APPENDIX A – AIR QUALITY/GREENHOUSE GAS EMISSIONS IMPACT ANALYSIS

Beltramo Ranch
Air Quality/Greenhouse Gas Emissions Impact Analysis

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I. INTRODUCTION AND SUMMARY

1. PURPOSE OF ANALYSIS AND STUDY OBJECTIVES

The purpose of this air quality and global climate change impact analysis is to provide an assessment of the impacts resulting from development of the proposed Beltramo Residential project and to identify measures that may be necessary to reduce potentially significant impacts. This study was performed to address the possibility of regional/local air quality impacts and global climate change impacts, from project related air emissions. The objectives of the study include:

- documentation of the atmospheric setting
- discussion of criteria pollutants and greenhouse gases
- discussion of the air quality and global climate change regulatory framework
- discussion of the air quality and greenhouse gases thresholds of significance
- analysis of the construction related air quality and greenhouse gas emissions
- analysis of the operations related air quality and greenhouse gas emissions
- analysis of the conformity of the proposed project with the AQMP
- recommendations for mitigation measures

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

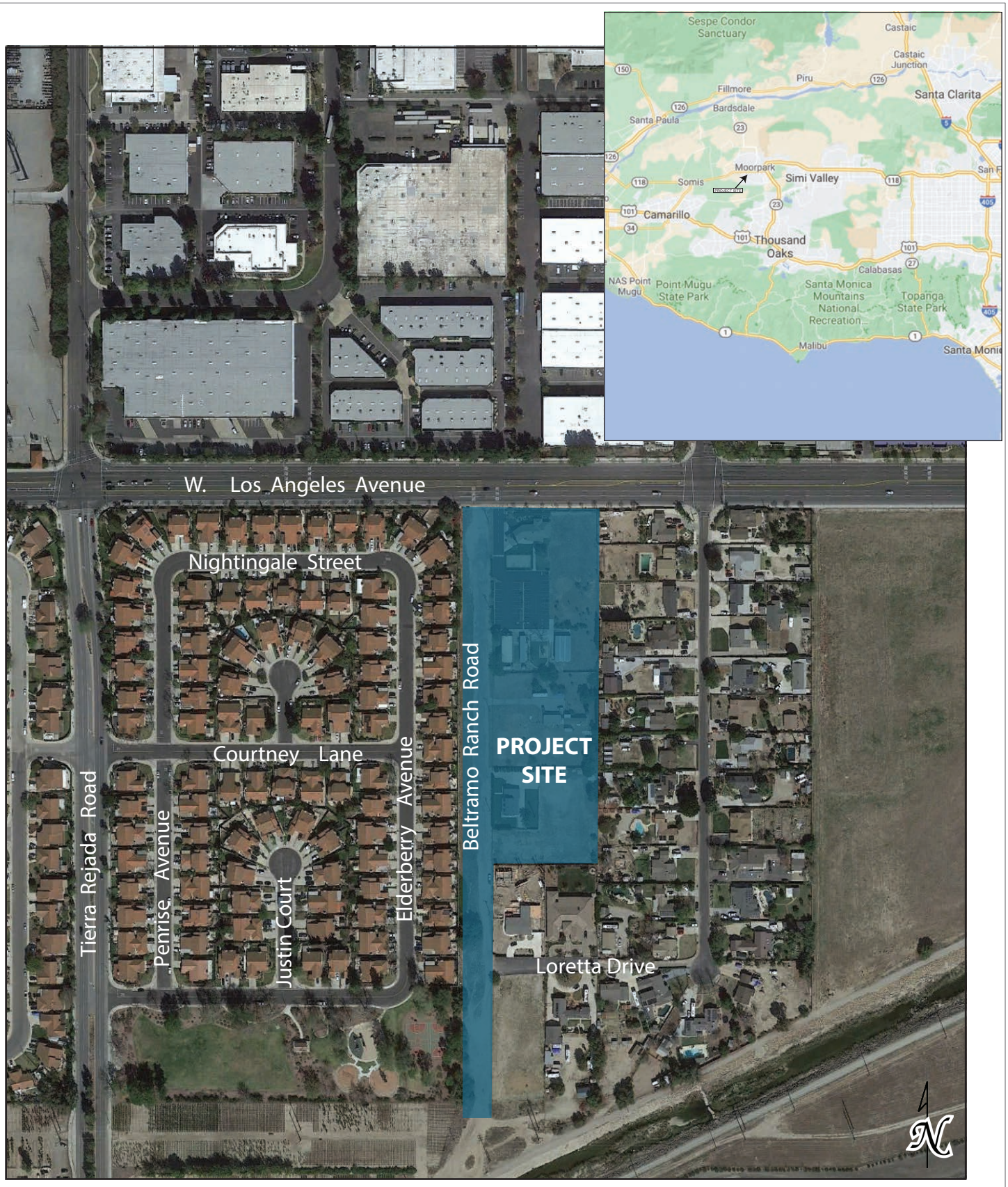
2. PROJECT LOCATION

The project site is located on the south side of Los Angeles Avenue (State Route 118) between Tierra Rejada Road and Maureen Lane, in the City of Moorpark. The Project is located on an approximately 7.4-acre site that is occupied by the Four Square Church and two single family residential homes. A vicinity map showing the project location is provided on **Figure 1, Project Location Map**.

3. PROJECT DESCRIPTION

The Project is proposing to redevelop the site and construct 47 single family housing units. **Figure 2, Site Plan**, illustrates the proposed site plan. The Project would include the demolition of approximately 4,274 square feet (SF) of existing residences/church uses, 3,128 SF of mobile homes, 74,225 SF of asphalt/paving, and earth work excavation with approximately 2,553 cubic yards (CY) of import, in order to make way for construction of the new streets, utilities, residential homes, and associated amenities. An existing triple-wide mobile home (currently on-site) will be returned to the rental agency located approximately 93.8 miles from the project site, in Mira Loma, CA. As a design feature, the developer will provide MERV 13 filtration in each new home.

The project is anticipated to be built out in several phases; however, to be conservative, the project has been analyzed as being built out in one phase, with project construction to start no sooner than January 2023 and take approximately 19 months to complete. The project is anticipated to be operational in 2024.



Project Site

Source: Google Earth, June 2021.

Figure 1
Regional Vicinity and Project Location Map

Parcel Addresses & APNs	Existing Zoning
Beltramo Ranch Road APN: 504-0-021-195	RE-1
11930-11934 West Los Angeles Ave. APN: 506-0-030-220 APN: 506-0-030-210 APN: 506-0-030-235 APN: 506-0-030-045	RE-20
11944 West Los Angeles Ave. APN: 506-0-030-255	RO

Proposed Zoning: RPD*

R-1* Developmental Standards:	
Density:	7 du/ac
Front Yard Setback:	20'
Interior Side Yard Setback:	5'
Street Side Yard Setback:	10'
Rear Yard Setback:	15'
Lot Coverage:	50%
Building Height:	35'
Resident Parking:	2.5 sp/unit

*Conceptual Site Plan is compliant with R-1 zoning standards, however project is seeking RPD zoning and High Density Residential (R-1)zoning throughout

Site Plan Summary

Site Area: ±7.4 ac. (±323,000sf)

Home Mix:
47 homes - 60'x53'-6" SFD Lots (2000-2200sf)

Site Density: ±6.4 du/ac

Parking Provided:
94 spaces - Garage Spaces
94 spaces - Driveway
76 spaces - Guest On-Street Parking
264 spaces - Total (±5.64 sp/unit)

Building Coverage: ±23%

Proposed Building Height: SFD ±26'

Open Space Provided:
±88,000sf - Private Yards
±56,000sf - Open Area
±144,000sf - Total Open Space Provided (45% of site)

Source: EcoTierra Consulting, 2021.

EcoTierra consulting

Figure 2
Conceptual Site Plan

4. SENSITIVE RECEPTORS IN PROJECT VICINITY

Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the VCAPCD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities (Ventura County Air Quality Assessment Guidelines 2003). Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours.

The nearest sensitive receptor to the project site are the existing single-family detached residential dwelling units located directly adjacent to the eastern, western and southern boundaries of the project site. Additionally, there is a small hospice facility located within a residence at 4762 Maureen Lane, located approximately 265 feet east of the site. Other air quality sensitive land uses are located further from the project site and would experience lower impacts

5. SUMMARY OF IMPACTS

A. Construction-Source Emissions

Project construction-source emissions would not exceed applicable thresholds of significance established by the Ventura County Air Pollution Control District (VCAPCD).

As discussed herein, the project will comply with all applicable VCAPCD construction-source emission reduction rules and guidelines. Project construction source emissions would not cause or substantively contribute to violation of the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS) or result in toxic air contaminant (TAC)-related impacts.

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

Construction of the project would not significantly increase the risk to public health for San Joaquin Valley Fever above existing background levels.

B. Operational-Source Emissions

The project operational-sourced emissions would not exceed applicable thresholds of significance established by the VCAPCD. Additionally, project-related trips will not cause or result in CO concentrations exceeding applicable state and/or federal standards (CO “hotspots). Project operational-source emissions would therefore not adversely affect sensitive receptors within the vicinity of the project.

The project's emissions meet VCAPCD thresholds and will not result in a significant cumulative impact. The project does not propose any such uses or activities that would result in potentially significant operational-source toxic air contaminants or odor impacts. Potential operational-source odor impacts are therefore considered less than significant.

Operation of the project would not significantly increase the risk to public health for San Joaquin Valley Fever above existing background levels.

C. Greenhouse Gases

Project-related GHG emissions will not exceed the SCAQMD Draft GHG emissions threshold of 3,000 MTCO2e per year for all land uses and will not conflict with the CARB Scoping Plan. Therefore, the project would not conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases and impacts are considered to be less than significant.

II. AIR QUALITY ANALYSIS

1. AIR QUALITY STANDARDS AND ATTAINMENT

The project site is located within the City of Moorpark, which lies within the South Central Coast Air Basin (the Basin), which is under the jurisdiction of the Ventura County Air Pollution Control District (VCAPCD), the Santa Barbara County Air Pollution Control District (SBCAPCD), and the San Luis Obispo Air Pollution Control District (SLOAPCD). The project site falls within the portion of the Basin overseen by VCAPCD. As the local air quality management agency, the VCAPCD is required to monitor air pollutant levels to ensure that State and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the Basin is classified as being in "attainment" or "nonattainment."

The Basin is designated a nonattainment area for the federal and State eight-hour ozone standards and the State one-hour ozone and PM10 standards (VCAPCD 2017, California Air Resources Board [CARB] 2019). The Basin is in attainment of all other federal and State standards. Because the Basin currently exceeds these State and federal ambient air quality standards, it is required to implement strategies to reduce pollutant levels to recognized acceptable standards. This nonattainment status is a result of several factors, the primary ones being naturally adverse meteorological conditions that limit the dispersion and diffusion of pollutants, the limited capacity of the local airshed to eliminate air pollutants, and the number, type, and density of emission sources within the Basin.

The VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003) also note San Joaquin Valley Fever (formally known as Coccidioidomycosis), as an air pollutant and disease of countywide concern. San Joaquin Valley Fever (Valley Fever) is an infectious disease caused by the fungus *Coccidioides immitis*. Infection is caused by inhalation of *Coccidioides immitis* spores that have become airborne when dry, dusty soil or dirt is disturbed by natural processes such as wind or earthquakes, or by human induced ground-disturbing activities such as construction, farming, or other activities (VCAPCD 2003). In 2019 the number of cases of Valley Fever reported in California was 9,004, with 364 cases reported in Ventura County (California Department of Public Health 2019)[1].

A. Pollutants

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or

[1] *Source: https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2019.pdf.*

avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

i) Criteria Pollutants

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

ii) Nitrogen Dioxides

Nitrogen Oxides (NOx) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NOx are colorless and odorless, concentrations of nitrogen dioxide (NO_2) can often be seen as a reddish-brown layer over many urban areas. NOx form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NOx are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NOx reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO_2, which cause respiratory problems. NOx and the pollutants formed from NOx can be transported over long distances, following the patterns of prevailing winds. Therefore, controlling NOx is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

iii) Ozone

Ozone (O_3) is not usually emitted directly into the air but at ground-level is created by a chemical reaction between NOx and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NOx and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NOx and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

iv) Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust.

Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

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

v) Sulfur Dioxide

Sulfur Oxide (SOx) gases (including sulfur dioxide [SO2]) are formed when fuel containing sulfur, such as coal and oil is burned, and from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

vi) Lead

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

vii) Particulate Matter

Particulate matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Particulate matter is made up of a number of components including acids (such as nitrates and sulfates),

organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) have been designated as a subset of PM10 due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

viii) Reactive Organic Gases (ROG)

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

B. Other Pollutants of Concern

i) Toxic Air Contaminants

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

Toxic air contaminants are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of toxic air contaminants with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2013 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from toxic air contaminants can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). Diesel particulate matter is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of diesel particulate matter

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

ii) Asbestos

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

2. AIR QUALITY MANAGEMENT

The proposed Under State law, the VCAPCD is required to prepare a plan for air quality improvement for pollutants for which the VCAPCD is in non-compliance. The VCAPCD's 2016 Air Quality Management Plan (AQMP) is an update of the previous 2007 AQMP. The 2016 AQMP, adopted on February 14, 2017, incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2007 AQMP, including the approval of the new federal 8-hour ozone standard of 0.070 ppm that was finalized in 2015. This Plan builds upon the approaches taken in the 2007 AQMP for the attainment of federal ozone standards and includes attainment and reasonable further progress demonstrations of the new federal eight-hour ozone standard (VCAPCD 2017).

3. AIR POLLLUTANT EMISSIONS THRESHOLDS

The 2016 AQMP provides a strategy for the attainment of State and federal air quality standards. The VCAPCD has adopted guidelines for quantifying and determining the significance of air quality emissions (VCAPCD 2003). The VCAPCD considers operational air quality impacts to be significant if a project would generate more than 25 pounds per day of ozone precursors reactive organic compounds (ROC) or nitrogen oxides (NOx). For all other criteria pollutants, the VCAPCD considers a significant adverse air quality impact to occur when a project measurably worsens an existing exceedance of a State or federal ambient air quality standard. Furthermore, construction-related air quality impacts are considered significant if fugitive dust emissions are generated in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public. The VCAPCD considers a project to have a significant cumulative adverse air quality impact if project emissions exceed two pounds per day of ROC or NOX and if the project is inconsistent with the population forecasts contained in the AQMP.

4. METHODOLOGY

The following provides a discussion of the methodology used to calculate the construction and operational air emissions. Emissions are estimated using the CalEEMod (Version 2020.4.0) software, which 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 from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.

A. Construction

The construction-related regional air quality impacts have been analyzed for both criteria pollutants and GHGs. Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The input values used in this analysis were adjusted to be project-specific for the construction schedule and the equipment used was based on CalEEMod defaults. The CalEEMod program uses the EMFAC2017 computer program to calculate the emission rates specific for Ventura County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2017 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Daily truck trips and CalEEMod default trip length data were used to assess roadway emissions from

truck exhaust. The maximum daily emissions are estimated values for the worst-case day and do not represent the emissions that would occur for every day of project construction. The maximum daily emissions are compared to the SCAQMD daily regional numeric indicators. Detailed construction equipment lists, construction scheduling, and emission calculations are provided in **Appendix B**.

The project will be required to comply with all applicable regulatory standards, including VCAPCD Rule 55 (Fugitive Dust), Rule 74.2 (Asbestos – Demolition and Renovation), and Rule 74.2 (Architectural Coatings).

Project demolition activities shall be operated in accordance with the Rules and Regulations of the Ventura County Air Pollution Control District, with emphasis on Rule 62.7, *Asbestos – Demolition and Renovation*. Specifically, the applicant shall submit an AB3205 Form to VCAPCD for approval. In addition, the contractor shall notify VCAPCD 10 business days prior to the abatement commencement, if applicable, by submitting a Notification of Demolition or Renovation Form. Demolition and/or renovation activities shall be conducted in compliance with VCAPCD Rule 62.7, Asbestos – Demolition and Renovation.

The phases of the construction activities which have been analyzed below for each phase are: (1) demolition, (2) grading, (3) building construction, (4) paving, and (5) application of architectural coatings. Details pertaining to the project's construction timing and the type of equipment modeled for each construction phase are available in the CalEEMod output in **Appendix B** of this technical report.

B. Operation

The operations-related criteria air quality impacts created by the proposed project have been analyzed through the use of the CalEEMod model. The operating emissions were based on the year 2023, which is the anticipated opening year for the proposed project. The operations daily emissions printouts from the CalEEMod model are provided in **Appendix B**. The CalEEMod analyzes operational emissions from area sources, energy usage, and mobile sources, which are discussed below.

i) Mobile Sources

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips from the Beltramo Ranch Residential Project Traffic and Circulation Study (TIA) prepared by Associated Transportation Engineers (May 19, 2021) for the proposed project into the CalEEMod Model. The CalEEMod program then applies the emission factors for each trip, which is provided by the EMFAC2017 model, to determine the vehicular traffic pollutant emissions.

ii) Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn

mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping equipment. No changes were made to the default area source parameters.

iii) Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. No changes were made to the default energy usage parameters.

5. AIR QUALITY STANDARDS

A. Significance Thresholds

i) Appendix G of the State CEQA Guidelines

Appendix G of the State CEQA Guidelines states that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make a significance determination. Pursuant to Appendix G, the project would result in a significant impact related to air quality if it would:

- Conflict with or obstruct the implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard;
- 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 CEQA Guidelines Section 15064.7 provides the significance criteria established by the applicable air quality management district or air pollution control district, when available, may be relied upon to make determinations of significance.

