AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

ATTACHMENT A

to the
841 Old County Road Project Initial Study / Mitigated Negative Declaration

803 – 851 OLD COUNTY ROAD AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

San Carlos, California

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Introduction

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with the proposed office/research and development/life science project located at 803 – 851 Old County Road in San Carlos, California. The air quality and GHG impacts from this project would be associated with demolition of the existing land uses, construction of the new buildings and infrastructure, and operation of the project. Air pollutants and GHG emissions associated with construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impacts (includes construction and operation) and the impact of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The existing project site is occupied by a garden supply center, kennels, and a tree services office. This project proposes to demolish the existing uses and construct a total of 339,733 square feet (sf) of office/research & development/life science space split between two buildings, a north building and a south building. The first building will be a five stories and 204,057-sf, followed by a four-story, 135,676-sf building. Two levels of parking will also be provided in an underground lot that will span the entire project site. In addition, the project proposes to include two stand-by diesel emergency generators on the northeastern boundary of the project, one for the base buildings and one for the future tenant. The project also proposes to include a cooling tower on the roof of the south building. Construction is proposed to begin in January 2022 and be completed by January 2025.

Air Quality Setting

The project is located in San Mateo County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter

[1] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.[2] See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the site are the residents in the multi-family housing southwest of the project site. There are additional sensitive receptors at farther distances to the south, west, and north of the project site. The Children's Place Preschool and Little Learners Preschool are also near the project site. The project will not introduce new sensitive (i.e., residential) receptors.

[2] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.[4] In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have

[3] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.
[4] California Air Resources Board, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

been approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[5] The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages

[5] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program , accessed 2/18/2021.

community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall CalEnviroScreen score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.[6] The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. The project site is not within a designated CARE area and not within a BAAQMD overburdened area as identified by CalEnviroScreen 4.0 as the project site is scored at the 31st percentile. The nearest sensitive receptors are scored at the 12th percentile.

The BAAQMD *California Environmental Quality Act (CEQA) Air Quality Guidelines*[7] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for TACs, odors, and greenhouse gas (GHG) emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of their *CEQA Guidelines*. In May 2011, the updated BAAQMD *CEQA Air Quality Guidelines* were amended to include a risk and hazards threshold for new receptors and modify procedures for assessing impacts related to risk and hazard impacts.

BAAQMD Rules and Regulations

Combustion equipment associated with the proposed project that includes new diesel engines to power generators and a cooling tower that would establish new sources of particulate matter and gaseous emissions. Emissions would primarily result from the testing of the emergency backup generators. Certain emission sources would be subject to BAAQMD Regulations and Rules. The District's rules and regulations that may apply to the project include:

- Regulation 1 – General Provisions
  - Rule 1-30: Public Nuisance
- Regulation 2 – Permits
  - Rule 2-1: General Requirements
  - Rule 2-2: New Source Review
  - Rule 2-5: New Source Review of Toxic Air Contaminants
- Regulation 6 – Particulate Matter and Visible Emissions
  - Rule 6-2: Commercial Cooking Equipment

[6] See BAAQMD: https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofoverburdenedcommunities-pdf.pdf?la=en , accessed 11/23/2021.
[7] Bay Area Air Quality Management District, 2011. *CEQA Air Quality Guidelines*. May. (Updated May 2017)

Rule 6-3: Wood-Burning Devices
Rule 6-7: Odorous Substances

- Regulation 9 – Inorganic Gaseous Pollutants
  Rule 9-1: Sulfur Dioxide
  Rule 9-7: Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, And Process Heaters
  Rule 9-8: Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines

Permits

Rule 2-1-301 requires that any person installing, modifying, or replacing any equipment, the use of which may reduce or control the emission of air contaminants, shall first obtain an Authority to Construct (ATC).

Rule 2-1-302 requires that written authorization from the BAAQMD in the form of a Permit to Operate (PTO) be secured before any such equipment is used or operated.

Rule 2-1 lists sources that are exempt from permitting.

New Source Review

Rule 2-2, New Source Review (NSR), applies to all new and modified sources or facilities that are subject to the requirements of Rule 2-1-301. The purpose of the rule is to provide for review of such sources and to provide mechanisms by which no net increase in emissions will result.

