7000e-004	3.0000e-005	7.0000e-004	0.0000	3.2904	3.2904	1.0000e-004	3.1000e-004	3.3838

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	7.8100e-003	0.0609	0.0688	1.2000e-004		2.4800e-003	2.4800e-003		2.3900e-003	2.3900e-003	0.0000	9.9886	9.9886	1.6600e-003	0.0000	10.0302
Total	7.8100e-003	0.0609	0.0688	1.2000e-004		2.4800e-003	2.4800e-003		2.3900e-003	2.3900e-003	0.0000	9.9886	9.9886	1.6600e-003	0.0000	10.0302

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3.4 Building Construction - 2024

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	1.1000e-004	4.1200e-003	1.4300e-003	2.0000e-005	6.2000e-004	2.0000e-005	6.5000e-004	1.8000e-004	2.0000e-005	2.0000e-004	0.0000	1.8434	1.8434	6.0000e-005	2.7000e-004	1.9244
Worker	5.9000e-004	3.9000e-004	4.9400e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8600e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4470	1.4470	4.0000e-005	4.0000e-005	1.4594
Total	7.0000e-004	4.5100e-003	6.3700e-003	4.0000e-005	2.4700e-003	3.0000e-005	2.5100e-003	6.7000e-004	3.0000e-005	7.0000e-004	0.0000	3.2904	3.2904	1.0000e-004	3.1000e-004	3.3838

3.5 Paving - 2024

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	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

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	1.7000e-004	1.1000e-004	1.3900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4072	0.4072	1.0000e-005	1.0000e-005	0.4106
Total	1.7000e-004	1.1000e-004	1.3900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4072	0.4072	1.0000e-005	1.0000e-005	0.4106

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	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337

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3.5 Paving - 2024

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	1.7000e-004	1.1000e-004	1.3900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4072	0.4072	1.0000e-005	1.0000e-005	0.4106
Total	1.7000e-004	1.1000e-004	1.3900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4072	0.4072	1.0000e-005	1.0000e-005	0.4106

3.6 Architectural Coating - 2024

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	0.1253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.1262	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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3.6 Architectural Coating - 2024

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	1.0000e-004	7.0000e-005	8.6000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2506	0.2506	1.0000e-005	1.0000e-005	0.2527
Total	1.0000e-004	7.0000e-005	8.6000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2506	0.2506	1.0000e-005	1.0000e-005	0.2527

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	0.1253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.1262	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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3.6 Architectural Coating - 2024

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	1.0000e-004	7.0000e-005	8.6000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2506	0.2506	1.0000e-005	1.0000e-005	0.2527
Total	1.0000e-004	7.0000e-005	8.6000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2506	0.2506	1.0000e-005	1.0000e-005	0.2527

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.4877	0.3308	2.8016	3.4800e-003	0.3359	3.4200e-003	0.3393	0.0897	3.1800e-003	0.0928	0.0000	327.4943	327.4943	0.0480	0.0262	336.5033
Unmitigated	0.4877	0.3308	2.8016	3.4800e-003	0.3359	3.4200e-003	0.3393	0.0897	3.1800e-003	0.0928	0.0000	327.4943	327.4943	0.0480	0.0262	336.5033

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Convenience Market with Gas Pumps	1,674.00	1,674.00	1,674.00	897,941	897,941
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		
Total	1,674.00	1,674.00	1,674.00	897,941	897,941

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
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Convenience Market with Gas Pumps	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Other Asphalt Surfaces	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Other Non-Asphalt Surfaces	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	111.5856	111.5856	6.8200e-003	8.3000e-004	112.0024
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	111.5856	111.5856	6.8200e-003	8.3000e-004	112.0024
NaturalGas Mitigated	7.2300e-003	0.0657	0.0552	3.9000e-004		4.9900e-003	4.9900e-003		4.9900e-003	4.9900e-003	0.0000	71.5192	71.5192	1.3700e-003	1.3100e-003	71.9443
NaturalGas Unmitigated	7.2300e-003	0.0657	0.0552	3.9000e-004		4.9900e-003	4.9900e-003		4.9900e-003	4.9900e-003	0.0000	71.5192	71.5192	1.3700e-003	1.3100e-003	71.9443