6. SHORT-TERM CONSTRUCTION EMISSIONS

Construction activities associated with the proposed project would have the potential to generate air emissions, toxic air contaminant emissions, and odor impacts. Assumptions for the phasing, duration, and required equipment for the construction of the proposed project were obtained from the project applicant. The construction activities for the proposed project are anticipated to include: demolition of 7,402 SF of existing buildings and 74,225 SF of existing asphalt/paving (for a total of 841.5 tons of demolition), grading of the project area (~7.4 acres); construction of 47 single-family dwelling units and 56,000 SF of open space; paving of approximately 1.85 acres of on-site roads; and application of architectural coatings. The project is anticipated to import approximately 2,553 CY of material during grading. An existing triple-wide mobile home (currently on-site) will be returned to the rental agency located approximately 93.8 miles from the project site, in Mira Loma, CA. See Appendix B for more details.

The proposed project is anticipated to start construction no sooner than January 2023 and take approximately 19 months to complete. The project is anticipated to be operational in 2024.

A. Construction-Related Impacts

The construction-related criteria pollutant emissions for each phase are shown below in **Table 1 Construction-Related Regional Pollutant Emissions**. The VCAPCD Thresholds for ROG and NOx do not apply to construction emissions, however they have been included in Table 1 for informational purposes only.

Table 1
Construction-Related Pollutant Emissions

Activity		Pollutant Emissions (pounds/day)					
		ROG	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Demolition	On-Site[1]	2.27	21.48	19.64	0.04	1.61	1.02
	Off-Site[2]	0.06	0.89	0.59	0.01	0.26	0.08
	Subtotal	2.33	22.38	20.23	0.04	1.87	1.10
Grading	On-Site[1]	1.71	17.94	14.75	0.03	7.86	4.14
	Off-Site[2]	0.05	0.36	0.48	0.00	0.17	0.05
	Subtotal	1.76	18.30	15.23	0.03	8.03	4.19
Building Construction	On-Site[1]	1.57	14.38	16.24	0.03	0.70	0.66
	Off-Site[2]	0.26	1.22	2.26	0.01	0.80	0.22
	Subtotal	1.83	15.61	18.51	0.04	1.50	0.88
Paving	On-Site[1]	1.08	9.52	14.63	0.02	0.47	0.43
	Off-Site[2]	0.04	0.03	0.35	0.00	0.12	0.03
	Subtotal	1.12	9.55	14.98	0.02	0.59	0.46
Architectural Coating	On-Site[1]	16.23	1.22	1.81	0.00	0.06	0.06
	Off-Site[2]	0.04	0.03	0.36	0.12	0.03	0.03
	Subtotal	16.27	1.25	2.17	0.13	0.09	0.09
Total for overlapping phases[3]		17.39	10.80	17.15	0.15	0.69	0.56
Maximum Daily Emissions		**17.39**	**22.38**	**20.23**	**0.15**	**8.03**	**4.19**
VCAPCD Thresholds		25	25	NT	NT	NT	NT

Notes:
(1) On-site emissions from equipment operated on-site that is not operated on public roads.
(2) Off-site emissions from equipment operated on public roads.
(3) Painting and paving phases may overlap.
NT = No threshold
Source: CalEEMod Version 2020.4.0.

Through adherence to Rules 55, 74.2 and 62.7, construction emissions would result in less than significant impacts and would not expose sensitive receptors to substantial pollutant concentrations. Although construction-related impacts would be less than significant because of their temporary nature, the VCAPCD recommends measures to minimize construction-related emissions. The project will incorporate

construction-related best management practices (BMPs) as feasible, per VCAPCD recommendations. See Appendix C for BMPs.

B. San Joaquin Valley Fever

There is no recommended threshold for a significant San Joaquin Valley Fever impact. However, listed below are factors that may indicate a project's potential to create significant Valley Fever impacts:

- Disturbance of the top soil of undeveloped land (to a depth of about 12 inches)
- Dry, alkaline, sandy soils.
- Virgin, undisturbed, non-urban areas.
- Windy areas.
- Archaeological resources probable or known to exist in the area (Native American midden sites).
- Special events (fairs, concerts) and motorized activities (motocross track, All Terrain Vehicle activities) on unvegetated soil (non-grass).
- Non-native population (i.e., out-of-area construction workers).

The lead agency should consider the factors above that are applicable to the project or the project site. The likelihood that the Valley Fever fungus may be present and impact nearby land uses (or the project itself) increases with the number of the above factors applicable to the project or the project site. Based on these or other factors, if a lead agency determines that project activities may create a significant Valley Fever impact, the VCAPCD recommends that the lead agency consider the Valley Fever mitigation measures listed in the VCAPCD Guidelines.[2]

Construction activities, including site preparation and grading, would have the potential to release *Coccidioides immitis* spores. Nonetheless, the population of Moorpark has been and will continue to be exposed to Valley Fever from agricultural and construction activities occurring throughout the region. In addition, substantial increases in the number of reported cases of Valley Fever tend to occur only after major ground-disturbing events such as the 1994 Northridge earthquake. Construction of the proposed project is in an area that has been disturbed by previous development and is not excessively windy. The project does not include any "special events" similar to those listed above. Therefore, construction and operation of the proposed project would not significantly increase the risk to public health above existing background levels.

C. Construction-Related Toxic Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to the Office of Environmental Health Hazard Assessment (OEHHA), health effects from TACs are described

[2] *Source: http://www.vcapcd.org/pubs/Planning/VCAQGuidelines.pdf. Section 7.4.2.*

in terms of individual cancer risk based on a lifetime (i.e., 30-year) resident exposure duration. Given the temporary and short-term construction schedule (approximately 19 months), the Project would not result in a long-term (i.e., lifetime or 30-year) exposure as a result of project construction. Furthermore, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed VCAPCD thresholds.

The project would comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. Therefore, impacts from TACs during construction would be less than significant.

D. Construction-Related Odor Impacts

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

E. Fugitive Dust-Related Impacts

The VCAPCD recommends minimizing fugitive dust, especially during grading and excavation operations, rather than quantifying fugitive dust emissions.

Control techniques for fugitive dust generally involve watering, chemical dust control agents for soil stabilization, scheduling of activities, and vehicle speed control. Watering, the most common and generally least expensive method, provides only temporary dust control. Watering also usually requires the use of diesel-powered watering trucks or pumps. The effectiveness of water for fugitive dust control depends greatly on the prevailing weather conditions and frequency of application. Chemical dust control agents provide longer dust suppression, but are not effective in reducing the large portion of construction dust emissions caused by grading, excavation, and cut-and-fill operations. Dust control agents for soil stabilization are useful primarily for application on completed cuts, fills, and unpaved roadways. Fugitive dust emissions from inactive portions of a construction site can be reduced up to 80 percent with chemical stabilizers. Chemical stabilizers, however, may be costly and should be limited to environmentally-safe materials to avoid adverse effects on plant and animal life.

Scheduling activities during periods of low wind speed will also reduce fugitive dust emissions. Low wind speeds typically occur during morning hours. Highest wind speeds are observed during Santa Ana wind

conditions, which commonly occur between October and February with December having the highest frequency of events. Additionally, vehicle speed control can reduce fugitive dust emissions from unpaved roads and areas at construction sites by up to 60 percent, assuming compliance with a 15 miles per hour (mph) on-site speed limit.

During clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering, paving construction roads, or other dust preventive measures using the following procedures:

- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day, so that water penetrates sufficiently to minimize fugitive dust during grading activities. Reclaimed water should be used if available.
- All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved roadways on-site, should be treated to prevent fugitive dust. Measures may include watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate.
- Graded and/or excavated inactive areas of the construction site should be monitored at least weekly for dust stabilization. If a portion of the site is inactive for over four days, soil on-site should be stabilized.
- Signs should be posted limiting on-site traffic to 15 miles per hour.
- All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 20 miles per hour averaged over one hour) so as to prevent excessive amounts of dust.
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust pursuant to California Vehicle Code §23114.
- The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust.

Compliance with Rule 55 will reduce impacts from fugitive dust to less than significant.

7. LONG-TERM OPERATIONAL EMISSIONS

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

A. Operations-Related Air Quality Impacts

The operations-related criteria air quality impacts created by the proposed project have been analyzed through the use of the CalEEMod model. The operating emissions were based on the year 2023, which is the anticipated opening year for the proposed project. The operations daily emissions printouts from the CalEEMod model are provided in Appendix B. As stated previously, CalEEMod analyzes operational emissions from area sources, energy usage, and mobile sources.

i) Mobile Sources

The TIA found that the proposed project will generate a total of 378 net daily trips (444 trips for the proposed use minus 66 trips from the existing church and residential uses being demolished). The mobile source emissions were reported in **Table 2, Operational Pollutant Emissions**.

Table 2:
Operational Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	ROG	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Area Sources[1]	2.22	0.04	3.88	0.00	0.02	0.02
Energy Usage[2]	0.03	0.28	0.12	0.00	0.02	0.02
Mobile Sources[3]	1.31	1.53	12.14	0.02	2.63	0.71
Subtotal Emissions	**3.56**	**1.86**	**16.14**	**0.03**	**2.67**	**0.76**
-Existing Uses Being Removed	-0.79	-0.58	-4.43	-0.01	-0.87	-0.24
Total Emissions	**2.77**	**1.28**	**11.71**	**0.02**	**1.81**	**0.52**
VCAPCD Thresholds	**25**	**25**	**NT**	**NT**	**NT**	**NT**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
(1) Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
(2) Energy usage consists of emissions from generation of electricity and on-site natural gas usage.
(3) Mobile sources consist of emissions from vehicles and road dust.
NT = No threshold.
Source: CalEEMod Version 2020.4.0. Daily Emissions (see Appendix B for daily emissions).

ii) Project Impacts

The worst-case summer or winter criteria pollutant emissions created from the proposed project's long-term operations have been calculated and are shown in Table 2 above. Table 2 shows that even before the emissions related to the removal of the exiting uses are subtracted, none of the analyzed criteria pollutants would exceed the VCAPCD emissions thresholds. Therefore, a less than significant air quality impact would occur from operation of the proposed project and the project would not expose sensitive receptors to substantial pollutant concentrations.

B. CO Emissions Impacts From Project-Related Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a

roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented above.

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

The According to the VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003), a CO hotspot screening analysis should be performed for any project with indirect emissions greater than the ozone project significance threshold of 25 pounds per day that may significantly impact roadway intersections that are currently operating at Levels of Service (LOS) E or F. A CO hotspot is a localized concentration of CO that exceeds the federal one-hour standard of 35.0 parts per million (ppm) or the federal and State eight-hour standard of 9.0 ppm (CARB 2016). As shown in Table 2 above, the proposed project would generate maximum daily indirect mobile CO emissions of 12.14 pounds per day, which would not exceed the ozone significance threshold. Therefore, a CO hotspot screening analysis is not required. Furthermore, the Basin is in conformance with federal and State CO standards, and most air quality monitoring stations no longer report CO levels. No stations in the vicinity of the project site have monitored CO since 2004. In 2004, the Simi Valley-Cochran Street Station detected an 8-hour maximum CO concentration of 2.62 ppm, which is below the federal and State standard of 9.0 ppm (CARB n.d.). As shown in Table 2, the project would generate maximum net daily CO emissions of approximately 11.71 pounds per day (after subtraction of emissions from the existing uses being removed). Based on the low background level of CO in the project area, ever-improving vehicle emissions standards for new cars in accordance with federal and State regulations, and the project's low level of operational CO emissions, the project would not result in the creation of new CO hotspots or contribute substantially to existing CO hotspots.

C. Operations-Related Odor Impacts

Based on the VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003), a project may have a significant impact if a project would generate an objectionable odor to a degree that would cause injury, detriment, nuisance, or annoyance to a considerable number of persons or to the public, or which would endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Land uses and industrial operations known to emit objectionable odors include wastewater treatment facilities, food processing facilities, coffee roasters, fiberglass operations, refineries, feed lots/dairies, and composting facilities. Residential and commercial uses are not included on this list. Therefore, no impact related to objectionable odors or other emissions would occur.

8. AIR QUALITY COMPLIANCE

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

A. Air Quality Compliance

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency. Based on the VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003), a significant air quality impact may occur if the project would cause the existing population to exceed the growth forecasts contained in the AQMP or if the project would be inconsistent with the emission reduction strategies contained in the AQMP.

The 2016 AQMP was developed using the Southern California Association of Governments' (SCAG) population forecasts contained in the 2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). Moorpark has a current population of 37,044 residents with an average household size of 3.3 persons.[3] SCAG forecasts that the population of Moorpark will grow to 43,000 residents by 2040, which is an increase of 5,980 persons (16 percent) relative to the 2019 population (SCAG 2016).

Based on the current average household size in the City, the 47 single-family dwelling unit project would add an estimated 155 residents. Therefore, implementation of the proposed project would increase the City's existing population to 37,199 residents (an increase of less than one percent), which would be within SCAG's 2040 population forecast for Moorpark (SCAG 2016).

The City currently contains approximately 11,092 households, and SCAG forecasts that the housing stock of Moorpark will reach 13,100 housing units by 2040 (CDOF 2019a, SCAG 2016). The 47 single-family dwelling unit project would increase the City's existing housing stock to 11,139 units, which is well within SCAG's forecasts for the City.

The project site has a current land use of high density residential (H), open space, and low density residential (L) and is pursuing a General Plan Amendment to very high density (VH). The Project is compliant with R-1 zoning standards; however, the project is seeking RPD zoning and high density residential (R-1) zoning throughout. Therefore, the proposed project is not currently consistent with all of

[3] *Source: https://www.moorparkca.gov/386/Population-Income-Education-Housing*

the existing land use and zoning designations. However, once the Change of Zone and General Plan Amendment are approved, the project would be consistent with the zoning and land use designations.

Although the project, Change of Zone and General Plan Amendment may initially result in an inconsistency with the AQMP on paper, the inconsistency would not necessarily constitute a conflict with the AQMP. Furthermore, the proposed residential use is not expected to increase the number of trips, and/or increase the overall vehicle miles traveled in an affected area, as higher density residential uses have lower trip generation rates than single family residential land uses. The VCAPCD acknowledges that strict consistency with all aspects of the AQMP is not required in order to make a finding of no conflict. Rather, a project is considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The project would implement contemporary energy-efficient technologies and regulatory/operational programs required per Title 24, CalGreen and City standards. Generally, compliance with VCAPCD emissions reductions and control requirements also act to reduce project air pollutant emissions. In combination, project emissions-reducing design features and regulatory/operational programs are consistent with and support overarching AQMP air pollution reduction strategies. Project support of these strategies promotes timely attainment of AQMP air quality standards and would bring the project into conformance with the AQMP. As shown by the results of this air analysis, the project's emissions do not exceed any VCAPCD thresholds. Therefore, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP.

Based on the above, the project would not conflict with the growth forecasts contained in the 2016 AQMP, and the impact would be less than significant.

III. GLOBAL CLIMATE CHANGE ANALYSIS

1. EXISTING GREENHOUSE GAS ENVIRONMENT

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions,[8] followed by electricity generation. Emissions of CO_2 and nitrous oxide (NOx) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

A. Water Vapor

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

[8] California Climate Investments (https://www.caclimateinvestments.ca.gov/about-cci)

B. Carbon Dioxide (CO_2)

The natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s. Each of these activities has increased in scale and distribution. CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC Fifth Assessment Report, 2014) Emissions of CO_2 from fossil fuel combustion and industrial processes contributed about 78% of the total GHG emissions increase from 1970 to 2010, with a similar percentage contribution for the increase during the period 2000 to 2010. Globally, economic and population growth continued to be the most important drivers of increases in CO_2 emissions from fossil fuel combustion. The contribution of population growth between 2000 and 2010 remained roughly identical to the previous three decades, while the contribution of economic growth has risen sharply.

C. Nitrous Oxide (N_2O)

Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration of this GHG was documented at 314 parts per billion (ppb). N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is also commonly used as an aerosol spray propellant, (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and in race cars).

D. Hydrofluorocarbons (HFC)

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

E. Perfluorocarbons (PFC)

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

atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

F. Sulfur Hexafluoride (SF_6)

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

G. Aerosols

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

H. Global Warming Potential

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO_2). The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases (e.g., to compile a national GHG inventory), and allows policymakers to compare emissions reduction opportunities across sectors and gases. A summary of the atmospheric lifetime and the global warming potential of selected gases are summarized in **Table 3, Global Warming Potentials and Atmospheric Lifetimes**. As shown in **Table 3,** the global warming potential of GHGs ranges from 1 to 22,800.

Table 3
Global Warming Potentials and Atmospheric Lifetimes

Gas	Atmospheric Lifetime	Global Warming Potential[1] (100 Year Horizon)
Carbon Dioxide (CO_2)	—[2]	1
Methane (CH_4)	12	28-36
Nitrous Oxide (NO)	114	298
Hydrofluorocarbons (HFCs)	1-270	12-14,800
Perfluorocarbons (PFCs)	2,600-50,000	7,390-12,200
Nitrogen trifluoride (NF_3)	740	17,200

Table 3
Global Warming Potentials and Atmospheric Lifetimes

Gas	Atmospheric Lifetime	Global Warming Potential[1] (100 Year Horizon)
Sulfur Hexafluoride (SF_6)	3,200	22,800

Notes:
(1) Compared to the same quantity of CO_2 emissions.
(2) Carbon dioxide's lifetime is poorly defined because the gas is not destroyed over time, but instead moves among different parts of the ocean–atmosphere–land system. Some of the excess carbon dioxide will be absorbed quickly (for example, by the ocean surface), but some will remain in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments.

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

2. GREENHOUSE GAS STANDARDS AND REGULATION

A. International

i) Montreal Protocol

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

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

ii) The Paris Agreement

The Paris Agreement became effective on November 4, 2016. Thirty days after this date at least 55 Parties to the United Nations Framework Convention on Climate Change (Convention), accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions, had deposited their instruments of ratification, acceptance, approval, or accession with the Depositary.

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

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework. Although the Trump administration withdrew the United States federal government from the Paris Agreement on November 4, 2020, the current administration reversed course and the federal government rejoined the Paris Agreement on January 20, 2021.