Rule 2-2-301 requires that an applicant for an ATC or PTO apply Best Available Control Technology (BACT) to any new or modified source that results in an increase in emissions and has emissions of precursor organic compounds, non-precursor organic compounds, NOx, SO_2, PM_{10}, or CO of 10.0 pounds or more per highest day. Based on the estimated emissions from the proposed project, BACT will be required for NOx emissions from the diesel-fueled generator engines.

Rule 2-5 applies to new and modified sources of TAC emissions. BAAQMD evaluates the TAC emissions in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced. Toxics BACT (or TBACT) is applied to any new or modified source of TACs where the source risk is a cancer risk greater than 1.0 in one million and/or a chronic hazard index greater than 0.20. Permits are not issued for any new or modified source that has risks or net project risks that exceed a cancer risk of 10.0 in one million or a chronic or acute hazard index of 1.0.

Stationary Diesel Airborne Toxic Control Measure

The BAAQMD administers the CARB's Airborne Toxic Control Measure (ACTM) for Stationary Diesel engines (section 93115, title 17 CA Code of Regulations). The project's

stationary sources will be new stationary emergency stationary emergency standby diesel engines larger than 50 hp. These limits vary based on maximum engine power. All engines are limited to PM emission rates of 0.15 g/hp-hour, regardless of size. This ACTM limits engine operation 50 hours per year for routine testing and maintenance.

Offsets

Rule 2-2-302 require that offsets be provided for a new or modified source that emits more than 10 tons per year of NOx or precursor organic compounds. It is not expected that emissions of any pollutant will exceed the offset thresholds.

Prohibitory Rules

Regulation 6 pertains to particulate matter and visible emissions. Although the engines will be fueled with diesel, they will be modern, low emission engines. Thus, the engines are expected to comply with Regulation 6.

Rule 6-3 applies to emissions from wood-burning devices. Effective November 1, 2016, no person or builder shall install a wood-burning device in a new building construction.

Rule 9-1 applies to sulfur dioxide. The engines will use ultra-low sulfur diesel fuel (less than 15 ppm sulfur) and will not be a significant source of sulfur dioxide emissions and are expected to comply with the requirements of Rule 9-1.

Rule 9-7 limits the emissions of NOx CO from industrial, institutional and commercial boilers, steam generators and process heaters. This regulation typically applies to boilers with a heat rating of 2 million British Thermal Units (BTU) per hour

Rule 9-8 prescribes NOx and CO emission limits for stationary internal combustion engines. Since the proposed engines will be used with emergency standby generators, Regulation 9-8-110 exempts the engines from the requirements of this Rule, except for the recordkeeping requirements (9-8-530) and limitations on hours of operation for reliability-related operation (maintenance and testing). The engines will not operate more than 50 hours per year, which will satisfy the requirements of 9-8-111.

BACT for Diesel Generator Engines

Since the generators will be used exclusively for emergency use during involuntary loss of power, the BACT levels listed for IC compression engines in the BAAQMD BACT Guidelines would apply. These are provided for two separate size ranges of diesel engines:

> I.C. Engine – Compression Ignition >50hp and <1.000hp: BAAQMD applies BACT 2 emission limits based on the ATCM for stationary emergency standby diesel engines larger than 50 brake-horsepower (BHP). NOx emission factor limit is subject to the CARB ACTM that ranges from 3.0 to 3.5 grams per horsepower hour (g/hp-hr). The PM (PM10 or PM2.5) limit is 0.15 g/hp-hr per CARB's ACTM.

I.C. Engine – Compression Ignition >999hp: BAAQMD applies specific BACT emission limits for stationary emergency standby diesel engines equal or larger than 1,000 brake-horsepower (BHP). NOx emission factor limit is subject to the CARB ACTM that ranges from 0.5 g/hp-hr. The PM (PM10 or PM2.5) limit is 0.02 g/hp-hr. POC (i.e., ROG) limits are 0.14 g/hp-hr.

City of San Carlos 2030 General Plan

The San Carlos 2030 General Plan's Environmental Management Element includes policies and actions to reduce exposure of the City's sensitive population to exposure of air pollution, toxic air contaminants, and GHG emissions. The following policies and actions are applicable to the proposed project:

Policies

Policy EM-6.1: Support and comply with the BAAQMD, State and federal standards and policies that improve air quality in the Bay Area.