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Automobile Care Center	1.32912e+006	7.1700e-003	0.0652	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003	0.0000	70.9269	70.9269	1.3600e-003	1.3000e-003	71.3484
Convenience Market with Gas Pumps	11100	6.0000e-005	5.4000e-004	4.6000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5923	0.5923	1.0000e-005	1.0000e-005	0.5959
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
Total		7.2300e-003	0.0657	0.0552	3.9000e-004		4.9900e-003	4.9900e-003		4.9900e-003	4.9900e-003	0.0000	71.5192	71.5192	1.3700e-003	1.3100e-003	71.9443

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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					
Automobile Care Center	1.32912e+006	7.1700e-003	0.0652	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003	0.0000	70.9269	70.9269	1.3600e-003	1.3000e-003	71.3484
Convenience Market with Gas Pumps	11100	6.0000e-005	5.4000e-004	4.6000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5923	0.5923	1.0000e-005	1.0000e-005	0.5959
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
Total		7.2300e-003	0.0657	0.0552	3.9000e-004		4.9900e-003	4.9900e-003		4.9900e-003	4.9900e-003	0.0000	71.5192	71.5192	1.3700e-003	1.3100e-003	71.9443

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	386220	94.5972	5.7800e-003	7.0000e-004	94.9505
Convenience Market with Gas Pumps	61100	14.9653	9.1000e-004	1.1000e-004	15.0212
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	8260	2.0231	1.2000e-004	1.0000e-005	2.0307
Total		111.5856	6.8100e-003	8.2000e-004	112.0024

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	386220	94.5972	5.7800e-003	7.0000e-004	94.9505
Convenience Market with Gas Pumps	61100	14.9653	9.1000e-004	1.1000e-004	15.0212
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	8260	2.0231	1.2000e-004	1.0000e-005	2.0307
Total		111.5856	6.8100e-003	8.2000e-004	112.0024

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.0500	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4500e-003	2.4500e-003	1.0000e-005	0.0000	2.6100e-003
Unmitigated	0.0500	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4500e-003	2.4500e-003	1.0000e-005	0.0000	2.6100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4500e-003	2.4500e-003	1.0000e-005	0.0000	2.6100e-003
Total	0.0500	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4500e-003	2.4500e-003	1.0000e-005	0.0000	2.6100e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4500e-003	2.4500e-003	1.0000e-005	0.0000	2.6100e-003
Total	0.0500	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4500e-003	2.4500e-003	1.0000e-005	0.0000	2.6100e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.5588	0.0649	1.5700e-003	9.6511
Unmitigated	9.2941	0.0812	1.9700e-003	11.9088

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	2.104 / 0	7.3777	0.0690	1.6700e-003	9.5991
Convenience Market with Gas Pumps	0.370363 / 0.226996	1.9164	0.0122	3.0000e-004	2.3097
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
Total		9.2940	0.0812	1.9700e-003	11.9088

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.6832 / 0	5.9021	0.0552	1.3300e-003	7.6793
Convenience Market with Gas Pumps	0.29629 / 0.226996	1.6566	9.7500e-003	2.4000e-004	1.9718
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
Total		7.5588	0.0649	1.5700e-003	9.6511

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.3772	0.3178	0.0000	13.3219
Unmitigated	5.3772	0.3178	0.0000	13.3219

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	11.46	2.3263	0.1375	0.0000	5.7633
Convenience Market with Gas Pumps	15.03	3.0510	0.1803	0.0000	7.5586
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
Total		5.3772	0.3178	0.0000	13.3219

200 N Las Posas Rd - San Diego County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	11.46	2.3263	0.1375	0.0000	5.7633
Convenience Market with Gas Pumps	15.03	3.0510	0.1803	0.0000	7.5586
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
Total		5.3772	0.3178	0.0000	13.3219

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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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

200 N Las Posas Rd - Existing GP Land Use - San Diego County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

200 N Las Posas Rd - Existing GP Land Use

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	52.42	1000sqft	0.00	52,421.00	0
Parking Lot	34.95	1000sqft	0.80	34,947.00	0
Strip Mall	52.42	1000sqft	0.80	52,421.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	539.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Existing land use designation model for GHG comparison