B. Federal

The United States Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address GHGs. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO2 gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the ENERGY STAR labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO_2 and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

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

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere

threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions will not themselves impose any requirements on industry or other entities. However, it is a prerequisite to finalizing the EPA's proposed GHG emission standards for light-duty vehicles, which were jointly proposed by the EPA and Department of Transportation on September 15, 2009.

i) Clean Air Act

In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), the U.S. Supreme Court held in April of 2007 that the USEPA has statutory authority under Section 202 of the federal Clean Air Act (CAA) to regulate GHGs. The court did not hold that the USEPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA. The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO2, CH4, N2O, HFCs, PFCs, and SF6) on December 7, 2009. The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the CAA consistently with the United States Supreme Court decision. The USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not, by themselves, impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

ii) Energy Independence Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and

- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.[9]

iii) Executive Order 13432

In response to the Massachusetts v. Environmental Protection Agency ruling, the President signed Executive Order 13432 on May 14, 2007, directing the USEPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court's decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. Light-Duty Vehicle Greenhouse Gas and Corporate Average Fuel Economy Standards.

On May 19, 2009, President Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The adopted federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpasses the prior Corporate Average Fuel Economy standards (CAFE)[10] and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO2 per mile by model year 2016, based on USEPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.[11] In 2017, the USEPA recommended no change to the GHG standards for light-duty vehicles for model years 2022-2025.

In August 2018, the USEPA and NHTSA proposed the Safer Affordable Fuel-Efficient Vehicles Rule that would, if adopted, maintain the CAFE and CO2 standards applicable in model year 2020 for model years

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[9] *A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.*

[10] *The Corporate Average Fuel Economy standards are regulations in the United States, first enacted by Congress in 1975, to improve the average fuel economy of cars and light trucks. The U.S Department of Transportation has delegated the National Highway Traffic Safety Administration as the regulatory agency for the Corporate Average Fuel Economy standards.*

[11] *United States Environmental Protection Agency, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks, August 2012, https://nepis.epa.gov/ Exe/ZyPDF.cgi/P100EZ7C.PDF?Dockey=P100EZ7C.PDF.*

2021 through 2026. The estimated CAFE and CO2 standards for model year 2020 are 43.7 mpg and 204 grams of CO2 per mile for passenger cars and 31.3 mpg and 284 grams of CO2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. The proposal, if adopted, would also exclude CO2- equivalent emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020.[12]

C. State of California

i) California Air Resources Board

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards (California Ambient Air Quality Standards [CAAQS]), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In 2004, the California Air Resources Board (CARB) adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants (Title 13 California Code of Regulations [CCR], Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure generally does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given location with certain exemptions for equipment in which idling is a necessary function such as concrete trucks. While this measure primarily targets diesel particulate matter emissions, it has co-benefits of minimizing GHG emissions from unnecessary truck idling.

In 2008, CARB approved the Truck and Bus regulation to reduce particulate matter and nitrogen oxide emissions from existing diesel vehicles operating in California (13 CCR, Section 2025, subsection (h)). CARB has also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation, adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. While these regulations primarily target reductions in

[12] *National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf.*

criteria air pollutant emission, they have co-benefits of minimizing GHG emissions due to improved engine efficiencies.

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

ii) Assembly Bill 1493

California Assembly Bill 1493 enacted on July 22, 2002, required the CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO_2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

iii) Executive Order S-3-05

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

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

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

iv) Assembly Bill 32 (California Health and Safety Code, Division 25.2. – California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines GHGs as CO2, CH4, N2O, HFCs, PFCs, and SF6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that

reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020.

v) Senate Bill 32 and Assembly Bill 197

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

vi) Climate Change Scoping Plan (2008)

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (Health and Safety Code section 38561 (h)). CARB developed an AB 32 Scoping Plan that contains strategies to achieve the 2020 emissions cap. The initial Scoping Plan was approved in 2008, and contains a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives.

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 MMTCO2e using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under no-action-taken (NAT) conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 MMTCO2e (using GWP values from the IPCC SAR). Therefore, under the original projections, the state must reduce its 2020 NAT emissions by 28.4 percent in order to meet the 1990 target of 427 MMTCO2e.

vii) First Update to the Climate Change Scoping Plan (2014)

The First Update to the Scoping Plan was approved by CARB in May 2014 and builds upon the initial Scoping Plan with new strategies and recommendations. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 MMTCO2e. CARB also updated the State's 2020 NAT emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently adopted for motor vehicles and renewable energy. CARB's projected statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 MMTCO2e.

viii) 2017 Climate Change Scoping Plan

In response to the 2030 GHG reduction target, CARB adopted the 2017 Climate Change Scoping Plan at a public meeting held in December 2017. The 2017 Scoping Plan outlines the strategies the State will implement to achieve the 2030 GHG reduction target of 40 percent below 1990 levels. The 2017 Scoping Plan also addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. The 2017 Scoping Plan considered the Scoping Plan Scenario and four alternatives for achieving the required GHG reductions but ultimately selected the Scoping Plan Scenario.

CARB states that the Scoping Plan Scenario "is the best choice to achieve the State's climate and clean air goals." [13] Under the Scoping Plan Scenario, the majority of the reductions would result from the continuation of the Cap-and-Trade regulation. Additional reductions are achieved from electricity sector standards (i.e., utility providers to supply at least 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. The alternatives were designed to consider various combinations of these programs, as well as consideration of a carbon tax in the event the Cap-and-Trade regulation is not continued. However, in July 2017, the California Legislature voted to extend the Cap-and-Trade regulation to 2030. Implementing this Scoping Plan will ensure that California's climate actions continue to promote innovation, drive the generation of new jobs, and achieve continued reductions of smog and air toxics. The ambitious approach draws on a decade of successful programs that address the major sources of climate-changing gases in every sector of the economy:

- More Clean Cars and Trucks: The plan sets out far-reaching programs to incentivize the sale of millions of zero-emission vehicles, drive the deployment of zero-emission trucks, and shift to a cleaner system of handling freight statewide.
- Increased Renewable Energy: California's electric utilities are ahead of schedule meeting the requirement that 33 percent of electricity come from renewable sources by 2020. The Scoping Plan guides utilities to 50 percent renewables, as required under SB 350.
- Slashing Super-Pollutants: The plan calls for a significant cut in super-pollutants such as methane and HFC refrigerants, which are responsible for as much as 40 percent of global warming.
- Cleaner Industry and Electricity: California's renewed cap-and-trade program extends the declining cap on emissions from utilities and industries and the carbon allowance auctions. The auctions will continue to fund investments in clean energy and efficiency, particularly in disadvantaged communities.

[13] *California Air Resources Board, California's 2017 Climate Change Scoping Plan, November 2017, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf*

- Cleaner Fuels: The Low Carbon Fuel Standard will drive further development of cleaner, renewable transportation fuels to replace fossil fuels.
- Smart Community Planning: Local communities will continue developing plans which will further link transportation and housing policies to create sustainable communities.
- Improved Agriculture and Forests: The Scoping Plan also outlines innovative programs to account for and reduce emissions from agriculture, as well as forests and other natural lands.

The 2017 Scoping Plan also evaluates reductions of smog-causing pollutants through California's climate programs.

ix) Senate Bill 32, California Global Warming Solutions Act 2006

(1) The California Global Warming Solutions Act of 2006 designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective greenhouse gas emissions reductions. This bill would require the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.

(2) This bill would become operative only if AB 197 of the 2015–16 Regular Session is enacted and becomes effective on or before January 1, 2017. AB 197 requires that the California Air Resources Board, which directs implementation of emission-reduction programs, should target direct reductions at both stationary and mobile sources. AB 197 of the 2015-2016 Regular Session was approved on September 8, 2016.

x) Executive Order S-1-07

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

On April 23, 2009, the CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are

established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than during the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

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

xi) Senate Bill 97

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

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

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

- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation".
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

xii) Senate Bill 100

Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

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

xiii) Senate Bill 375

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

The proposed project is located within the Southern California Association of Governments (SCAG) jurisdiction, which has authority to develop the SCS or APS. For the SCAG region, the targets set by the CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 19 percent below 2005 per capita GHG emissions levels by 2035. These reduction targets became effective October 2018.

xiv) Senate Bill X7-7

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

xv) Assembly Bill 939 and Senate Bill 1374

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

xvi) California Code of Regulations (CCR) Title 24

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

The Energy Commission adopted 2008 Standards on April 23, 2008, and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. CalEEMod modeling defaults to 2008 standards. 2013 Standards were approved and have been effective since July 1, 2014. 2016 Standards were adopted January 1, 2017. 2019 standards were published July 1, 2019 and became effective January 1, 2020.

All buildings for which an application for a building permit is submitted on or after January 1, 2020 must follow the 2019 standards. The 2016 residential standards were estimated to be approximately 28 percent

more efficient than the 2013 standards, whereas the 2019 residential standards are estimated to be approximately 7 percent more efficient than the 2016 standards. The California solar initiative mandate requires new construction homes to have a solar photovoltaic (PV) system as an electricity source. This code, which went into effect on January 1, 2020, applies to both single-family homes and multi-family homes that are up to three stories high. Once rooftop solar electricity generation is factored in, 2019 residential standards are estimated to be approximately 53 percent more efficient than the 2016 standards. Under the 2019 standards, nonresidential buildings are estimated to be approximately 30 percent more efficient than the 2016 standards[14]. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

xvii) California Green Building Standards

2019 CALGreen Code: During the 2019-2020 fiscal year, the HCD updated CALGreen through the 2019 Triennial Code Adoption Cycle.

HCD modified the best management practices for stormwater pollution prevention adding Section 5.106.2 for projects that disturb one or more acres of land. This section requires projects that disturb one acre or more of land or less than one acre of land but are part of a larger common plan of development or sale must comply with the postconstruction requirement detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board. The NPDES permits require postconstruction runoff (post-project hydrology) to match the preconstruction runoff pre-project hydrology) with installation of postconstruction stormwater management measures.

HCD added sections 5.106.4.1.3 and 5.106.4.1.5 in regards to bicycle parking. Section 5.106.4.1.3 requires new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility. In addition, Section 5.106.4.1.5 states that acceptable bicycle parking facility for Sections 5.106.4.1.2 through 5.106.4.1.4 shall be convenient from the street and shall meeting one of the following: (1) covered, lockable enclosures with permanently anchored racks for bicycles; (2) lockable bicycle rooms with permanently anchored racks; or (3) lockable, permanently anchored bicycle lockers.

HCD amended section 5.106.5.3.5 allowing future charging spaces to qualify as designated parking for clean air vehicles.

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[14] *California Energy Commission, Efficiency Division, 2019 Building Energy Efficiency Standards, Frequently Asked Questions, website: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf, accessed: December 11, 2020.*

HCD updated section 5.303.3.3 in regards to showerhead flow rates. This update reduced the flow rate to 1.8 GPM.

HCD amended section 5.304.1 for outdoor potable water use in landscape areas and repealed sections 5.304.2 and 5.304.3. The update requires nonresidential developments to comply with a local water efficient landscape ordinance or the current California Department of Water Resource's' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. Some updates were also made in regards to the outdoor potable water use in landscape areas for public schools and community colleges.

HCD updated Section 5.504.5.3 in regards to the use of MERV filters in mechanically ventilated buildings. This update changed the filter use from MERV 8 to MERV 13. MERV 13 filters are to be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

xviii) Executive Order B-30-15

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

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

xix) Executive Order B-29-15

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

xx) Executive Order B-37-16

Executive Order B-37-16, continuing the State's adopted water reductions, was signed into law on May 9, 2016. The water reductions build off the mandatory 25 percent reduction called for in EO B-29-15.

xxi) Senate Bill X1 2

Signed into law in April 2011, Senate Bill (SB)X1 2, requires one-third of the State's electricity to come from renewable sources. The legislation increases California's current 20 percent renewables portfolio standard target in 2010 to a 33 percent renewables portfolio standard by December 31, 2020.

xxii) Senate Bill 350

Signed into law October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. To help ensure these goals are met and the greenhouse gas emission reductions are realized, large utilities will be required to develop and submit Integrated Resource Plans (IRPs). These IRPs will detail how each entity will meet their customers resource needs, reduce greenhouse gas emissions, and ramp up the deployment of clean energy resources.

xxiii) Energy Sector and CEQA Guidelines Appendix F

The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods. The 2019 update to the Energy Efficiency Standards for Residential and Nonresidential Buildings focuses on several key areas to improve the energy efficiency of renovations and addition to existing buildings as well as newly constructed buildings and renovations and additions to existing buildings. The major efficiency improvements to the residential Standards involve improvements for attics, walls, water heating, and lighting, whereas the major efficiency improvements to the nonresidential Standards include alignment with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1-2013 national standards. Furthermore, the 2019 update requires that enforcement agencies determine compliance with CCR, Title 24, Part 6 before issuing building permits for any construction.[15]

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."16 As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in

[15] *California Energy Commission, 2016 Building Energy Efficiency Standards, June 2015, http://www.energy.ca.gov/2015publications/CEC-400-2015-037/CEC-400-2015-037-CMF.pdf*

[16] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and nonresidential uses; the new measures took effect on January 1, 2020.

D. Regional – Ventura County Air Pollution Control District

The VCAPCD has not adopted GHG emissions thresholds. Therefore, per VCAPCD guidance[17] this analysis uses the South Coast Air Quality Management District (SCAQMD) draft GHG emissions threshold of 3,000 MTCO2e/year for all land uses.

i) SCAQMD Regulation XXVII, Climate Change

SCAQMD Regulation XXVII currently includes three rules:

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

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

ii) SCAQMD Threshold Development

On December 5, 2008, the SCAQMD Governing Board adopted an interim greenhouse gas significance threshold for stationary sources, rules, and plans where the SCAQMD is lead agency (SCAQMD permit

[17] http://www.vcapcd.org/pubs/Planning/GHGThresholdReportRevised.pdf

threshold). The SCAQMD permit threshold consists of five tiers. However, the SCAQMD is not the lead agency for this project. Therefore, the five permit threshold tiers do not apply to the proposed project.

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

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

The SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap carbon dioxide concentrations at 450 ppm, thus stabilizing global climate. Specifically, the Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to a CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact report, which includes analyzing feasible alternatives and imposing feasible mitigation measures. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90 percent emission capture rate sets the emission threshold low enough

to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that staff estimates that these GHG emissions would account for slightly less than one percent of future 2050 statewide GHG emissions target (85 MMTCO2eq/year). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to BACT for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility.

E. Local – City of Moorpark

The VCAPCD, Ventura County, and the City of Moorpark have not adopted plans or policies related to GHG emission reductions.

3. SIGNIFICANCE THRESHOLDS

A. Appendix G of State CEQA Guidelines

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

- *The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;*
- *Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;*
- *The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions*[18]*.*

B. Thresholds of Significance for this Project

The VCAPCD, Ventura County, and the City of Moorpark have not developed a numerical significance threshold or adopted plans or policies related to GHG emission reductions. Therefore, as stated previously, per VCAPCD guidance, the SCAQMD draft GHG emissions threshold of 3,000 MTCO2e/year was used.

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

4. METHODOLOGY

In view of the above considerations, this analysis also quantifies the project's total annual GHG emissions for informational purposes, taking into account the GHG emission reduction features that would be incorporated into the Project's design.

The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water, and construction equipment. The following provides the methodology used to calculate the project-related GHG emissions and the project impacts.

CalEEMod Version 2020.4.0 was used to calculate the GHG emissions from the proposed project. The CalEEMod Annual Outputs for both the existing uses (being removed) and for the proposed project are available in Appendix B. Each source of GHG emissions is described in greater detail below.

A. Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. No changes were made to the default area source emissions.

B. Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. The energy use calculations provided below represent a worst-case scenario as the project will be required to provide PV solar panels which would reduce the project's energy consumption. No changes were made to the default energy usage parameters.

C. Mobil Sources

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips from the Beltramo Ranch Residential Project Traffic and Circulation Study (TIA) prepared by Associated Transportation Engineers (May 19, 2021) for the proposed project into the CalEEMod Model. The TIA found that the proposed project will generate a total of 378 net daily trips (444 trips for the proposed use minus 66 trips from the existing church and residential uses being demolished). See Section II for details.

D. Waste

Waste includes the GHG emissions generated from the processing of waste from the proposed project as well as the GHG emissions from the waste once it is interred into a landfill. AB 341 requires that 75 percent of waste be diverted from landfills by 2020, this analysis conservatively assumed that 50 percent of solid waste would be recycled and the reductions for this are shown in the mitigated CalEEMod output values. No other changes were made to the default waste parameters.

E. Water

Water includes the water used for the interior of the building as well as for landscaping and is based on the GHG emissions associated with the energy used to transport and filter the water. CalGreen requires a 20 percent reduction in indoor water use and water efficient irrigation systems, this regulation was incorporated into the analysis. No other changes were made to the default water usage parameters.

F. Construction

The construction-related GHG emissions were also included in the analysis and were based on a 30-year amortization rate as recommended in the SCAQMD GHG Working Group meeting on November 19, 2009. The construction-related GHG emissions were calculated by CalEEMod using the methodology detailed above in *Section II, Air Quality Analysis*, of this technical report.

5. PROJECT GREENHOUSE GAS EMISSIONS

The GHG emissions have been calculated based on the parameters described above. A summary of the results is shown in **Table 4, Project-Related Greenhouse Gas Emissions**. As shown in **Table 4**, the project's total emissions (with incorporation of regulatory requirements (CalGreen and AB 341) and subtraction of emissions from the existing uses being removed) would be 480.17 MTCO2e per year.