Land Use - Mixed Use 3: Used FAR to established the max dev intensity (all nonresidential uses). 50% office and 50% retail assumed. Parcel 50% dev and 50% Parking. FAR = 1.50 and Acres = 1.6

Construction Phase - GHG model only; no construction

Off-road Equipment -

Trips and VMT -

Grading -

Vehicle Trips - SANDAG Trip rates for Speciality Retail/Strip Commercial (40/1000 sf) and Standard Commercial Office (20/1000 sf). 2,097 strip commercial trips and 1,048 commercial office trips

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	4.00	0.00
tblLandUse	LandUseSquareFeet	52,420.00	52,421.00
tblLandUse	LandUseSquareFeet	34,950.00	34,947.00
tblLandUse	LandUseSquareFeet	52,420.00	52,421.00
tblLandUse	LotAcreage	1.20	0.00
tblLandUse	LotAcreage	1.20	0.80
tblVehicleTrips	WD_TR	9.74	20.00
tblVehicleTrips	WD_TR	44.32	40.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							

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					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	0.00	0.00	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)

200 N Las Posas Rd - Existing GP Land Use - San Diego County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest	
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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	0.5345	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6600e-003
Energy	6.2900e-003	0.0572	0.0480	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	388.2799	388.2799	0.0211	3.5600e-003	389.8677
Mobile	1.1601	1.1570	9.4825	0.0179	1.8213	0.0147	1.8359	0.4861	0.0137	0.4997	0.0000	1,670.0939	1,670.0939	0.1393	0.0850	1,698.8918
Waste						0.0000	0.0000		0.0000	0.0000	21.0684	0.0000	21.0684	1.2451	0.0000	52.1962
Water						0.0000	0.0000		0.0000	0.0000	4.1877	64.1117	68.2994	0.4340	0.0106	82.3181
Total	1.7009	1.2142	9.5319	0.0182	1.8213	0.0190	1.8403	0.4861	0.0180	0.5041	25.2561	2,122.4880	2,147.7441	1.8396	0.0991	2,223.2764

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5345	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6600e-003
Energy	6.2900e-003	0.0572	0.0480	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	388.2799	388.2799	0.0211	3.5600e-003	389.8677
Mobile	1.1601	1.1570	9.4825	0.0179	1.8213	0.0147	1.8359	0.4861	0.0137	0.4997	0.0000	1,670.0939	1,670.0939	0.1393	0.0850	1,698.8918
Waste						0.0000	0.0000		0.0000	0.0000	21.0684	0.0000	21.0684	1.2451	0.0000	52.1962
Water						0.0000	0.0000		0.0000	0.0000	4.1877	64.1117	68.2994	0.4340	0.0106	82.3181
Total	1.7009	1.2142	9.5319	0.0182	1.8213	0.0190	1.8403	0.4861	0.0180	0.5041	25.2561	2,122.4880	2,147.7441	1.8396	0.0991	2,223.2764

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	10/7/2022	10/6/2022	5	0	

Acres of Grading (Site Preparation Phase): 0

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	0		231	0.29
Grading	Forklifts	0		89	0.20
Grading	Generator Sets	0		84	0.74
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Grading	Welders	0		46	0.45

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	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1601	1.1570	9.4825	0.0179	1.8213	0.0147	1.8359	0.4861	0.0137	0.4997	0.0000	1,670.0939	1,670.0939	0.1393	0.0850	1,698.8918
Unmitigated	1.1601	1.1570	9.4825	0.0179	1.8213	0.0147	1.8359	0.4861	0.0137	0.4997	0.0000	1,670.0939	1,670.0939	0.1393	0.0850	1,698.8918

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,048.40	115.85	36.69	1,841,660	1,841,660
Parking Lot	0.00	0.00	0.00		
Strip Mall	2,096.80	2,203.74	1070.94	3,026,974	3,026,974
Total	3,145.20	2,319.59	1,107.63	4,868,634	4,868,634