Table 4
Project-Related Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	**NonBio-CO_2**	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Area Sources[1]	0.00	0.57	0.57	0.00	0.00	0.58
Energy Usage[2]	0.00	148.60	148.60	0.01	0.00	149.30
Mobile Sources[3]	0.00	393.81	393.81	0.03	0.02	400.06
Waste[4]	5.99	0.00	5.99	0.35	0.00	14.85
Water[5]	0.78	12.87	13.65	0.08	0.00	16.26
Construction[6]	0.00	22.41	22.41	0.01	0.00	22.66
Sequestration[7]						-12.21
Subtotal Emissions	6.77	578.08	584.85	0.47	0.02	**591.49**
-Existing uses being removed	-8.50	-88.92	-97.41	-0.51	0.00	-111.33
Total Emissions	-1.73	489.07	487.34	-0.04	0.02	**480.17**
SCAQMD Draft Threshold						**3,000**
Exceeds Threshold?						**No**

Table 4
Project-Related Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e

Notes:
(1) Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
(2) Energy usage consist of GHG emissions from electricity and natural gas usage.
(3) Mobile sources consist of GHG emissions from vehicles
(4) Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills (AB341 applied).
(5) Water includes GHG emissions from electricity used for transport of water and processing of wastewater (CalGreen standards applied).
(6) Construction GHG emissions CO2e based on a 30-year amortization rate.
(7) CO2 sequestration from the planting of ~345 trees (244.24 MTCO2e/20 years [trees' lifetime])

Source: CalEEMod Version 2020.4.0 for Opening Year 2024 and existing uses (2023).

6. CONSISTENCY WITH APPLICABLE GREENHOUSE GAS REDUCTION PLANS AND POLICIES

The proposed project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. As stated previously, the neither the City of Moorpark nor the VCAPCD currently have a Climate Action Plan; therefore, the project has been compared to the goals of the CARB Scoping Plan.

Scoping Plan

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

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

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of

14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

In May 2014, CARB released its *First Update to the Climate Change Scoping Plan* (CARB 2014). This *Update* identifies the next steps for California's leadership on climate change. While California continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

In November 2017, CARB release the 2017 Scoping Plan. This Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals, and includes a description of a suite of specific actions to meet the State's 2030 GHG limit. In addition, Chapter 4 provides a broader description of the many actions and proposals being explored across the sectors, including the natural resources sector, to achieve the State's mid and long-term climate goals.

Guided by legislative direction, the actions identified in the 2017 Scoping Plan reduce overall GHG emissions in California and deliver policy signals that will continue to drive investment and certainty in a low carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and Trade Program, which constrains and reduces emissions at covered sources.

As the latest, 2017 Scoping Plan builds upon previous versions, project consistency with applicable strategies of both the 2008 and 2017 Plan are assessed in **Table 5, Project Consistency with CARG Scoping Plan Policies and Measures**.

Table 5
Project Consistency with CARB Scoping Plan Policies and Measures

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	**No conflict.** These are CARB enforced standards; vehicles that access the proposed project, that are required to comply with the standards, will comply with the strategy.

Table 5
Project Consistency with CARB Scoping Plan Policies and Measures

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**No conflict.** The proposed project will be compliant with the current Title 24 standards.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	**No conflict.** These are CARB enforced standards; vehicles that access the proposed project that are required to comply with the standards will comply with the strategy.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	**No conflict.** These are CARB enforced standards; vehicles that access the proposed project, that are required to comply with the standards, will comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	**No conflict.** These are CARB enforced standards; vehicles that access the proposed project, that are required to comply with the standards, will comply with the strategy.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**No conflict**. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2019 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The proposed project will be subject to these mandatory standards.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	**No conflict.** CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the proposed project that are required to comply with the measures will comply with the strategy.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	**No conflict.** The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The proposed project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required in 2020 per AB 341.

Table 5
Project Consistency with CARB Scoping Plan Policies and Measures

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	**No conflict.** The proposed project will comply with all applicable City ordinances and CAL Green requirements.
2017 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	**Project Compliance with Recommended Action**
Implement Mobile Source Strategy: Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Car regulations.	**No conflict.** These are CARB enforced standards; vehicles that access the proposed project, that are required to comply with the standards, will comply with the strategy
Implement Mobile Source Strategy: At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025 and at least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.	**No conflict.** These are CARB enforced standards; vehicles that access the proposed project, that are required to comply with the standards, will comply with the strategy.
Implement Mobile Source Strategy: Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.	**No conflict.** These are CARB enforced standards; vehicles that access the proposed project, that are required to comply with the standards, will comply with the strategy
Implement Mobile Source Strategy: Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.	**No conflict**. These are CARB enforced standards; vehicles that access the proposed project, that are required to comply with the standards, will comply with the strategy
Implement SB 350 by 2030: Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	**No conflict.** The proposed project will be compliant with the current Title 24 standards.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	**No conflict.** The proposed project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply with the 75 percent reduction required by 2020 per AB 341.

Source: CARB Scoping Plan (2008 and 2017)

As shown in Table 5 above, the project is consistent with the applicable strategies and would result in a less than significant impact. Therefore, the project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

7. CUMULATIVE GREENHOUSE GAS IMPACTS

Although the project is expected to emit GHGs, the emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG from more than one project and many sources in the atmosphere that may result in global climate change. Therefore, in the case of global climate change, the proximity of the project to other GHG emission generating activities is not directly relevant to the determination of a cumulative impact because climate change is a global condition. According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective."[19] The resultant consequences of that climate change can cause adverse environmental effects. A project's GHG emissions typically would be very small in comparison to state or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change.

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

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

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations to achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which was phased in starting in 2012.

Therefore, as the project's emissions meet the threshold for compliance with Executive Order S-3-05, the project's emissions also comply with the goals of AB 32 and the Scoping Plan. Additionally, as the project meets the current interim emissions targets/thresholds established by SCAQMD, the project would also be on track to meet the reduction target of 40 percent below 1990 levels by 2030 mandated by SB-32. Furthermore, the majority of the post 2020 reductions in GHG emissions are addressed via regulatory

[19] *Source: California Air Pollution Control Officers Association, CEQA & Climate change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, (2008).*

requirements at the State level and the project will be required to comply with these regulations as they come into effect.

As discussed previously, the project would emit less than 3,000 MTCO2e/year and would not conflict with the CARB Scoping Plan. Therefore, the project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable.

IV. EMISSIONS REDUCTION MEASURES

1. CONSTRUCTION MEASURES

Adherence to VCAPCD Rule 55 (Fugitive Dust), Rule 74.2 (Asbestos – Demolition and Renovation), and Rule 74.2 (Architectural Coatings) are required.

2. OPERATIONAL MEASURES

None required.

V. REFERENCES

Associated Transportation Engineers

2021 Traffic and Circulation Study For the Beltramo Ranch Residential Project, City of Moorpark. May 19.

California Air Resources Board

2008 Resolution 08-43

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2008 Climate Change Scoping Plan, a framework for change.

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2013 Almanac of Emissions and Air Quality.

Source: https://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm

2014 First Update to the Climate Change Scoping Plan, Building on the Framework Pursuant to AB32, the California Global Warming Solutions Act of 2006. May.

2017 California's 2017 Climate Change Scoping Plan. November.

City of Moorpark

1986 General Plan

Governor's Office of Planning and Research

2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2018 CEQA Guideline Sections to be Added or Amended

Intergovernmental Panel on Climate Change (IPCC).

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

South Coast Air Quality Management District (SCAQMD)

2011 California Environmental Quality Act (CEQA) And Federal Conformity Guidelines. February

Office of Environmental Health Hazard Assessment

2015 Air Toxics Hot Spots Program Risk Assessment Guidelines

Southern California Association of Governments

2016 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

U.S. Environmental Protection Agency (EPA)

2017 Understanding Global Warming Potentials

(Source: https://www.epa.gov/ghgemissions/understanding-global-warming-potentials)

U.S. Geological Survey

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

VI. LIST OF ACRONYMS AND ABBREVIATIONS

AQMP	Air Quality Management Plan
BACT	Best Available Control Technologies
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HIDPM	Hazard Index Diesel Particulate Matter
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact

PPM	Parts per million
PPB	Parts per billion
ROG	Reactive Organic Gases (aka ROC or VOC)
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
TAC	Toxic air contaminants
VCAPCD	Ventura County Air Pollution Control District
VOC	Volatile organic compounds

APPENDICES

Appendix A: CalEEMod Model Daily Emissions Printouts

Appendix B: CalEEMod Annual Emissions Printouts

Appendix C: Emissions Reduction and Dust Control BMP Measures

APPENDIX A

CalEEMod Model Daily Emissions Printouts

Beltramo Ranch - Ventura County, Summer

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

Beltramo Ranch

Ventura County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.85	Acre	1.85	80,586.00	0
Other Non-Asphalt Surfaces	56.00	1000sqft	1.29	56,000.00	0
Single Family Housing	47.00	Dwelling Unit	4.26	84,600.00	144

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 47 SFDs with ~1.85 ac of on-site roads, ~56,000 SF of open space on ~7.4 acres

Construction Phase - Construction to start ~ Jan 2023 and take ~19 months to complete.

Trips and VMT - 1 vendor trip added to demo for the removal and transport of the triple-wide trailer offsite to 11450 Mission Blvd, Mira Loma (93.8 miles). Vehicle calss changed to HHDT.

Demolition - 7,402 SF of demo (4,274 SF of existing residences and church, 3,128 SF of mobile homes) = 340.5 tons. 74,225 SF of asphalt and paving = 501 tons. Total tons of demo = 841.5 tons

Grading - ~2553 CY of import.

Architectural Coating - Area of roads to be painted = 6% of 80,586 SF = 4,835 SF

Area Coating - Area of roads to be painted = 6% of 80,586 SF = 4,835 SF

Sequestration - ~345 new trees to be planted on-site

Beltramo Ranch - Ventura County, Summer

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

Construction Off-road Equipment Mitigation -

Water Mitigation - 20% reduction in indoor water use per CalGreen requirements.

Waste Mitigation - Assumed least 50% of waste will be diverted.

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	8,195.00	4,835.00
tblAreaCoating	Area_Parking	8195	4835
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	120.00
tblConstructionPhase	NumDays	20.00	55.00
tblConstructionPhase	NumDays	20.00	55.00
tblGrading	MaterialImported	0.00	2,553.00
tblLandUse	LotAcreage	15.26	4.26
tblSequestration	NumberOfNewTrees	0.00	345.00
tblTripsAndVMT	VendorTripLength	7.30	93.80
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT

2.0 Emissions Summary

Beltramo Ranch - Ventura County, 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	2.3236	22.3395	20.2324	0.0440	7.2552	1.0047	8.0332	3.4706	0.9349	4.1864	0.0000	4,311.5900	4,311.5900	1.0840	0.0950	4,361.2226
2024	17.3855	14.5800	18.2997	0.0369	0.7906	0.6226	1.4132	0.2138	0.5856	0.7995	0.0000	3,608.6998	3,608.6998	0.7356	0.0929	3,652.4123
Maximum	**17.3855**	**22.3395**	**20.2324**	**0.0440**	**7.2552**	**1.0047**	**8.0332**	**3.4706**	**0.9349**	**4.1864**	**0.0000**	**4,311.5900**	**4,311.5900**	**1.0840**	**0.0950**	**4,361.2226**

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	2.3236	22.3395	20.2324	0.0440	3.3581	1.0047	4.1361	1.5867	0.9349	2.3025	0.0000	4,311.5900	4,311.5900	1.0840	0.0950	4,361.2226
2024	17.3855	14.5800	18.2997	0.0369	0.7906	0.6226	1.4132	0.2138	0.5856	0.7995	0.0000	3,608.6998	3,608.6998	0.7356	0.0929	3,652.4123
Maximum	**17.3855**	**22.3395**	**20.2324**	**0.0440**	**3.3581**	**1.0047**	**4.1361**	**1.5867**	**0.9349**	**2.3025**	**0.0000**	**4,311.5900**	**4,311.5900**	**1.0840**	**0.0950**	**4,361.2226**

Beltramo Ranch - Ventura County, 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	48.44	0.00	41.25	51.13	0.00	37.78	0.00	0.00	0.00	0.00	0.00	0.00

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	2.2177	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	6.9946	6.9946	6.7300e-003	0.0000	7.1629
Energy	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
Mobile	1.3096	1.3868	11.4617	0.0243	2.6114	0.0189	2.6303	0.6961	0.0177	0.7138		2,514.0405	2,514.0405	0.1600	0.1101	2,550.8500
Total	**3.5605**	**1.7151**	**15.4642**	**0.0263**	**2.6114**	**0.0634**	**2.6747**	**0.6961**	**0.0621**	**0.7582**	**0.0000**	**2,883.0639**	**2,883.0639**	**0.1737**	**0.1167**	**2,922.1930**

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	2.2177	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	6.9946	6.9946	6.7300e-003	0.0000	7.1629
Energy	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
Mobile	1.3096	1.3868	11.4617	0.0243	2.6114	0.0189	2.6303	0.6961	0.0177	0.7138		2,514.0405	2,514.0405	0.1600	0.1101	2,550.8500
Total	**3.5605**	**1.7151**	**15.4642**	**0.0263**	**2.6114**	**0.0634**	**2.6747**	**0.6961**	**0.0621**	**0.7582**	**0.0000**	**2,883.0639**	**2,883.0639**	**0.1737**	**0.1167**	**2,922.1930**

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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	2/10/2023	5	30	
2	Grading	Grading	2/11/2023	7/28/2023	5	120	
3	Building Construction	Building Construction	7/29/2023	6/14/2024	5	230	
4	Paving	Paving	6/15/2024	8/30/2024	5	55	
5	Architectural Coating	Architectural Coating	6/15/2024	8/30/2024	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 120

Acres of Paving: 3.14

Residential Indoor: 171,315; Residential Outdoor: 57,105; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,835 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

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

Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	1.00	83.00	10.80	93.80	20.00	LD_Mix	HHDT	HHDT
Grading	6	15.00	0.00	319.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	74.00	27.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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

3.2 Demolition - 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					0.6077	0.0000	0.6077	0.0920	0.0000	0.0920			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.6077**	**0.9975**	**1.6053**	**0.0920**	**0.9280**	**1.0200**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	5.5800e-003	0.3320	0.0945	1.5600e-003	0.0483	2.4400e-003	0.0507	0.0132	2.3400e-003	0.0156		173.1643	173.1643	0.0118	0.0276	181.6785
Vendor	5.7800e-003	0.4964	0.1094	2.5500e-003	0.0818	4.1000e-003	0.0859	0.0224	3.9200e-003	0.0263		283.8394	283.8394	0.0197	0.0452	297.8072
Worker	0.0432	0.0267	0.3851	1.0500e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		107.6023	107.6023	3.1600e-003	2.8100e-003	108.5187
Total	**0.0545**	**0.8551**	**0.5890**	**5.1600e-003**	**0.2533**	**7.2100e-003**	**0.2605**	**0.0683**	**6.8700e-003**	**0.0752**		**564.6060**	**564.6060**	**0.0346**	**0.0756**	**588.0043**

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

3.2 Demolition - 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					0.2735	0.0000	0.2735	0.0414	0.0000	0.0414			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.2735**	**0.9975**	**1.2710**	**0.0414**	**0.9280**	**0.9694**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	5.5800e-003	0.3320	0.0945	1.5600e-003	0.0483	2.4400e-003	0.0507	0.0132	2.3400e-003	0.0156		173.1643	173.1643	0.0118	0.0276	181.6785
Vendor	5.7800e-003	0.4964	0.1094	2.5500e-003	0.0818	4.1000e-003	0.0859	0.0224	3.9200e-003	0.0263		283.8394	283.8394	0.0197	0.0452	297.8072
Worker	0.0432	0.0267	0.3851	1.0500e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		107.6023	107.6023	3.1600e-003	2.8100e-003	108.5187
Total	**0.0545**	**0.8551**	**0.5890**	**5.1600e-003**	**0.2533**	**7.2100e-003**	**0.2605**	**0.0683**	**6.8700e-003**	**0.0752**		**564.6060**	**564.6060**	**0.0346**	**0.0756**	**588.0043**

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					7.0856	0.0000	7.0856	3.4252	0.0000	3.4252			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.0856**	**0.7749**	**7.8605**	**3.4252**	**0.7129**	**4.1381**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	5.3700e-003	0.3190	0.0908	1.5000e-003	0.0464	2.3500e-003	0.0488	0.0127	2.2500e-003	0.0150		166.3838	166.3838	0.0113	0.0265	174.5646
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	0.0432	0.0267	0.3851	1.0500e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		107.6023	107.6023	3.1600e-003	2.8100e-003	108.5187
Total	**0.0485**	**0.3456**	**0.4759**	**2.5500e-003**	**0.1696**	**3.0200e-003**	**0.1727**	**0.0454**	**2.8600e-003**	**0.0483**		**273.9861**	**273.9861**	**0.0145**	**0.0293**	**283.0832**

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					3.1885	0.0000	3.1885	1.5413	0.0000	1.5413			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**3.1885**	**0.7749**	**3.9634**	**1.5413**	**0.7129**	**2.2543**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	5.3700e-003	0.3190	0.0908	1.5000e-003	0.0464	2.3500e-003	0.0488	0.0127	2.2500e-003	0.0150		166.3838	166.3838	0.0113	0.0265	174.5646
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	0.0432	0.0267	0.3851	1.0500e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		107.6023	107.6023	3.1600e-003	2.8100e-003	108.5187
Total	**0.0485**	**0.3456**	**0.4759**	**2.5500e-003**	**0.1696**	**3.0200e-003**	**0.1727**	**0.0454**	**2.8600e-003**	**0.0483**		**273.9861**	**273.9861**	**0.0145**	**0.0293**	**283.0832**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0268	1.0230	0.3634	5.0000e-003	0.1827	6.0800e-003	0.1888	0.0526	5.8200e-003	0.0584		542.5775	542.5775	0.0223	0.0812	567.3284
Worker	0.2129	0.1316	1.9000	5.1900e-003	0.6079	3.2900e-003	0.6112	0.1612	3.0300e-003	0.1643		530.8379	530.8379	0.0156	0.0139	535.3589
Total	**0.2397**	**1.1546**	**2.2635**	**0.0102**	**0.7906**	**9.3700e-003**	**0.8000**	**0.2138**	**8.8500e-003**	**0.2227**		**1,073.4154**	**1,073.4154**	**0.0379**	**0.0950**	**1,102.6872**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0268	1.0230	0.3634	5.0000e-003	0.1827	6.0800e-003	0.1888	0.0526	5.8200e-003	0.0584		542.5775	542.5775	0.0223	0.0812	567.3284
Worker	0.2129	0.1316	1.9000	5.1900e-003	0.6079	3.2900e-003	0.6112	0.1612	3.0300e-003	0.1643		530.8379	530.8379	0.0156	0.0139	535.3589
Total	**0.2397**	**1.1546**	**2.2635**	**0.0102**	**0.7906**	**9.3700e-003**	**0.8000**	**0.2138**	**8.8500e-003**	**0.2227**		**1,073.4154**	**1,073.4154**	**0.0379**	**0.0950**	**1,102.6872**

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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0261	1.0181	0.3616	4.9200e-003	0.1827	6.1000e-003	0.1888	0.0526	5.8300e-003	0.0584		534.3843	534.3843	0.0229	0.0799	558.7787
Worker	0.1989	0.1181	1.7712	5.0300e-003	0.6079	3.1500e-003	0.6110	0.1612	2.9000e-003	0.1641		518.6166	518.6166	0.0142	0.0129	522.8260
Total	**0.2251**	**1.1362**	**2.1329**	**9.9500e-003**	**0.7906**	**9.2500e-003**	**0.7999**	**0.2138**	**8.7300e-003**	**0.2226**		**1,053.0009**	**1,053.0009**	**0.0371**	**0.0929**	**1,081.6047**

Beltramo Ranch - Ventura County, 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0261	1.0181	0.3616	4.9200e-003	0.1827	6.1000e-003	0.1888	0.0526	5.8300e-003	0.0584		534.3843	534.3843	0.0229	0.0799	558.7787
Worker	0.1989	0.1181	1.7712	5.0300e-003	0.6079	3.1500e-003	0.6110	0.1612	2.9000e-003	0.1641		518.6166	518.6166	0.0142	0.0129	522.8260
Total	**0.2251**	**1.1362**	**2.1329**	**9.9500e-003**	**0.7906**	**9.2500e-003**	**0.7999**	**0.2138**	**8.7300e-003**	**0.2226**		**1,053.0009**	**1,053.0009**	**0.0371**	**0.0929**	**1,081.6047**

Beltramo Ranch - Ventura County, 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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0763**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	0.0403	0.0239	0.3590	1.0200e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		105.1250	105.1250	2.8800e-003	2.6200e-003	105.9782
Total	**0.0403**	**0.0239**	**0.3590**	**1.0200e-003**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**105.1250**	**105.1250**	**2.8800e-003**	**2.6200e-003**	**105.9782**

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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0763**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	0.0403	0.0239	0.3590	1.0200e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		105.1250	105.1250	2.8800e-003	2.6200e-003	105.9782
Total	**0.0403**	**0.0239**	**0.3590**	**1.0200e-003**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**105.1250**	**105.1250**	**2.8800e-003**	**2.6200e-003**	**105.9782**

Beltramo Ranch - Ventura County, 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	16.0477					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	**16.2285**	**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	0.0403	0.0239	0.3590	1.0200e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		105.1250	105.1250	2.8800e-003	2.6200e-003	105.9782
Total	**0.0403**	**0.0239**	**0.3590**	**1.0200e-003**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**105.1250**	**105.1250**	**2.8800e-003**	**2.6200e-003**	**105.9782**

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	16.0477					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	**16.2285**	**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	0.0403	0.0239	0.3590	1.0200e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		105.1250	105.1250	2.8800e-003	2.6200e-003	105.9782
Total	**0.0403**	**0.0239**	**0.3590**	**1.0200e-003**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**105.1250**	**105.1250**	**2.8800e-003**	**2.6200e-003**	**105.9782**

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	1.3096	1.3868	11.4617	0.0243	2.6114	0.0189	2.6303	0.6961	0.0177	0.7138		2,514.0405	2,514.0405	0.1600	0.1101	2,550.8500
Unmitigated	1.3096	1.3868	11.4617	0.0243	2.6114	0.0189	2.6303	0.6961	0.0177	0.7138		2,514.0405	2,514.0405	0.1600	0.1101	2,550.8500

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	443.68	448.38	401.85	1,211,264	1,211,264
Total	443.68	448.38	401.85	1,211,264	1,211,264

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
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
Single Family Housing	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3

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
Other Asphalt Surfaces	0.548670	0.058343	0.171689	0.130773	0.027316	0.007545	0.011806	0.006161	0.000681	0.000392	0.029028	0.000637	0.006958
Other Non-Asphalt Surfaces	0.548670	0.058343	0.171689	0.130773	0.027316	0.007545	0.011806	0.006161	0.000681	0.000392	0.029028	0.000637	0.006958
Single Family Housing	0.548670	0.058343	0.171689	0.130773	0.027316	0.007545	0.011806	0.006161	0.000681	0.000392	0.029028	0.000637	0.006958

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
NaturalGas Unmitigated	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801

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	lb/day										lb/day					
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
Single Family Housing	3077.24	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
Total		**0.0332**	**0.2836**	**0.1207**	**1.8100e-003**		**0.0229**	**0.0229**		**0.0229**	**0.0229**		**362.0288**	**362.0288**	**6.9400e-003**	**6.6400e-003**	**364.1801**

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	lb/day										lb/day					
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
Single Family Housing	3.07724	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
Total		**0.0332**	**0.2836**	**0.1207**	**1.8100e-003**		**0.0229**	**0.0229**		**0.0229**	**0.0229**		**362.0288**	**362.0288**	**6.9400e-003**	**6.6400e-003**	**364.1801**

6.0 Area Detail

6.1 Mitigation Measures Area

Beltramo Ranch - Ventura County, 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	2.2177	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	6.9946	6.9946	6.7300e-003	0.0000	7.1629
Unmitigated	2.2177	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	6.9946	6.9946	6.7300e-003	0.0000	7.1629

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	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1171	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215		6.9946	6.9946	6.7300e-003		7.1629
Total	**2.2177**	**0.0447**	**3.8818**	**2.1000e-004**		**0.0215**	**0.0215**		**0.0215**	**0.0215**	**0.0000**	**6.9946**	**6.9946**	**6.7300e-003**	**0.0000**	**7.1629**

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	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1171	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215		6.9946	6.9946	6.7300e-003		7.1629
Total	**2.2177**	**0.0447**	**3.8818**	**2.1000e-004**		**0.0215**	**0.0215**		**0.0215**	**0.0215**	**0.0000**	**6.9946**	**6.9946**	**6.7300e-003**	**0.0000**	**7.1629**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Beltramo Ranch - Ventura County, Winter

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

Beltramo Ranch

Ventura County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.85	Acre	1.85	80,586.00	0
Other Non-Asphalt Surfaces	56.00	1000sqft	1.29	56,000.00	0
Single Family Housing	47.00	Dwelling Unit	4.26	84,600.00	144

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 47 SFDs with ~1.85 ac of on-site roads, ~56,000 SF of open space on ~7.4 acres

Construction Phase - Construction to start ~ Jan 2023 and take ~19 months to complete.

Trips and VMT - 1 vendor trip added to demo for the removal and transport of the triple-wide trailer offsite to 11450 Mission Blvd, Mira Loma (93.8 miles). Vehicle calss changed to HHDT.

Demolition - 7,402 SF of demo (4,274 SF of existing residences and church, 3,128 SF of mobile homes) = 340.5 tons. 74,225 SF of asphalt and paving = 501 tons. Total tons of demo = 841.5 tons

Grading - ~2553 CY of import.

Architectural Coating - Area of roads to be painted = 6% of 80,586 SF = 4,835 SF

Area Coating - Area of roads to be painted = 6% of 80,586 SF = 4,835 SF

Sequestration - ~345 new trees to be planted on-site

Beltramo Ranch - Ventura County, Winter

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

Construction Off-road Equipment Mitigation -

Water Mitigation - 20% reduction in indoor water use per CalGreen requirements.

Waste Mitigation - Assumed least 50% of waste will be diverted.

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	8,195.00	4,835.00
tblAreaCoating	Area_Parking	8195	4835
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	120.00
tblConstructionPhase	NumDays	20.00	55.00
tblConstructionPhase	NumDays	20.00	55.00
tblGrading	MaterialImported	0.00	2,553.00
tblLandUse	LotAcreage	15.26	4.26
tblSequestration	NumberOfNewTrees	0.00	345.00
tblTripsAndVMT	VendorTripLength	7.30	93.80
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT

2.0 Emissions Summary

Beltramo Ranch - Ventura County, 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	2.3266	22.3776	20.2269	0.0440	7.2552	1.0048	8.0332	3.4706	0.9349	4.1864	0.0000	4,307.1486	4,307.1486	1.0843	0.0968	4,356.8920
2024	17.3921	14.6452	18.2820	0.0367	0.7906	0.6226	1.4132	0.2138	0.5857	0.7995	0.0000	3,587.0877	3,587.0877	0.7361	0.0945	3,631.3120
Maximum	**17.3921**	**22.3776**	**20.2269**	**0.0440**	**7.2552**	**1.0048**	**8.0332**	**3.4706**	**0.9349**	**4.1864**	**0.0000**	**4,307.1486**	**4,307.1486**	**1.0843**	**0.0968**	**4,356.8920**

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	2.3266	22.3776	20.2269	0.0440	3.3581	1.0048	4.1361	1.5867	0.9349	2.3025	0.0000	4,307.1486	4,307.1486	1.0843	0.0968	4,356.8920
2024	17.3921	14.6452	18.2820	0.0367	0.7906	0.6226	1.4132	0.2138	0.5857	0.7995	0.0000	3,587.0877	3,587.0877	0.7361	0.0945	3,631.3120
Maximum	**17.3921**	**22.3776**	**20.2269**	**0.0440**	**3.3581**	**1.0048**	**4.1361**	**1.5867**	**0.9349**	**2.3025**	**0.0000**	**4,307.1486**	**4,307.1486**	**1.0843**	**0.0968**	**4,356.8920**

Beltramo Ranch - Ventura County, 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	48.44	0.00	41.25	51.13	0.00	37.78	0.00	0.00	0.00	0.00	0.00	0.00

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	2.2177	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	6.9946	6.9946	6.7300e-003	0.0000	7.1629
Energy	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
Mobile	1.2753	1.5318	12.1394	0.0235	2.6114	0.0189	2.6303	0.6961	0.0177	0.7138		2,429.7020	2,429.7020	0.1734	0.1179	2,469.1674
Total	**3.5262**	**1.8601**	**16.1419**	**0.0255**	**2.6114**	**0.0634**	**2.6747**	**0.6961**	**0.0621**	**0.7582**	**0.0000**	**2,798.7253**	**2,798.7253**	**0.1871**	**0.1245**	**2,840.5104**

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	2.2177	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	6.9946	6.9946	6.7300e-003	0.0000	7.1629
Energy	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
Mobile	1.2753	1.5318	12.1394	0.0235	2.6114	0.0189	2.6303	0.6961	0.0177	0.7138		2,429.7020	2,429.7020	0.1734	0.1179	2,469.1674
Total	**3.5262**	**1.8601**	**16.1419**	**0.0255**	**2.6114**	**0.0634**	**2.6747**	**0.6961**	**0.0621**	**0.7582**	**0.0000**	**2,798.7253**	**2,798.7253**	**0.1871**	**0.1245**	**2,840.5104**

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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	2/10/2023	5	30	
2	Grading	Grading	2/11/2023	7/28/2023	5	120	
3	Building Construction	Building Construction	7/29/2023	6/14/2024	5	230	
4	Paving	Paving	6/15/2024	8/30/2024	5	55	
5	Architectural Coating	Architectural Coating	6/15/2024	8/30/2024	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 120

Acres of Paving: 3.14

Residential Indoor: 171,315; Residential Outdoor: 57,105; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,835 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

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

Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	1.00	83.00	10.80	93.80	20.00	LD_Mix	HHDT	HHDT
Grading	6	15.00	0.00	319.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	74.00	27.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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

3.2 Demolition - 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					0.6077	0.0000	0.6077	0.0920	0.0000	0.0920			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.6077**	**0.9975**	**1.6053**	**0.0920**	**0.9280**	**1.0200**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	5.2300e-003	0.3461	0.0958	1.5600e-003	0.0483	2.4500e-003	0.0508	0.0132	2.3400e-003	0.0156		173.3223	173.3223	0.0118	0.0276	181.8437
Vendor	5.6500e-003	0.5159	0.1097	2.5600e-003	0.0818	4.1000e-003	0.0859	0.0224	3.9200e-003	0.0263		283.8963	283.8963	0.0197	0.0452	297.8670
Worker	0.0466	0.0312	0.3781	1.0100e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		102.9460	102.9460	3.4400e-003	3.1200e-003	103.9631
Total	**0.0575**	**0.8932**	**0.5835**	**5.1300e-003**	**0.2533**	**7.2200e-003**	**0.2605**	**0.0683**	**6.8700e-003**	**0.0752**		**560.1646**	**560.1646**	**0.0349**	**0.0760**	**583.6737**

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

3.2 Demolition - 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					0.2735	0.0000	0.2735	0.0414	0.0000	0.0414			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.2735**	**0.9975**	**1.2710**	**0.0414**	**0.9280**	**0.9694**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	5.2300e-003	0.3461	0.0958	1.5600e-003	0.0483	2.4500e-003	0.0508	0.0132	2.3400e-003	0.0156		173.3223	173.3223	0.0118	0.0276	181.8437
Vendor	5.6500e-003	0.5159	0.1097	2.5600e-003	0.0818	4.1000e-003	0.0859	0.0224	3.9200e-003	0.0263		283.8963	283.8963	0.0197	0.0452	297.8670
Worker	0.0466	0.0312	0.3781	1.0100e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		102.9460	102.9460	3.4400e-003	3.1200e-003	103.9631
Total	**0.0575**	**0.8932**	**0.5835**	**5.1300e-003**	**0.2533**	**7.2200e-003**	**0.2605**	**0.0683**	**6.8700e-003**	**0.0752**		**560.1646**	**560.1646**	**0.0349**	**0.0760**	**583.6737**

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					7.0856	0.0000	7.0856	3.4252	0.0000	3.4252			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.0856**	**0.7749**	**7.8605**	**3.4252**	**0.7129**	**4.1381**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	5.0300e-003	0.3325	0.0920	1.5000e-003	0.0464	2.3500e-003	0.0488	0.0127	2.2500e-003	0.0150		166.5356	166.5356	0.0113	0.0265	174.7233
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	0.0466	0.0312	0.3781	1.0100e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		102.9460	102.9460	3.4400e-003	3.1200e-003	103.9631
Total	**0.0516**	**0.3638**	**0.4701**	**2.5100e-003**	**0.1696**	**3.0200e-003**	**0.1727**	**0.0454**	**2.8600e-003**	**0.0483**		**269.4816**	**269.4816**	**0.0148**	**0.0297**	**278.6864**

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					3.1885	0.0000	3.1885	1.5413	0.0000	1.5413			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**3.1885**	**0.7749**	**3.9634**	**1.5413**	**0.7129**	**2.2543**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	5.0300e-003	0.3325	0.0920	1.5000e-003	0.0464	2.3500e-003	0.0488	0.0127	2.2500e-003	0.0150		166.5356	166.5356	0.0113	0.0265	174.7233
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	0.0466	0.0312	0.3781	1.0100e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		102.9460	102.9460	3.4400e-003	3.1200e-003	103.9631
Total	**0.0516**	**0.3638**	**0.4701**	**2.5100e-003**	**0.1696**	**3.0200e-003**	**0.1727**	**0.0454**	**2.8600e-003**	**0.0483**		**269.4816**	**269.4816**	**0.0148**	**0.0297**	**278.6864**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0258	1.0680	0.3751	5.0100e-003	0.1827	6.1200e-003	0.1888	0.0526	5.8500e-003	0.0584		543.3544	543.3544	0.0222	0.0814	568.1565
Worker	0.2299	0.1541	1.8651	4.9600e-003	0.6079	3.2900e-003	0.6112	0.1612	3.0300e-003	0.1643		507.8670	507.8670	0.0170	0.0154	512.8844
Total	**0.2557**	**1.2221**	**2.2402**	**9.9700e-003**	**0.7906**	**9.4100e-003**	**0.8000**	**0.2138**	**8.8800e-003**	**0.2227**		**1,051.2214**	**1,051.2214**	**0.0392**	**0.0968**	**1,081.0408**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0258	1.0680	0.3751	5.0100e-003	0.1827	6.1200e-003	0.1888	0.0526	5.8500e-003	0.0584		543.3544	543.3544	0.0222	0.0814	568.1565
Worker	0.2299	0.1541	1.8651	4.9600e-003	0.6079	3.2900e-003	0.6112	0.1612	3.0300e-003	0.1643		507.8670	507.8670	0.0170	0.0154	512.8844
Total	**0.2557**	**1.2221**	**2.2402**	**9.9700e-003**	**0.7906**	**9.4100e-003**	**0.8000**	**0.2138**	**8.8800e-003**	**0.2227**		**1,051.2214**	**1,051.2214**	**0.0392**	**0.0968**	**1,081.0408**

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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0251	1.0632	0.3731	4.9300e-003	0.1827	6.1300e-003	0.1888	0.0526	5.8700e-003	0.0585		535.1748	535.1748	0.0228	0.0801	559.6195
Worker	0.2152	0.1383	1.7421	4.8100e-003	0.6079	3.1500e-003	0.6110	0.1612	2.9000e-003	0.1641		496.2140	496.2140	0.0155	0.0144	500.8849
Total	**0.2403**	**1.2015**	**2.1152**	**9.7400e-003**	**0.7906**	**9.2800e-003**	**0.7999**	**0.2138**	**8.7700e-003**	**0.2226**		**1,031.3888**	**1,031.3888**	**0.0383**	**0.0945**	**1,060.5043**