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Parking Lot	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Strip Mall	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	326.0381	326.0381	0.0199	2.4200e-003	327.2560
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	326.0381	326.0381	0.0199	2.4200e-003	327.2560
NaturalGas Mitigated	6.2900e-003	0.0572	0.0480	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.2418	62.2418	1.1900e-003	1.1400e-003	62.6117
NaturalGas Unmitigated	6.2900e-003	0.0572	0.0480	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.2418	62.2418	1.1900e-003	1.1400e-003	62.6117

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	1.04999e+006	5.6600e-003	0.0515	0.0432	3.1000e-004		3.9100e-003	3.9100e-003		3.9100e-003	3.9100e-003	0.0000	56.0316	56.0316	1.0700e-003	1.0300e-003	56.3646
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
Strip Mall	116375	6.3000e-004	5.7000e-003	4.7900e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	6.2102	6.2102	1.2000e-004	1.1000e-004	6.2471
Total		6.2900e-003	0.0572	0.0480	3.4000e-004		4.3400e-003	4.3400e-003		4.3400e-003	4.3400e-003	0.0000	62.2418	62.2418	1.1900e-003	1.1400e-003	62.6117

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	1.04999e+006	5.6600e-003	0.0515	0.0432	3.1000e-004		3.9100e-003	3.9100e-003		3.9100e-003	3.9100e-003	0.0000	56.0316	56.0316	1.0700e-003	1.0300e-003	56.3646
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
Strip Mall	116375	6.3000e-004	5.7000e-003	4.7900e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	6.2102	6.2102	1.2000e-004	1.1000e-004	6.2471
Total		6.2900e-003	0.0572	0.0480	3.4000e-004		4.3400e-003	4.3400e-003		4.3400e-003	4.3400e-003	0.0000	62.2418	62.2418	1.1900e-003	1.1400e-003	62.6117

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	678328	166.1434	0.0102	1.2300e-003	166.7640
Parking Lot	12231.4	2.9959	1.8000e-004	2.0000e-005	3.0071
Strip Mall	640585	156.8989	9.5900e-003	1.1600e-003	157.4850
Total		326.0381	0.0199	2.4100e-003	327.2560

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	678328	166.1434	0.0102	1.2300e-003	166.7640
Parking Lot	12231.4	2.9959	1.8000e-004	2.0000e-005	3.0071
Strip Mall	640585	156.8989	9.5900e-003	1.1600e-003	157.4850
Total		326.0381	0.0199	2.4100e-003	327.2560

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.5345	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6600e-003
Unmitigated	0.5345	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1227					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4117					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6600e-003
Total	0.5345	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6600e-003

200 N Las Posas Rd - Existing GP Land Use - San Diego County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1227					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4117					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6600e-003
Total	0.5345	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

200 N Las Posas Rd - Existing GP Land Use - San Diego County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	68.2994	0.4340	0.0106	82.3181
Unmitigated	68.2994	0.4340	0.0106	82.3181

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	9.3168 / 5.7103	48.2081	0.3064	7.5000e-003	58.1030
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.88288 / 2.37983	20.0913	0.1277	3.1300e-003	24.2151
Total		68.2994	0.4340	0.0106	82.3181

200 N Las Posas Rd - Existing GP Land Use - San Diego County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	9.3168 / 5.7103	48.2081	0.3064	7.5000e-003	58.1030
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.88288 / 2.37983	20.0913	0.1277	3.1300e-003	24.2151
Total		68.2994	0.4340	0.0106	82.3181

8.0 Waste Detail

8.1 Mitigation Measures Waste

200 N Las Posas Rd - Existing GP Land Use - San Diego County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	21.0684	1.2451	0.0000	52.1962
Unmitigated	21.0684	1.2451	0.0000	52.1962

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	48.75	9.8958	0.5848	0.0000	24.5165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	55.04	11.1726	0.6603	0.0000	27.6797
Total		21.0684	1.2451	0.0000	52.1962

200 N Las Posas Rd - Existing GP Land Use - San Diego County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	48.75	9.8958	0.5848	0.0000	24.5165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	55.04	11.1726	0.6603	0.0000	27.6797
Total		21.0684	1.2451	0.0000	52.1962

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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200 N Las Posas Rd - Existing GP Land Use - San Diego County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

Appendix B

Project CAP Consistency Checklist



CLIMATE ACTION PLAN CONSISTENCY REVIEW CHECKLIST

INTRODUCTION

The City of San Marcos (City) adopted an updated Climate Action Plan (CAP) in **DECEMBER 2020**. The CAP outlines strategies and measures that the City will undertake to achieve its proportional share of State greenhouse gas (GHG) emissions reduction targets. The purpose of the CAP Consistency Checklist (Checklist), in conjunction with the CAP, is to provide a streamlined review process for all proposed development projects that are subject to discretionary review and/or trigger environmental review pursuant to the California Environmental Quality Act (CEQA).

Analysis of GHG emissions and potential climate change impacts from new development is required under CEQA. The City's CAP is a qualified greenhouse gas (GHG) emissions reduction plan in accordance with State CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of a CAP.

The purpose of this Checklist is to implement GHG reduction measures from the CAP that apply to new discretionary development projects. New development would demonstrate consistency with relevant CAP strategies and would not conflict with the City's ability to achieve the identified GHG reduction targets through implementation of applicable measures. Projects that are consistent with the CAP, as determined through the use of this Checklist, may rely on the CAP for the cumulative impact analysis of GHG emissions. Projects that are not consistent with the CAP must prepare a comprehensive project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible. Cumulative GHG impacts would be significant for any project that is not consistent with the CAP.

This Checklist may be updated periodically to incorporate new GHG reduction techniques or to comply with later amendments to the CAP or local, State, or federal law. Comprehensive updates to this Checklist will be coordinated with each CAP update. Administrative updates to the Checklist may occur regularly, as necessary for the purpose of keeping the Checklist up-to-date and implementable. Updates to the CAP Checklist associated with an update to the City's CAP would also require City Council approval and shall comply with CEQA.



APPLICABILITY AND PROCEDURES

This Checklist is required only for discretionary projects¹ that are subject to and not exempt from CEQA. Projects that are exempt from CEQA are deemed to be consistent with the City's CAP, and no further review is necessary, with the exception of a Class 32 "In-Fill Development Projects" categorical exemption (State CEQA Guidelines Section 15332), for which projects are required to demonstrate consistency with the CAP through this Checklist.

General procedures for Checklist compliance and review are described below. Specific guidance is also provided under each of the questions under Steps 1 and 2 of the Checklist.

- The City's Development Services - Planning Division reviews development applications and makes determinations regarding environmental review requirements under CEQA.
- The specific applicable requirements outlined in the Checklist shall be required as conditions of project approval.
- The project must provide written documentation and supporting evidence that demonstrate how the proposed project would implement each applicable Checklist requirement described herein to the satisfaction of the Planning Division.
- If a question in the Checklist is deemed not applicable (N/A) to a project, written documentation and evidence supporting that conclusion shall be provided to the satisfaction of the Planning Division. Each Checklist question provides the scenario(s) where checking N/A may be acceptable. If a measure is deemed not applicable for reasons other than those outlined in each question, supporting evidence will need to be provided and would be subject to Planning Division approval. A project may be determined to be inconsistent with the CAP if the N/A response is deemed to be not supported by credible evidence.
- Development projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist shall prepare a separate, project-level GHG analysis as part of the CEQA document prepared for the project.

¹ In this context, a project is any action that meets the definition of a "Project" in Section 15378 of the State CEQA Guidelines.



Application Information

Contact Information

Project No. and Name: IM 19-0061 Las Posas Arco - Service Station, Car Wash & Drive Thru

Property Address and APN: 200 N Las Posas Road, APN 219-122-03-00

Applicant Name and Co.: Ahmad Ghaderi, A & S Engineering, Inc.