Beltramo Ranch - Ventura County, 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0251	1.0632	0.3731	4.9300e-003	0.1827	6.1300e-003	0.1888	0.0526	5.8700e-003	0.0585		535.1748	535.1748	0.0228	0.0801	559.6195
Worker	0.2152	0.1383	1.7421	4.8100e-003	0.6079	3.1500e-003	0.6110	0.1612	2.9000e-003	0.1641		496.2140	496.2140	0.0155	0.0144	500.8849
Total	**0.2403**	**1.2015**	**2.1152**	**9.7400e-003**	**0.7906**	**9.2800e-003**	**0.7999**	**0.2138**	**8.7700e-003**	**0.2226**		**1,031.3888**	**1,031.3888**	**0.0383**	**0.0945**	**1,060.5043**

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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0763**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	0.0436	0.0280	0.3531	9.8000e-004	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		100.5839	100.5839	3.1400e-003	2.9100e-003	101.5307
Total	**0.0436**	**0.0280**	**0.3531**	**9.8000e-004**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**100.5839**	**100.5839**	**3.1400e-003**	**2.9100e-003**	**101.5307**

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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0763**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	0.0436	0.0280	0.3531	9.8000e-004	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		100.5839	100.5839	3.1400e-003	2.9100e-003	101.5307
Total	**0.0436**	**0.0280**	**0.3531**	**9.8000e-004**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**100.5839**	**100.5839**	**3.1400e-003**	**2.9100e-003**	**101.5307**

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	16.0477					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	**16.2285**	**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	0.0436	0.0280	0.3531	9.8000e-004	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		100.5839	100.5839	3.1400e-003	2.9100e-003	101.5307
Total	**0.0436**	**0.0280**	**0.3531**	**9.8000e-004**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**100.5839**	**100.5839**	**3.1400e-003**	**2.9100e-003**	**101.5307**

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	16.0477					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	**16.2285**	**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	0.0436	0.0280	0.3531	9.8000e-004	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		100.5839	100.5839	3.1400e-003	2.9100e-003	101.5307
Total	**0.0436**	**0.0280**	**0.3531**	**9.8000e-004**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**100.5839**	**100.5839**	**3.1400e-003**	**2.9100e-003**	**101.5307**

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	1.2753	1.5318	12.1394	0.0235	2.6114	0.0189	2.6303	0.6961	0.0177	0.7138		2,429.7020	2,429.7020	0.1734	0.1179	2,469.1674
Unmitigated	1.2753	1.5318	12.1394	0.0235	2.6114	0.0189	2.6303	0.6961	0.0177	0.7138		2,429.7020	2,429.7020	0.1734	0.1179	2,469.1674

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	443.68	448.38	401.85	1,211,264	1,211,264
Total	443.68	448.38	401.85	1,211,264	1,211,264

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
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
Single Family Housing	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3

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
Other Asphalt Surfaces	0.548670	0.058343	0.171689	0.130773	0.027316	0.007545	0.011806	0.006161	0.000681	0.000392	0.029028	0.000637	0.006958
Other Non-Asphalt Surfaces	0.548670	0.058343	0.171689	0.130773	0.027316	0.007545	0.011806	0.006161	0.000681	0.000392	0.029028	0.000637	0.006958
Single Family Housing	0.548670	0.058343	0.171689	0.130773	0.027316	0.007545	0.011806	0.006161	0.000681	0.000392	0.029028	0.000637	0.006958

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
NaturalGas Unmitigated	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801

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	lb/day										lb/day					
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
Single Family Housing	3077.24	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
Total		**0.0332**	**0.2836**	**0.1207**	**1.8100e-003**		**0.0229**	**0.0229**		**0.0229**	**0.0229**		**362.0288**	**362.0288**	**6.9400e-003**	**6.6400e-003**	**364.1801**

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	lb/day										lb/day					
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
Single Family Housing	3.07724	0.0332	0.2836	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.0288	362.0288	6.9400e-003	6.6400e-003	364.1801
Total		**0.0332**	**0.2836**	**0.1207**	**1.8100e-003**		**0.0229**	**0.0229**		**0.0229**	**0.0229**		**362.0288**	**362.0288**	**6.9400e-003**	**6.6400e-003**	**364.1801**

6.0 Area Detail

6.1 Mitigation Measures Area

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	2.2177	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	6.9946	6.9946	6.7300e-003	0.0000	7.1629
Unmitigated	2.2177	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	6.9946	6.9946	6.7300e-003	0.0000	7.1629

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	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1171	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215		6.9946	6.9946	6.7300e-003		7.1629
Total	**2.2177**	**0.0447**	**3.8818**	**2.1000e-004**		**0.0215**	**0.0215**		**0.0215**	**0.0215**	**0.0000**	**6.9946**	**6.9946**	**6.7300e-003**	**0.0000**	**7.1629**

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	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1171	0.0447	3.8818	2.1000e-004		0.0215	0.0215		0.0215	0.0215		6.9946	6.9946	6.7300e-003		7.1629
Total	**2.2177**	**0.0447**	**3.8818**	**2.1000e-004**		**0.0215**	**0.0215**		**0.0215**	**0.0215**	**0.0000**	**6.9946**	**6.9946**	**6.7300e-003**	**0.0000**	**7.1629**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Beltramo Existing Uses OPS ONLY - Ventura County, Summer

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

Beltramo Existing Uses OPS ONLY

Ventura County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	6.82	1000sqft	0.16	6,820.00	0
Single Family Housing	2.00	Dwelling Unit	0.65	3,600.00	6

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - OPERATIONAL EMISSIONS ONLY

Land Use - 6,820 SF church and 2 SFDs

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

Beltramo Existing Uses OPS ONLY - Ventura County, 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	0.2554	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	0.2986	0.2986	2.9000e-004	0.0000	0.3058
Energy	5.6000e-003	0.0501	0.0371	3.1000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003		61.0407	61.0407	1.1700e-003	1.1200e-003	61.4034
Mobile	0.5480	0.5238	4.2281	8.2800e-003	0.8542	6.6800e-003	0.8609	0.2277	6.2300e-003	0.2339		851.4495	851.4495	0.0620	0.0410	865.2271
Total	**0.8089**	**0.5758**	**4.4309**	**8.6000e-003**	**0.8542**	**0.0115**	**0.8657**	**0.2277**	**0.0110**	**0.2387**	**0.0000**	**912.7888**	**912.7888**	**0.0634**	**0.0422**	**926.9363**

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	0.2554	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	0.2986	0.2986	2.9000e-004	0.0000	0.3058
Energy	5.6000e-003	0.0501	0.0371	3.1000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003		61.0407	61.0407	1.1700e-003	1.1200e-003	61.4034
Mobile	0.5480	0.5238	4.2281	8.2800e-003	0.8542	6.6800e-003	0.8609	0.2277	6.2300e-003	0.2339		851.4495	851.4495	0.0620	0.0410	865.2271
Total	**0.8089**	**0.5758**	**4.4309**	**8.6000e-003**	**0.8542**	**0.0115**	**0.8657**	**0.2277**	**0.0110**	**0.2387**	**0.0000**	**912.7888**	**912.7888**	**0.0634**	**0.0422**	**926.9363**

Beltramo Existing Uses OPS ONLY - Ventura County, 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5480	0.5238	4.2281	8.2800e-003	0.8542	6.6800e-003	0.8609	0.2277	6.2300e-003	0.2339		851.4495	851.4495	0.0620	0.0410	865.2271
Unmitigated	0.5480	0.5238	4.2281	8.2800e-003	0.8542	6.6800e-003	0.8609	0.2277	6.2300e-003	0.2339		851.4495	851.4495	0.0620	0.0410	865.2271

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	47.40	40.85	188.44	124,610	124,610
Single Family Housing	18.88	19.08	17.10	51,543	51,543
Total	66.28	59.93	205.54	176,153	176,153

Beltramo Existing Uses OPS ONLY - Ventura County, Summer

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11
Single Family Housing	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Place of Worship	0.543528	0.058189	0.173108	0.133952	0.027894	0.007577	0.011427	0.006062	0.000688	0.000393	0.029232	0.000646	0.0073
Single Family Housing	0.543528	0.058189	0.173108	0.133952	0.027894	0.007577	0.011427	0.006062	0.000688	0.000393	0.029232	0.000646	0.0073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.6000e-003	0.0501	0.0371	3.1000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003		61.0407	61.0407	1.1700e-003	1.1200e-003	61.4034
NaturalGas Unmitigated	5.6000e-003	0.0501	0.0371	3.1000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003		61.0407	61.0407	1.1700e-003	1.1200e-003	61.4034

Beltramo Existing Uses OPS ONLY - Ventura County, 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 - 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					
Place of Worship	387.899	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003		45.6352	45.6352	8.7000e-004	8.4000e-004	45.9064
Single Family Housing	130.947	1.4100e-003	0.0121	5.1400e-003	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004		15.4055	15.4055	3.0000e-004	2.8000e-004	15.4970
Total		**5.5900e-003**	**0.0501**	**0.0371**	**3.1000e-004**		**3.8700e-003**	**3.8700e-003**		**3.8700e-003**	**3.8700e-003**		**61.0407**	**61.0407**	**1.1700e-003**	**1.1200e-003**	**61.4034**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Place of Worship	0.387899	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003		45.6352	45.6352	8.7000e-004	8.4000e-004	45.9064
Single Family Housing	0.130947	1.4100e-003	0.0121	5.1400e-003	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004		15.4055	15.4055	3.0000e-004	2.8000e-004	15.4970
Total		**5.5900e-003**	**0.0501**	**0.0371**	**3.1000e-004**		**3.8700e-003**	**3.8700e-003**		**3.8700e-003**	**3.8700e-003**		**61.0407**	**61.0407**	**1.1700e-003**	**1.1200e-003**	**61.4034**

Beltramo Existing Uses OPS ONLY - Ventura County, Summer

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2554	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	0.2986	0.2986	2.9000e-004	0.0000	0.3058
Unmitigated	0.2554	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	0.2986	0.2986	2.9000e-004	0.0000	0.3058

Beltramo Existing Uses OPS ONLY - Ventura County, Summer

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

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	0.0274					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2230					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0400e-003	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004		0.2986	0.2986	2.9000e-004		0.3058
Total	**0.2554**	**1.9100e-003**	**0.1657**	**1.0000e-005**		**9.2000e-004**	**9.2000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**0.2986**	**0.2986**	**2.9000e-004**	**0.0000**	**0.3058**

Beltramo Existing Uses OPS ONLY - Ventura County, Summer

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

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	0.0274					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2230					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0400e-003	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004		0.2986	0.2986	2.9000e-004		0.3058
Total	**0.2554**	**1.9100e-003**	**0.1657**	**1.0000e-005**		**9.2000e-004**	**9.2000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**0.2986**	**0.2986**	**2.9000e-004**	**0.0000**	**0.3058**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Beltramo Existing Uses OPS ONLY - Ventura County, Summer

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

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Beltramo Existing Uses OPS ONLY - Ventura County, Winter

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

Beltramo Existing Uses OPS ONLY

Ventura County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	6.82	1000sqft	0.16	6,820.00	0
Single Family Housing	2.00	Dwelling Unit	0.65	3,600.00	6

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - OPERATIONAL EMISSIONS ONLY

Land Use - 6,820 SF church and 2 SFDs

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

Beltramo Existing Uses OPS ONLY - Ventura County, 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	0.2554	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	0.2986	0.2986	2.9000e-004	0.0000	0.3058
Energy	5.6000e-003	0.0501	0.0371	3.1000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003		61.0407	61.0407	1.1700e-003	1.1200e-003	61.4034
Mobile	0.5284	0.5801	4.5503	8.0100e-003	0.8542	6.6800e-003	0.8609	0.2277	6.2300e-003	0.2340		823.3468	823.3468	0.0683	0.0441	838.2050
Total	**0.7894**	**0.6321**	**4.7531**	**8.3300e-003**	**0.8542**	**0.0115**	**0.8657**	**0.2277**	**0.0110**	**0.2387**	**0.0000**	**884.6861**	**884.6861**	**0.0698**	**0.0453**	**899.9143**

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	0.2554	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	0.2986	0.2986	2.9000e-004	0.0000	0.3058
Energy	5.6000e-003	0.0501	0.0371	3.1000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003		61.0407	61.0407	1.1700e-003	1.1200e-003	61.4034
Mobile	0.5284	0.5801	4.5503	8.0100e-003	0.8542	6.6800e-003	0.8609	0.2277	6.2300e-003	0.2340		823.3468	823.3468	0.0683	0.0441	838.2050
Total	**0.7894**	**0.6321**	**4.7531**	**8.3300e-003**	**0.8542**	**0.0115**	**0.8657**	**0.2277**	**0.0110**	**0.2387**	**0.0000**	**884.6861**	**884.6861**	**0.0698**	**0.0453**	**899.9143**

Beltramo Existing Uses OPS ONLY - Ventura County, 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5284	0.5801	4.5503	8.0100e-003	0.8542	6.6800e-003	0.8609	0.2277	6.2300e-003	0.2340		823.3468	823.3468	0.0683	0.0441	838.2050
Unmitigated	0.5284	0.5801	4.5503	8.0100e-003	0.8542	6.6800e-003	0.8609	0.2277	6.2300e-003	0.2340		823.3468	823.3468	0.0683	0.0441	838.2050

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	47.40	40.85	188.44	124,610	124,610
Single Family Housing	18.88	19.08	17.10	51,543	51,543
Total	66.28	59.93	205.54	176,153	176,153

Beltramo Existing Uses OPS ONLY - Ventura County, Winter

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11
Single Family Housing	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Place of Worship	0.543528	0.058189	0.173108	0.133952	0.027894	0.007577	0.011427	0.006062	0.000688	0.000393	0.029232	0.000646	0.00730
Single Family Housing	0.543528	0.058189	0.173108	0.133952	0.027894	0.007577	0.011427	0.006062	0.000688	0.000393	0.029232	0.000646	0.00730

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.6000e-003	0.0501	0.0371	3.1000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003		61.0407	61.0407	1.1700e-003	1.1200e-003	61.4034
NaturalGas Unmitigated	5.6000e-003	0.0501	0.0371	3.1000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003		61.0407	61.0407	1.1700e-003	1.1200e-003	61.4034

Beltramo Existing Uses OPS ONLY - Ventura County, 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 - 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					
Place of Worship	387.899	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003		45.6352	45.6352	8.7000e-004	8.4000e-004	45.9064
Single Family Housing	130.947	1.4100e-003	0.0121	5.1400e-003	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004		15.4055	15.4055	3.0000e-004	2.8000e-004	15.4970
Total		**5.5900e-003**	**0.0501**	**0.0371**	**3.1000e-004**		**3.8700e-003**	**3.8700e-003**		**3.8700e-003**	**3.8700e-003**		**61.0407**	**61.0407**	**1.1700e-003**	**1.1200e-003**	**61.4034**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Place of Worship	0.387899	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003		45.6352	45.6352	8.7000e-004	8.4000e-004	45.9064
Single Family Housing	0.130947	1.4100e-003	0.0121	5.1400e-003	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004		15.4055	15.4055	3.0000e-004	2.8000e-004	15.4970
Total		**5.5900e-003**	**0.0501**	**0.0371**	**3.1000e-004**		**3.8700e-003**	**3.8700e-003**		**3.8700e-003**	**3.8700e-003**		**61.0407**	**61.0407**	**1.1700e-003**	**1.1200e-003**	**61.4034**

Beltramo Existing Uses OPS ONLY - Ventura County, Winter

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2554	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	0.2986	0.2986	2.9000e-004	0.0000	0.3058
Unmitigated	0.2554	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	0.2986	0.2986	2.9000e-004	0.0000	0.3058

Beltramo Existing Uses OPS ONLY - Ventura County, Winter

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

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	0.0274					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2230					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0400e-003	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004		0.2986	0.2986	2.9000e-004		0.3058
Total	**0.2554**	**1.9100e-003**	**0.1657**	**1.0000e-005**		**9.2000e-004**	**9.2000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**0.2986**	**0.2986**	**2.9000e-004**	**0.0000**	**0.3058**

Beltramo Existing Uses OPS ONLY - Ventura County, Winter

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

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	0.0274					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2230					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0400e-003	1.9100e-003	0.1657	1.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004		0.2986	0.2986	2.9000e-004		0.3058
Total	**0.2554**	**1.9100e-003**	**0.1657**	**1.0000e-005**		**9.2000e-004**	**9.2000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**0.2986**	**0.2986**	**2.9000e-004**	**0.0000**	**0.3058**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Beltramo Existing Uses OPS ONLY - Ventura County, Winter

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

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

CalEEMod Model Annual Emissions Printouts

Beltramo Ranch - Ventura County, Annual

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

Beltramo Ranch

Ventura County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.85	Acre	1.85	80,586.00	0
Other Non-Asphalt Surfaces	56.00	1000sqft	1.29	56,000.00	0
Single Family Housing	47.00	Dwelling Unit	4.26	84,600.00	144

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 47 SFDs with ~1.85 ac of on-site roads, ~56,000 SF of open space on ~7.4 acres

Construction Phase - Construction to start ~ Jan 2023 and take ~19 months to complete.

Trips and VMT - 1 vendor trip added to demo for the removal and transport of the triple-wide trailer offsite to 11450 Mission Blvd, Mira Loma (93.8 miles). Vehicle calss changed to HHDT.

Demolition - 7,402 SF of demo (4,274 SF of existing residences and church, 3,128 SF of mobile homes) = 340.5 tons. 74,225 SF of asphalt and paving = 501 tons. Total tons of demo = 841.5 tons

Grading - ~2553 CY of import.

Architectural Coating - Area of roads to be painted = 6% of 80,586 SF = 4,835 SF

Area Coating - Area of roads to be painted = 6% of 80,586 SF = 4,835 SF

Sequestration - ~345 new trees to be planted on-site

Beltramo Ranch - Ventura County, Annual

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

Construction Off-road Equipment Mitigation -

Water Mitigation - 20% reduction in indoor water use per CalGreen requirements.

Waste Mitigation - Assumed least 50% of waste will be diverted.

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	8,195.00	4,835.00
tblAreaCoating	Area_Parking	8195	4835
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	120.00
tblConstructionPhase	NumDays	20.00	55.00
tblConstructionPhase	NumDays	20.00	55.00
tblGrading	MaterialImported	0.00	2,553.00
tblLandUse	LotAcreage	15.26	4.26
tblSequestration	NumberOfNewTrees	0.00	345.00
tblTripsAndVMT	VendorTripLength	7.30	93.80
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT

2.0 Emissions Summary

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	0.2400	2.2914	2.2312	4.6200e-003	0.4907	0.1008	0.5914	0.2222	0.0937	0.3158	0.0000	409.7871	409.7871	0.0984	7.4500e-003	414.4654
2024	0.5798	1.1750	1.5663	2.9700e-003	0.0533	0.0520	0.1052	0.0144	0.0487	0.0631	0.0000	262.5646	262.5646	0.0533	5.2600e-003	265.4649
Maximum	**0.5798**	**2.2914**	**2.2312**	**4.6200e-003**	**0.4907**	**0.1008**	**0.5914**	**0.2222**	**0.0937**	**0.3158**	**0.0000**	**409.7871**	**409.7871**	**0.0984**	**7.4500e-003**	**414.4654**

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	0.2400	2.2914	2.2312	4.6200e-003	0.2519	0.1008	0.3526	0.1084	0.0937	0.2020	0.0000	409.7867	409.7867	0.0984	7.4500e-003	414.4650
2024	0.5798	1.1750	1.5663	2.9700e-003	0.0533	0.0520	0.1052	0.0144	0.0487	0.0631	0.0000	262.5643	262.5643	0.0533	5.2600e-003	265.4646
Maximum	**0.5798**	**2.2914**	**2.2312**	**4.6200e-003**	**0.2519**	**0.1008**	**0.3526**	**0.1084**	**0.0937**	**0.2020**	**0.0000**	**409.7867**	**409.7867**	**0.0984**	**7.4500e-003**	**414.4650**

Beltramo Ranch - Ventura County, Annual

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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**43.91**	**0.00**	**34.28**	**48.11**	**0.00**	**30.03**	**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	**1-2-2023**	**4-1-2023**	0.7112	0.7112
2	**4-2-2023**	**7-1-2023**	0.6513	0.6513
3	**7-2-2023**	**10-1-2023**	0.5961	0.5961
4	**10-2-2023**	**1-1-2024**	0.5725	0.5725
5	**1-2-2024**	**4-1-2024**	0.5316	0.5316
6	**4-2-2024**	**7-1-2024**	0.6012	0.6012
7	**7-2-2024**	**9-30-2024**	0.6038	0.6038
		Highest	0.7112	0.7112

Beltramo Ranch - Ventura County, Annual

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	tons/yr										MT/yr					
Area	0.3939	4.0200e-003	0.3494	2.0000e-005		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	0.5711	0.5711	5.5000e-004	0.0000	0.5848
Energy	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003	0.0000	125.1036	125.1036	6.6500e-003	1.7700e-003	125.7959
Mobile	0.2245	0.2676	2.0828	4.2000e-003	0.4562	3.3600e-003	0.4595	0.1218	3.1400e-003	0.1249	0.0000	393.8114	393.8114	0.0271	0.0187	400.0578
Waste						0.0000	0.0000		0.0000	0.0000	11.9846	0.0000	11.9846	0.7083	0.0000	29.6913
Water						0.0000	0.0000		0.0000	0.0000	0.9715	10.8751	11.8466	0.1007	2.4700e-003	15.0994
Total	**0.6244**	**0.3234**	**2.4542**	**4.5500e-003**	**0.4562**	**9.4800e-003**	**0.4657**	**0.1218**	**9.2600e-003**	**0.1310**	**12.9561**	**530.3612**	**543.3173**	**0.8432**	**0.0229**	**571.2293**

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	0.3939	4.0200e-003	0.3494	2.0000e-005		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	0.5711	0.5711	5.5000e-004	0.0000	0.5848
Energy	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003	0.0000	125.1036	125.1036	6.6500e-003	1.7700e-003	125.7959
Mobile	0.2245	0.2676	2.0828	4.2000e-003	0.4562	3.3600e-003	0.4595	0.1218	3.1400e-003	0.1249	0.0000	393.8114	393.8114	0.0271	0.0187	400.0578
Waste						0.0000	0.0000		0.0000	0.0000	5.9923	0.0000	5.9923	0.3541	0.0000	14.8457
Water						0.0000	0.0000		0.0000	0.0000	0.7772	9.4609	10.2381	0.0806	1.9800e-003	12.8442
Total	**0.6244**	**0.3234**	**2.4542**	**4.5500e-003**	**0.4562**	**9.4800e-003**	**0.4657**	**0.1218**	**9.2600e-003**	**0.1310**	**6.7695**	**528.9469**	**535.7164**	**0.4690**	**0.0224**	**554.1284**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**47.75**	**0.27**	**1.40**	**44.38**	**2.14**	**2.99**

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

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	244.2600
Total	**244.2600**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	2/10/2023	5	30	
2	Grading	Grading	2/11/2023	7/28/2023	5	120	
3	Building Construction	Building Construction	7/29/2023	6/14/2024	5	230	
4	Paving	Paving	6/15/2024	8/30/2024	5	55	
5	Architectural Coating	Architectural Coating	6/15/2024	8/30/2024	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 120

Acres of Paving: 3.14

Residential Indoor: 171,315; Residential Outdoor: 57,105; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,835 (Architectural Coating – sqft)

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	1.00	83.00	10.80	93.80	20.00	LD_Mix	HHDT	HHDT
Grading	6	15.00	0.00	319.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	74.00	27.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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					9.1200e-003	0.0000	9.1200e-003	1.3800e-003	0.0000	1.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0340	0.3223	0.2947	5.8000e-004		0.0150	0.0150		0.0139	0.0139	0.0000	50.9881	50.9881	0.0143	0.0000	51.3451
Total	**0.0340**	**0.3223**	**0.2947**	**5.8000e-004**	**9.1200e-003**	**0.0150**	**0.0241**	**1.3800e-003**	**0.0139**	**0.0153**	**0.0000**	**50.9881**	**50.9881**	**0.0143**	**0.0000**	**51.3451**

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

3.2 Demolition - 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	8.0000e-005	5.1900e-003	1.4300e-003	2.0000e-005	7.1000e-004	4.0000e-005	7.5000e-004	2.0000e-004	4.0000e-005	2.3000e-004	0.0000	2.3573	2.3573	1.6000e-004	3.8000e-004	2.4732
Vendor	9.0000e-005	7.7700e-003	1.6400e-003	4.0000e-005	1.2100e-003	6.0000e-005	1.2700e-003	3.3000e-004	6.0000e-005	3.9000e-004	0.0000	3.8628	3.8628	2.7000e-004	6.2000e-004	4.0528
Worker	6.4000e-004	4.5000e-004	5.6000e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4108	1.4108	5.0000e-005	4.0000e-005	1.4243
Total	**8.1000e-004**	**0.0134**	**8.6700e-003**	**8.0000e-005**	**3.7300e-003**	**1.1000e-004**	**3.8400e-003**	**1.0100e-003**	**1.1000e-004**	**1.1100e-003**	**0.0000**	**7.6309**	**7.6309**	**4.8000e-004**	**1.0400e-003**	**7.9503**

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					4.1000e-003	0.0000	4.1000e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0340	0.3223	0.2947	5.8000e-004		0.0150	0.0150		0.0139	0.0139	0.0000	50.9880	50.9880	0.0143	0.0000	51.3450
Total	**0.0340**	**0.3223**	**0.2947**	**5.8000e-004**	**4.1000e-003**	**0.0150**	**0.0191**	**6.2000e-004**	**0.0139**	**0.0145**	**0.0000**	**50.9880**	**50.9880**	**0.0143**	**0.0000**	**51.3450**

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

3.2 Demolition - 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	8.0000e-005	5.1900e-003	1.4300e-003	2.0000e-005	7.1000e-004	4.0000e-005	7.5000e-004	2.0000e-004	4.0000e-005	2.3000e-004	0.0000	2.3573	2.3573	1.6000e-004	3.8000e-004	2.4732
Vendor	9.0000e-005	7.7700e-003	1.6400e-003	4.0000e-005	1.2100e-003	6.0000e-005	1.2700e-003	3.3000e-004	6.0000e-005	3.9000e-004	0.0000	3.8628	3.8628	2.7000e-004	6.2000e-004	4.0528
Worker	6.4000e-004	4.5000e-004	5.6000e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4108	1.4108	5.0000e-005	4.0000e-005	1.4243
Total	**8.1000e-004**	**0.0134**	**8.6700e-003**	**8.0000e-005**	**3.7300e-003**	**1.1000e-004**	**3.8400e-003**	**1.0100e-003**	**1.1000e-004**	**1.1100e-003**	**0.0000**	**7.6309**	**7.6309**	**4.8000e-004**	**1.0400e-003**	**7.9503**

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					0.4251	0.0000	0.4251	0.2055	0.0000	0.2055	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1027	1.0762	0.8850	1.7800e-003		0.0465	0.0465		0.0428	0.0428	0.0000	156.3637	156.3637	0.0506	0.0000	157.6280
Total	**0.1027**	**1.0762**	**0.8850**	**1.7800e-003**	**0.4251**	**0.0465**	**0.4716**	**0.2055**	**0.0428**	**0.2483**	**0.0000**	**156.3637**	**156.3637**	**0.0506**	**0.0000**	**157.6280**

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

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	3.1000e-004	0.0200	5.4800e-003	9.0000e-005	2.7400e-003	1.4000e-004	2.8800e-003	7.5000e-004	1.3000e-004	8.9000e-004	0.0000	9.0599	9.0599	6.2000e-004	1.4400e-003	9.5054
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5700e-003	1.8000e-003	0.0224	6.0000e-005	7.2600e-003	4.0000e-005	7.3000e-003	1.9300e-003	4.0000e-005	1.9600e-003	0.0000	5.6433	5.6433	1.8000e-004	1.7000e-004	5.6972
Total	**2.8800e-003**	**0.0218**	**0.0279**	**1.5000e-004**	**0.0100**	**1.8000e-004**	**0.0102**	**2.6800e-003**	**1.7000e-004**	**2.8500e-003**	**0.0000**	**14.7032**	**14.7032**	**8.0000e-004**	**1.6100e-003**	**15.2026**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1913	0.0000	0.1913	0.0925	0.0000	0.0925	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1027	1.0762	0.8850	1.7800e-003		0.0465	0.0465		0.0428	0.0428	0.0000	156.3635	156.3635	0.0506	0.0000	157.6278
Total	**0.1027**	**1.0762**	**0.8850**	**1.7800e-003**	**0.1913**	**0.0465**	**0.2378**	**0.0925**	**0.0428**	**0.1353**	**0.0000**	**156.3635**	**156.3635**	**0.0506**	**0.0000**	**157.6278**

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

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	3.1000e-004	0.0200	5.4800e-003	9.0000e-005	2.7400e-003	1.4000e-004	2.8800e-003	7.5000e-004	1.3000e-004	8.9000e-004	0.0000	9.0599	9.0599	6.2000e-004	1.4400e-003	9.5054
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5700e-003	1.8000e-003	0.0224	6.0000e-005	7.2600e-003	4.0000e-005	7.3000e-003	1.9300e-003	4.0000e-005	1.9600e-003	0.0000	5.6433	5.6433	1.8000e-004	1.7000e-004	5.6972
Total	**2.8800e-003**	**0.0218**	**0.0279**	**1.5000e-004**	**0.0100**	**1.8000e-004**	**0.0102**	**2.6800e-003**	**1.7000e-004**	**2.8500e-003**	**0.0000**	**14.7032**	**14.7032**	**8.0000e-004**	**1.6100e-003**	**15.2026**

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	0.0865	0.7912	0.8934	1.4800e-003		0.0385	0.0385		0.0362	0.0362	0.0000	127.4926	127.4926	0.0303	0.0000	128.2508
Total	**0.0865**	**0.7912**	**0.8934**	**1.4800e-003**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**127.4926**	**127.4926**	**0.0303**	**0.0000**	**128.2508**

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 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	1.4400e-003	0.0585	0.0203	2.8000e-004	9.9000e-003	3.4000e-004	0.0102	2.8500e-003	3.2000e-004	3.1800e-003	0.0000	27.0883	27.0883	1.1100e-003	4.0600e-003	28.3246
Worker	0.0116	8.1600e-003	0.1013	2.7000e-004	0.0328	1.8000e-004	0.0330	8.7200e-003	1.7000e-004	8.8800e-003	0.0000	25.5203	25.5203	8.2000e-004	7.5000e-004	25.7640
Total	**0.0131**	**0.0666**	**0.1216**	**5.5000e-004**	**0.0427**	**5.2000e-004**	**0.0432**	**0.0116**	**4.9000e-004**	**0.0121**	**0.0000**	**52.6086**	**52.6086**	**1.9300e-003**	**4.8100e-003**	**54.0886**

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	0.0865	0.7912	0.8934	1.4800e-003		0.0385	0.0385		0.0362	0.0362	0.0000	127.4925	127.4925	0.0303	0.0000	128.2507
Total	**0.0865**	**0.7912**	**0.8934**	**1.4800e-003**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**127.4925**	**127.4925**	**0.0303**	**0.0000**	**128.2507**

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 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	1.4400e-003	0.0585	0.0203	2.8000e-004	9.9000e-003	3.4000e-004	0.0102	2.8500e-003	3.2000e-004	3.1800e-003	0.0000	27.0883	27.0883	1.1100e-003	4.0600e-003	28.3246
Worker	0.0116	8.1600e-003	0.1013	2.7000e-004	0.0328	1.8000e-004	0.0330	8.7200e-003	1.7000e-004	8.8800e-003	0.0000	25.5203	25.5203	8.2000e-004	7.5000e-004	25.7640
Total	**0.0131**	**0.0666**	**0.1216**	**5.5000e-004**	**0.0427**	**5.2000e-004**	**0.0432**	**0.0116**	**4.9000e-004**	**0.0121**	**0.0000**	**52.6086**	**52.6086**	**1.9300e-003**	**4.8100e-003**	**54.0886**

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	0.0883	0.8066	0.9700	1.6200e-003		0.0368	0.0368		0.0346	0.0346	0.0000	139.1095	139.1095	0.0329	0.0000	139.9319
Total	**0.0883**	**0.8066**	**0.9700**	**1.6200e-003**		**0.0368**	**0.0368**		**0.0346**	**0.0346**	**0.0000**	**139.1095**	**139.1095**	**0.0329**	**0.0000**	**139.9319**

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 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	1.5400e-003	0.0635	0.0220	3.0000e-004	0.0108	3.7000e-004	0.0112	3.1100e-003	3.5000e-004	3.4700e-003	0.0000	29.1052	29.1052	1.2400e-003	4.3600e-003	30.4345
Worker	0.0119	7.9900e-003	0.1031	2.9000e-004	0.0358	1.9000e-004	0.0360	9.5100e-003	1.7000e-004	9.6800e-003	0.0000	27.2012	27.2012	8.1000e-004	7.6000e-004	27.4487
Total	**0.0134**	**0.0715**	**0.1251**	**5.9000e-004**	**0.0466**	**5.6000e-004**	**0.0472**	**0.0126**	**5.2000e-004**	**0.0132**	**0.0000**	**56.3064**	**56.3064**	**2.0500e-003**	**5.1200e-003**	**57.8832**

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	0.0883	0.8066	0.9700	1.6200e-003		0.0368	0.0368		0.0346	0.0346	0.0000	139.1093	139.1093	0.0329	0.0000	139.9317
Total	**0.0883**	**0.8066**	**0.9700**	**1.6200e-003**		**0.0368**	**0.0368**		**0.0346**	**0.0346**	**0.0000**	**139.1093**	**139.1093**	**0.0329**	**0.0000**	**139.9317**

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 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	1.5400e-003	0.0635	0.0220	3.0000e-004	0.0108	3.7000e-004	0.0112	3.1100e-003	3.5000e-004	3.4700e-003	0.0000	29.1052	29.1052	1.2400e-003	4.3600e-003	30.4345
Worker	0.0119	7.9900e-003	0.1031	2.9000e-004	0.0358	1.9000e-004	0.0360	9.5100e-003	1.7000e-004	9.6800e-003	0.0000	27.2012	27.2012	8.1000e-004	7.6000e-004	27.4487
Total	**0.0134**	**0.0715**	**0.1251**	**5.9000e-004**	**0.0466**	**5.6000e-004**	**0.0472**	**0.0126**	**5.2000e-004**	**0.0132**	**0.0000**	**56.3064**	**56.3064**	**2.0500e-003**	**5.1200e-003**	**57.8832**

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	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	55.0730	55.0730	0.0178	0.0000	55.5183
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0296**	**0.2619**	**0.4022**	**6.3000e-004**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**55.0730**	**55.0730**	**0.0178**	**0.0000**	**55.5183**

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	1.1000e-003	7.4000e-004	9.5800e-003	3.0000e-005	3.3300e-003	2.0000e-005	3.3400e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.5271	2.5271	8.0000e-005	7.0000e-005	2.5501
Total	**1.1000e-003**	**7.4000e-004**	**9.5800e-003**	**3.0000e-005**	**3.3300e-003**	**2.0000e-005**	**3.3400e-003**	**8.8000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.5271**	**2.5271**	**8.0000e-005**	**7.0000e-005**	**2.5501**

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	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	55.0729	55.0729	0.0178	0.0000	55.5182
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0296**	**0.2619**	**0.4022**	**6.3000e-004**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**55.0729**	**55.0729**	**0.0178**	**0.0000**	**55.5182**

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

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	1.1000e-003	7.4000e-004	9.5800e-003	3.0000e-005	3.3300e-003	2.0000e-005	3.3400e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.5271	2.5271	8.0000e-005	7.0000e-005	2.5501
Total	**1.1000e-003**	**7.4000e-004**	**9.5800e-003**	**3.0000e-005**	**3.3300e-003**	**2.0000e-005**	**3.3400e-003**	**8.8000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.5271**	**2.5271**	**8.0000e-005**	**7.0000e-005**	**2.5501**