Contact Phone: 661-250-9300. Contact Email: ahmadg@asengineer.com

Was a consultant retained to complete this checklist? Yes No
If Yes, complete the following:

Consultant Name: Bill Vosti Contact Phone: 510-671-0181

Company Name: Rincon Consultants Contact Email: bvosti@rinconconsultants.com

Project Information

1. What is the size of the project site (acres)? 1.6 acres
2. Identify all applicable proposed land uses:
- Residential (indicate # of single-family dwelling units): _____
 - Residential (indicate # of multi-family dwelling units): _____
 - Commercial (indicate total square footage): 5,000 sf food mart; 3,000 sf car wash; 6,192 sf gas station canopy with nine fueling stations
 - Industrial (indicate total square footage): _____
 - Other (describe): _____

3. Provide a description of the project proposed. This description should match the basic project description used for the CEQA document. The description may be attached to the Checklist if there are space constraints.

The project would include development of a 5,000 square foot food mart with a drive thru, a 2,000 square foot car wash (with 1,000 square foot equipment room), and a 6,192 square foot gas station canopy with nine fuel dispensing stations (i.e., 18 fuel pumps). A total of 59 parking spaces would be provided in parking lot spaces with three being an electric vehicle (EV) charging space, one being a vanpool EV parking space, and two being future clean air parking spaces. Three of the 59 parking spaces would also be designated as accessible parking spaces. The proposed project would be developed on a currently vacant parcel of land with a current land use designation of MU3. The MU3 zone does not permit gas station, car wash, or food mart uses; instead, the zone is intended for job-based mixed-use developments. Job-based mixed-use developments include commercial retail, business support services, offices, government uses, and restaurants. Therefore, the development of the project would require a General Plan Amendment and Rezone to Commercial to allow for these uses



STEP 1: LAND USE CONSISTENCY

The first step in this section evaluates a project's GHG emissions consistent with the City's *Guidance to Demonstrating Consistency with the City of San Marcos Climate Action Plan: For Discretionary Projects Subject to CEQA* (Guidance Document). New discretionary development projects subject to CEQA review that emit fewer than 500 metric tons of carbon dioxide equivalent (MTCO₂e) annually would not contribute considerably to cumulative climate change impacts as stated in the City's Guidance Document, and therefore, would be considered consistent with the CAP and associated emissions projections.

For projects that are subject to CAP consistency review, the next step in determining consistency is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the city to determine a project's consistency with the land use assumptions used in the CAP.



Step 1: Land Use Consistency

Checklist Item <small>(Check the appropriate box and provide an explanation and supporting documentation for your answer)</small>	Yes	No
<p>1. The size and type of projects listed below would emit fewer than 500 MTCO₂e per year. Based on this threshold, does the proposed project exceed these characteristics?</p> <ul style="list-style-type: none"> ▪ <u>Single Family Housing</u>: 36 dwelling units ▪ <u>Multi-Family Housing</u>: 55 dwelling units ▪ <u>Office</u>: 43,000 square feet ▪ <u>Commercial Space</u>: 20,000 square feet ▪ <u>Regional Shopping Center</u>: 18,000 square feet ▪ <u>Hotel</u>: 37 rooms ▪ <u>Restaurant (Sit-Down)</u>: 6,500 square feet ▪ <u>Restaurant (Drive-Thru, High Turnover)</u>: 2,400 square feet ▪ <u>General Light Industrial</u>: 58,000 square feet ▪ <u>University</u>: 263 students ▪ <u>Mixed-Use</u>: See <i>Guidance to Demonstrating Consistency</i> memorandum for methods to estimate mixed-use development thresholds ▪ <u>Other</u>: For project types not listed in this section the need for GHG analysis and mitigation will be made on a project-specific basis, considering the 500 MTCO₂e per year screening threshold. <p>If “Yes”, proceed to Question 2 of Step 1. If “No”, in accordance with the City’s CAP screening criteria, the project’s GHG impact is less than significant and is not subject to the measures of the CAP.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>2. Is the proposed project consistent with the City’s existing General Plan land use designation?</p> <p>If “Yes”, proceed to Step 2. If “No”, proceed to Question 3 of Step 1</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>3. For projects not consistent with the existing General Plan land use designation, does the project include a General Plan Amendment that would generate GHG emissions equal to or less than estimated emissions generated under the existing designation?</p> <p>If “Yes”, proceed to Step 2 and provide estimated project emissions under both existing and proposed designation(s) for comparison. If “No”, the project’s GHG impact is potentially significant, and a GHG analysis must be prepared in accordance with the City’s Guidance Document and applicable CEQA guidelines. The project must incorporate each of the measures identified in Step 2 to mitigate cumulative GHG emissions impacts, along with other mitigation measures as necessary based on a project specific GHG analysis.. Proceed and complete a project specific GHG analysis, and Step 2 of the Checklist.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



STEP 2: CAP MEASURES CONSISTENCY

The second step of CAP consistency review is to evaluate a project's consistency with the applicable strategies and measures of the CAP. Each Checklist item is associated with a specific GHG reduction measure in the City's CAP. "N/A" should only be checked based on the direction provided in each Checklist Item question. All projects for which the measure is applicable must demonstrate that they would implement measures consistent with the Checklist Item, or fully substantiate how the item would be infeasible for project implementation. "N/A" responses are subject to Planning Division review and approval. If "No" is provided as a response to a question, the project would be determined to be inconsistent with the CAP and result in a significant GHG impact.



Step 2: CAP Measures Consistency

Checklist Item <small>(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)</small>	Yes	No	N/A
Project Design			
<p>1. Electric Vehicle Charging Stations (Measure T-2)</p> <p><u>Multi-Family Residential and Non-Residential:</u> Will the project install electric vehicle charging stations (Level 2 or better) in at least five percent of the total parking spaces provided on-site?</p> <p>Check "N/A" if the project is a single-family residential project or would not provide any parking.</p> <p>Please substantiate how the project satisfies question 1: The project would include 59 on-site parking spaces; five percent of this amount would equate to three spaces. The project would comply with this requirement by providing three electric vehicle charging stations parking spaces which are proposed to be Level 2.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>2. Bicycle Infrastructure (Measure T-8)</p> <p><u>Residential and Non-Residential Projects:</u> If the following conditions are met, would the project pay its fair-share contribution to bicycle infrastructure improvements?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Intersection or roadway segment improvements are proposed as part of the project and, <input type="checkbox"/> The City's General Plan Mobility Element identifies bicycle infrastructure improvements at any intersection(s) or roadway segment(s) that would be improved as part of the project. <p>Check "N/A" if the conditions above would not be met.</p> <p>Please substantiate how the project satisfies question 2: This measure would not be applicable to the project because the project does not propose any intersection or roadway segment improvements</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Step 2: CAP Measures Consistency

Checklist Item <small>(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)</small>	Yes	No	N/A
<p>3. Transportation Demand Management (Measure T-9)</p> <p><u>Multi-Family Residential and Non-Residential:</u> Will the project develop and implement a TDM plan that includes, at a minimum, all of the TDM strategies listed below?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provide discounted monthly transit pass or provide at least 25 percent transit fare subsidy to residents/employees. <input type="checkbox"/> Provide designated car-share, carpool, vanpool, and/or park-and-ride parking spaces.² <input type="checkbox"/> Provide pedestrian connections between all internal uses and to all existing or planned external streets around the project site(s). <input type="checkbox"/> Provide secure bicycle parking spaces or bicycle racks, showers, and clothes lockers. <input type="checkbox"/> Encourage telecommuting for employees (allow one telecommute day per week or compressed work weeks) or provide a telecommute work center with common office space and equipment available to residents. <p style="text-align: center;">-or-</p> <p>Would the project implement and monitor for four (4) years a TDM program that demonstrates an alternative transportation (i.e. carpool, public transit, bicycle, walk, telecommute) mode share of at least 29 percent ³ for all residents?</p> <p>Check “N/A” if the project is a single-family residential project or is not subject to the City’s TDM Ordinance.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please state which measure option the project for which the project would comply and substantiate how the project satisfies question 3:

This measure was developed based on a 1-2% application rate. Thus 1-2% of the total tenant-occupants are subject to comply. If the 1-2% application rate results in less than 1 tenant-occupant then this measure would not be applicable. The project is anticipated to have approximately 20 employees. 1-2% of 20 employees would represent less than half an employee. Therefore, measures such as providing discounted transit passes or bicycle spaces would not see adoption of at least one employee. The project does provide a vanpool parking space and pedestrian connections to external streets. In addition, a retail type use is not coherent with telecommuting.