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	0.4413					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9700e-003	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	7.0215	7.0215	4.0000e-004	0.0000	7.0313
Total	**0.4463**	**0.0335**	**0.0498**	**8.0000e-005**		**1.6800e-003**	**1.6800e-003**		**1.6800e-003**	**1.6800e-003**	**0.0000**	**7.0215**	**7.0215**	**4.0000e-004**	**0.0000**	**7.0313**

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 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	1.1000e-003	7.4000e-004	9.5800e-003	3.0000e-005	3.3300e-003	2.0000e-005	3.3400e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.5271	2.5271	8.0000e-005	7.0000e-005	2.5501
Total	**1.1000e-003**	**7.4000e-004**	**9.5800e-003**	**3.0000e-005**	**3.3300e-003**	**2.0000e-005**	**3.3400e-003**	**8.8000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.5271**	**2.5271**	**8.0000e-005**	**7.0000e-005**	**2.5501**

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	0.4413					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9700e-003	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	7.0214	7.0214	4.0000e-004	0.0000	7.0313
Total	**0.4463**	**0.0335**	**0.0498**	**8.0000e-005**		**1.6800e-003**	**1.6800e-003**		**1.6800e-003**	**1.6800e-003**	**0.0000**	**7.0214**	**7.0214**	**4.0000e-004**	**0.0000**	**7.0313**

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 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	1.1000e-003	7.4000e-004	9.5800e-003	3.0000e-005	3.3300e-003	2.0000e-005	3.3400e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.5271	2.5271	8.0000e-005	7.0000e-005	2.5501
Total	**1.1000e-003**	**7.4000e-004**	**9.5800e-003**	**3.0000e-005**	**3.3300e-003**	**2.0000e-005**	**3.3400e-003**	**8.8000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.5271**	**2.5271**	**8.0000e-005**	**7.0000e-005**	**2.5501**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	0.2245	0.2676	2.0828	4.2000e-003	0.4562	3.3600e-003	0.4595	0.1218	3.1400e-003	0.1249	0.0000	393.8114	393.8114	0.0271	0.0187	400.0578
Unmitigated	0.2245	0.2676	2.0828	4.2000e-003	0.4562	3.3600e-003	0.4595	0.1218	3.1400e-003	0.1249	0.0000	393.8114	393.8114	0.0271	0.0187	400.0578

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	443.68	448.38	401.85	1,211,264	1,211,264
Total	443.68	448.38	401.85	1,211,264	1,211,264

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
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
Single Family Housing	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.548670	0.058343	0.171689	0.130773	0.027316	0.007545	0.011806	0.006161	0.000681	0.000392	0.029028	0.000637	0.006958
Other Non-Asphalt Surfaces	0.548670	0.058343	0.171689	0.130773	0.027316	0.007545	0.011806	0.006161	0.000681	0.000392	0.029028	0.000637	0.006958

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

Single Family Housing	0.548670	0.058343	0.171689	0.130773	0.027316	0.007545	0.011806	0.006161	0.000681	0.000392	0.029028	0.000637	0.006958

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	65.1657	65.1657	5.5000e-003	6.7000e-004	65.5018
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	65.1657	65.1657	5.5000e-003	6.7000e-004	65.5018
NaturalGas Mitigated	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003	0.0000	59.9379	59.9379	1.1500e-003	1.1000e-003	60.2941
NaturalGas Unmitigated	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003	0.0000	59.9379	59.9379	1.1500e-003	1.1000e-003	60.2941

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					
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
Single Family Housing	1.12319e+006	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003	0.0000	59.9379	59.9379	1.1500e-003	1.1000e-003	60.2941
Total		**6.0600e-003**	**0.0518**	**0.0220**	**3.3000e-004**		**4.1800e-003**	**4.1800e-003**		**4.1800e-003**	**4.1800e-003**	**0.0000**	**59.9379**	**59.9379**	**1.1500e-003**	**1.1000e-003**	**60.2941**

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					
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
Single Family Housing	1.12319e+006	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003	0.0000	59.9379	59.9379	1.1500e-003	1.1000e-003	60.2941
Total		**6.0600e-003**	**0.0518**	**0.0220**	**3.3000e-004**		**4.1800e-003**	**4.1800e-003**		**4.1800e-003**	**4.1800e-003**	**0.0000**	**59.9379**	**59.9379**	**1.1500e-003**	**1.1000e-003**	**60.2941**

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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			
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
Single Family Housing	367450	65.1657	5.5000e-003	6.7000e-004	65.5018
Total		**65.1657**	**5.5000e-003**	**6.7000e-004**	**65.5018**

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			
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
Single Family Housing	367450	65.1657	5.5000e-003	6.7000e-004	65.5018
Total		**65.1657**	**5.5000e-003**	**6.7000e-004**	**65.5018**

6.0 Area Detail

6.1 Mitigation Measures Area

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	0.3939	4.0200e-003	0.3494	2.0000e-005		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	0.5711	0.5711	5.5000e-004	0.0000	0.5848
Unmitigated	0.3939	4.0200e-003	0.3494	2.0000e-005		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	0.5711	0.5711	5.5000e-004	0.0000	0.5848

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	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3392					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0105	4.0200e-003	0.3494	2.0000e-005		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	0.5711	0.5711	5.5000e-004	0.0000	0.5848
Total	**0.3939**	**4.0200e-003**	**0.3494**	**2.0000e-005**		**1.9400e-003**	**1.9400e-003**		**1.9400e-003**	**1.9400e-003**	**0.0000**	**0.5711**	**0.5711**	**5.5000e-004**	**0.0000**	**0.5848**

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	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3392					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0105	4.0200e-003	0.3494	2.0000e-005		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	0.5711	0.5711	5.5000e-004	0.0000	0.5848
Total	**0.3939**	**4.0200e-003**	**0.3494**	**2.0000e-005**		**1.9400e-003**	**1.9400e-003**		**1.9400e-003**	**1.9400e-003**	**0.0000**	**0.5711**	**0.5711**	**5.5000e-004**	**0.0000**	**0.5848**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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	10.2381	0.0806	1.9800e-003	12.8442
Unmitigated	11.8466	0.1007	2.4700e-003	15.0994

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
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
Single Family Housing	3.06224 / 1.93054	11.8466	0.1007	2.4700e-003	15.0994
Total		**11.8466**	**0.1007**	**2.4700e-003**	**15.0994**

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			
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
Single Family Housing	2.44979 / 1.93054	10.2381	0.0806	1.9800e-003	12.8442
Total		**10.2381**	**0.0806**	**1.9800e-003**	**12.8442**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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	5.9923	0.3541	0.0000	14.8457
Unmitigated	11.9846	0.7083	0.0000	29.6913

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
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
Single Family Housing	59.04	11.9846	0.7083	0.0000	29.6913
Total		**11.9846**	**0.7083**	**0.0000**	**29.6913**

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			
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
Single Family Housing	29.52	5.9923	0.3541	0.0000	14.8457
Total		**5.9923**	**0.3541**	**0.0000**	**14.8457**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

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

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	244.2600	0.0000	0.0000	244.2600

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	345	244.2600	0.0000	0.0000	244.2600
Total		**244.2600**	**0.0000**	**0.0000**	**244.2600**

Beltramo Existing Uses OPS ONLY - Ventura County, Annual

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

Beltramo Existing Uses OPS ONLY

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	6.82	1000sqft	0.16	6,820.00	0
Single Family Housing	2.00	Dwelling Unit	0.65	3,600.00	6

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - OPERATIONAL EMISSIONS ONLY

Land Use - 6,820 SF church and 2 SFDs

Table Name	Column Name	Default Value	New Value

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

2.2 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	0.0461	1.7000e-004	0.0149	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0244	0.0244	2.0000e-005	0.0000	0.0250
Energy	1.0200e-003	9.1400e-003	6.7700e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	27.4888	27.4888	1.2700e-003	3.2000e-004	27.6148
Mobile	0.0400	0.0443	0.3402	6.3000e-004	0.0663	5.2000e-004	0.0669	0.0177	4.9000e-004	0.0182	0.0000	59.2070	59.2070	4.6000e-003	3.0500e-003	60.2313
Waste						0.0000	0.0000		0.0000	0.0000	8.3896	0.0000	8.3896	0.4958	0.0000	20.7849
Water						0.0000	0.0000		0.0000	0.0000	0.1090	2.1949	2.3040	0.0113	2.8000e-004	2.6711
Total	**0.0872**	**0.0536**	**0.3619**	**6.9000e-004**	**0.0663**	**1.3100e-003**	**0.0677**	**0.0177**	**1.2800e-003**	**0.0190**	**8.4987**	**88.9151**	**97.4137**	**0.5130**	**3.6500e-003**	**111.3270**

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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	0.0461	1.7000e-004	0.0149	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0244	0.0244	2.0000e-005	0.0000	0.0250
Energy	1.0200e-003	9.1400e-003	6.7700e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	27.4888	27.4888	1.2700e-003	3.2000e-004	27.6148
Mobile	0.0400	0.0443	0.3402	6.3000e-004	0.0663	5.2000e-004	0.0669	0.0177	4.9000e-004	0.0182	0.0000	59.2070	59.2070	4.6000e-003	3.0500e-003	60.2313
Waste						0.0000	0.0000		0.0000	0.0000	8.3896	0.0000	8.3896	0.4958	0.0000	20.7849
Water						0.0000	0.0000		0.0000	0.0000	0.1090	2.1949	2.3040	0.0113	2.8000e-004	2.6711
Total	**0.0872**	**0.0536**	**0.3619**	**6.9000e-004**	**0.0663**	**1.3100e-003**	**0.0677**	**0.0177**	**1.2800e-003**	**0.0190**	**8.4987**	**88.9151**	**97.4137**	**0.5130**	**3.6500e-003**	**111.3270**

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

4.0 Operational Detail - Mobile

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

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0400	0.0443	0.3402	6.3000e-004	0.0663	5.2000e-004	0.0669	0.0177	4.9000e-004	0.0182	0.0000	59.2070	59.2070	4.6000e-003	3.0500e-003	60.2313
Unmitigated	0.0400	0.0443	0.3402	6.3000e-004	0.0663	5.2000e-004	0.0669	0.0177	4.9000e-004	0.0182	0.0000	59.2070	59.2070	4.6000e-003	3.0500e-003	60.2313

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	47.40	40.85	188.44	124,610	124,610
Single Family Housing	18.88	19.08	17.10	51,543	51,543
Total	66.28	59.93	205.54	176,153	176,153

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11
Single Family Housing	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Place of Worship	0.543528	0.058189	0.173108	0.133952	0.027894	0.007577	0.011427	0.006062	0.000688	0.000393	0.029232	0.000646	0.007304
Single Family Housing	0.543528	0.058189	0.173108	0.133952	0.027894	0.007577	0.011427	0.006062	0.000688	0.000393	0.029232	0.000646	0.007304

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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	17.3828	17.3828	1.0800e-003	1.3000e-004	17.4487
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	17.3828	17.3828	1.0800e-003	1.3000e-004	17.4487
NaturalGas Mitigated	1.0200e-003	9.1400e-003	6.7700e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	10.1060	10.1060	1.9000e-004	1.9000e-004	10.1660
NaturalGas Unmitigated	1.0200e-003	9.1400e-003	6.7700e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	10.1060	10.1060	1.9000e-004	1.9000e-004	10.1660

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Place of Worship	141583	7.6000e-004	6.9400e-003	5.8300e-003	4.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	7.5554	7.5554	1.4000e-004	1.4000e-004	7.6003
Single Family Housing	47795.5	2.6000e-004	2.2000e-003	9.4000e-004	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.5506	2.5506	5.0000e-005	5.0000e-005	2.5657
Total		**1.0200e-003**	**9.1400e-003**	**6.7700e-003**	**5.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**10.1060**	**10.1060**	**1.9000e-004**	**1.9000e-004**	**10.1660**

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					
Place of Worship	141583	7.6000e-004	6.9400e-003	5.8300e-003	4.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	7.5554	7.5554	1.4000e-004	1.4000e-004	7.6003
Single Family Housing	47795.5	2.6000e-004	2.2000e-003	9.4000e-004	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.5506	2.5506	5.0000e-005	5.0000e-005	2.5657
Total		**1.0200e-003**	**9.1400e-003**	**6.7700e-003**	**5.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**10.1060**	**10.1060**	**1.9000e-004**	**1.9000e-004**	**10.1660**

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Place of Worship	56401.4	13.6098	8.4000e-004	1.0000e-004	13.6614
Single Family Housing	15636.2	3.7730	2.3000e-004	3.0000e-005	3.7874
Total		**17.3828**	**1.0700e-003**	**1.3000e-004**	**17.4487**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Place of Worship	56401.4	13.6098	8.4000e-004	1.0000e-004	13.6614
Single Family Housing	15636.2	3.7730	2.3000e-004	3.0000e-005	3.7874
Total		**17.3828**	**1.0700e-003**	**1.3000e-004**	**17.4487**

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6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0461	1.7000e-004	0.0149	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0244	0.0244	2.0000e-005	0.0000	0.0250
Unmitigated	0.0461	1.7000e-004	0.0149	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0244	0.0244	2.0000e-005	0.0000	0.0250

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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	4.9900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0407					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.5000e-004	1.7000e-004	0.0149	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0244	0.0244	2.0000e-005	0.0000	0.0250
Total	**0.0461**	**1.7000e-004**	**0.0149**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0244**	**0.0244**	**2.0000e-005**	**0.0000**	**0.0250**

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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	4.9900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0407					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.5000e-004	1.7000e-004	0.0149	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0244	0.0244	2.0000e-005	0.0000	0.0250
Total	**0.0461**	**1.7000e-004**	**0.0149**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0244**	**0.0244**	**2.0000e-005**	**0.0000**	**0.0250**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.3040	0.0113	2.8000e-004	2.6711
Unmitigated	2.3040	0.0113	2.8000e-004	2.6711

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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

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Place of Worship	0.21339 / 0.333764	1.6330	7.0500e-003	1.8000e-004	1.8616
Single Family Housing	0.130308 / 0.0821507	0.6710	4.2900e-003	1.0000e-004	0.8094
Total		**2.3040**	**0.0113**	**2.8000e-004**	**2.6711**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Place of Worship	0.21339 / 0.333764	1.6330	7.0500e-003	1.8000e-004	1.8616
Single Family Housing	0.130308 / 0.0821507	0.6710	4.2900e-003	1.0000e-004	0.8094
Total		**2.3040**	**0.0113**	**2.8000e-004**	**2.6711**

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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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.3896	0.4958	0.0000	20.7849
Unmitigated	8.3896	0.4958	0.0000	20.7849

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Place of Worship	38.87	7.8903	0.4663	0.0000	19.5478
Single Family Housing	2.46	0.4994	0.0295	0.0000	1.2371
Total		**8.3896**	**0.4958**	**0.0000**	**20.7849**

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Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Place of Worship	38.87	7.8903	0.4663	0.0000	19.5478
Single Family Housing	2.46	0.4994	0.0295	0.0000	1.2371
Total		**8.3896**	**0.4958**	**0.0000**	**20.7849**

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX C

Emissions Reduction and Dust Control BMP Measures

APPENDIX C: EMISSIONS REDUCTION AND DUST CONTROL BMP MEASURES

(1) Per VCAPCD recommendations, in order to reduce impacts associated with NOx emissions (a precursor to ozone) to the extent feasible, the following measures shall be implemented:
    a. All commercial on-road and off-road diesel vehicles are subject to the idling limits of California Code of Regulations Title 13, Sections 2485 and 2449(d)(3), respectively. Construction equipment shall not idle for more than five consecutive minutes. The idling limit does not apply to: 1) idling when queuing; 2) idling to verify that the vehicle is in safe operating condition; (3), idling for testing, servicing, repairing, or diagnostic purposes; 4) idling necessary to accomplish work for which the vehicle was designed (such as operating a crane); 5) idling required to bring the machine system to operating temperature, and 6) idling necessary to ensure safe operation of the vehicle.
    b. Idling Equipment engines should be maintained in good condition and in proper tune, as per manufacturer's specifications.
    c. During the smog season (May through October), the construction period should be lengthened so as to minimize the number of vehicles and equipment operating at the same time.
    d. Alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, should be used if feasible.

(2) Per VCAPCD recommendations, during clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering, or other dust preventive measures using the following procedures:
    a. All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day, so that water penetrates sufficiently to minimize fugitive dust during grading activities.
    b. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved roadways on-site, should be treated to prevent fugitive dust. Measures may include watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate.
    c. Graded and/or excavated inactive areas of the construction site should be monitored at least weekly for dust stabilization. If a portion of the site is inactive for over four days, soil on-site should be stabilized.
    d. Signs should be posted limiting on-site traffic to 15 miles per hour.
    e. All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 20 miles per hour averaged over one hour) so as to prevent excessive amounts of dust.

f. All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust pursuant to California Vehicle Code §23114.
g. Respiratory protection shall be used by all employees as needed, in accordance with California Division of Occupational Safety and Health regulations.
h. It is not anticipated that the Project site poses a risk for Valley Fever. Measures to reduce exposure to the fungus that causes Valley Fever can be found in the *2003 VCAPCD Ventura County Air Quality Assessment Guidelines*, Section 7.4.2.

(3) Per VCAPCD recommendations, after clearing, grading, earth moving, or excavation operations, and during construction activities, fugitive dust emissions shall be controlled using the following procedures:
   a. All inactive portions of the construction site shall be seeded and watered until grass cover is grown.
   b. All active portions of the construction site shall be sufficiently watered to prevent excessive amounts of dust.

(4) Per VCAPCD recommendations, fugitive dust emissions shall be controlled by assuring that streets adjacent to the project site shall be swept as needed to remove silt, which may be accumulated from construction activities so as to prevent excessive amounts of dust.

(5) Per VCAPCD recommendations, construction activities should utilize new technologies to control ozone precursor emissions as they become available and feasible. Streets shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.