² The designated number of car-share, carpool, vanpool, and/or park-and-ride parking spaces provided at a rate equal to or greater than CALGreen minimum requirements.

³ Measure T-10 requires projects to increase alternative mode share by seven percent. The baseline mode share for alternative transportation (i.e. carpool, public transit, bicycle, walk, and telecommute) is 22 percent based on 2010 Census Data.



Step 2: CAP Measures Consistency

Checklist Item <small>(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)</small>	Yes	No	N/A
<p>4. Reduce Parking Near Transit (Measure T-12)</p> <p><u>Multi-Family Residential:</u> If located within a half-mile of a major transit stop⁴, would the project provide at least 27 percent fewer parking spaces than required for the same use based on the City’s municipal code parking requirements?</p> <p>Check “N/A” if the project is a single-family residential or non-residential project.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please substantiate how the project satisfies question 4:

This measure would not be applicable because the project only proposes non-residential uses.

<p>5. Water Heaters (Measure E-1)</p> <p><u>Residential:</u> Will the project install one of, or a combination of, the following water heater types in place of natural gas water heaters?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Electric heat pump water heater <input type="checkbox"/> Instantaneous electric water heater <input type="checkbox"/> Electric tank <input type="checkbox"/> Solar water heater with heat pump water heater backup <input type="checkbox"/> Solar water heater with electric tank backup <p>Check “N/A” if the project is a non-residential project.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Please substantiate how the project satisfies question 5:

This measure would not be applicable because the project only proposes non-residential uses.

⁴ Major transit stop is defined as a bus or light-rail station with fixed service and 10-minute minimum headways during peak hours. Project applicants should confirm with City staff if the project site would fall within this proximity to a major transit stop.



Step 2: CAP Measures Consistency

Checklist Item <small>(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)</small>	Yes	No	N/A
<p>6. Photovoltaic Installation (Measure E-2)</p> <p><u>Non-Residential</u>: Will the project install photovoltaic systems with a minimum capacity of two watts per square foot of gross floor area?</p> <p>Check “N/A” if the project is a residential project or if installation of on-site photovoltaic would be infeasible.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please substantiate how the project satisfies question 6:

The project proposes a 5,000 square foot food mart; a 3,000 square foot car wash; and a 6,192 square foot gas station canopy. Consistency with this item would require a photovoltaic system with a capacity of approximately 28.4 kW. The project would comply with this item through installation of solar panels with a rated capacity of at least 28.4 kW.

<p>7. Landscaping Water Use (Measure W-1)</p> <p><u>Residential and Non-Residential</u>: Will the project comply with the City’s Water Efficient Landscape Ordinance?⁵</p> <p>Check “N/A” if the project is not proposing any landscaping or is not subject to the City’s Water Efficient Landscape Ordinance.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Please substantiate how the project satisfies question 7:

The project would comply with the City’s Water Efficient Landscape Ordinance; the project’s estimated total water use is 154,563 gallons per year, while the maximum applied water allowance is 197,067 gallons per year.

⁵ City of San Marcos Landscape Manual: <https://www.san-marcos.net/home/showdocument?id=13984>



Step 2: CAP Measures Consistency

Checklist Item <small>(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)</small>	Yes	No	N/A
<p>8. Urban Tree Canopy (Measure C-2)</p> <p><u>Single-Family Residential</u>: Will the project plant a minimum of one tree per single-family residential unit?</p> <p style="text-align: center;">-or-</p> <p><u>Multi-Family Residential and Non-Residential</u>: If the project is providing more than 10 parking spaces, will the project plant at least one tree per five parking spaces provided?</p> <p>Check "N/A" if planting the required number of trees on-site would be infeasible.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please substantiate how the project satisfies question 8:

The project would include 59 on-site parking spaces; one tree per five spaces would equate to 12 trees. The project would include 49 total trees, which would exceed the requirements of Measure T 2. Proposed trees include 14 Art's Seedless Dessert Willows, 12 Shoestring Acacias, 9 Engelmann Oaks, 6 Desert Museum Palo Verde, 4 Guadalupe Palms, and 4 Cootamurda Wattles.