Policy EM-6.2: Support and encourage commercial uses to adopt environmentally friendly technologies and reduce the release of pollutants.

Policy EM-6.3: Support the reduction of emissions of particulates from wood burning appliances, construction activity, automobiles, trucks and other sources.

Policy EM-6.6: BAAQMD recommended measures to reduce PM_{10} and exhaust emissions associated with construction shall be applied to new development in San Carlos.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 CEQA Air Quality Guidelines. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the CEQA Air Quality Guidelines in 2017 to include the latest significance thresholds, which were used in this analysis and are summarized in Table 1. Impacts above the threshold are considered potentially significant.

Table 1. BAAQMD CEQA Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1000-foot zone of influence)**	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental annual $PM_{2.5}$	0.3 µg/m^3	0.8 µg/m^3	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020)		
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.			

Per discussion with BAAQMD staff, in circumstances where a cumulative Health Risk and Hazards threshold is exceeded, a project's contribution would be considered cumulatively considerable if the project's risk exceeds the single source threshold.[8]

[8] Per email from BAAQMD, Areana Flores, on February 23, 2021.

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: Conflict with or obstruct implementation of the applicable air quality plan?

BAAQMD is the regional agency responsible for overseeing compliance with State and federal laws, regulations, and programs within the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD, with assistance from the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), prepares and implements specific plans to meet the applicable laws, regulations, and programs. The most recent and comprehensive of which is the *Bay Area 2017 Clean Air Plan*.[9] The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality and GHG impacts. In formulating compliance strategies, BAAQMD relies on the planned land uses identified in local general plans. Land use planning affects vehicle travel, which, in turn, affects region-wide emissions of air pollutants and GHGs.

Conclusion AIR-1

The 2017 Clean Air Plan, adopted by BAAQMD in April 2017, includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. General plans must show consistency with the control measures listed within the Clean Air Plan. However, at the project-level, there are no consistency measures or thresholds. Despite this, the proposed project would not conflict with the latest Clean Air planning efforts since 1) the project would have construction and operational emissions below the BAAQMD thresholds (see Impact 2 below) and 2) the project would be considered urban infill, 3) the project would be located near employment centers, and 4) the project would be located near transit with regional connections.

Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and Federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for O_3, $PM_{2.5}$ and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O_3 precursor pollutants (ROG and NOx), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types, size, and anticipated construction schedule were input to

[9] Bay Area Air Quality Management District (BAAQMD), 2017. *Final 2017 Clean Air Plan.*

CalEEMod. The CARB EMission FACtors 2021 (EMFAC2021) model was used to predict emissions from construction traffic, which includes worker travel, vendor trucks, and haul trucks.[10] The CalEEMod model output along with construction inputs are included in *Attachment 2* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 3*.

CalEEMod Inputs

Land Uses

The proposed restaurant project land uses were entered into CalEEMod as described in Table 2.

Table 2. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet	Acreage
Research & Development	339.73	1000sf	339,733	3.41
Enclosed Parking with Elevator	748	Parking Space	299,200	

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario including equipment list and schedule, were based on information generated using CalEEMod defaults for a project of this type and size that was reviewed and modified by the project applicant.

The construction equipment worksheets included the schedule for each phase. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays were based on CalEEMod defaults and adjusted by the applicant where necessary. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase. The construction schedule assumed that the earliest possible start date would be January 2022, with no construction equipment present on the project site until February 2022, and would be built out over a period of approximately 36 months, or 773 construction workdays. The earliest year of full operation was assumed to be 2026.

Construction Traffic Emissions

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2017 motor vehicle emission factor model. This model has been superseded by the EMFAC2021 model; however, CalEEMod has not been updated to include EMFAC2021. Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil

[10] See CARB's EMFAC2021 Emissions Inventory at https://arb.ca.gov/emfac/emissions-inventory

material imported and/or exported to the site, and the estimate of cement and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for demolition and grading were estimated from the provided demolition and grading volumes and assuming each truck could carry 10 tons per load. The number of concrete and asphalt total haul trips were provided and converted to total one-way trips, assuming two trips per round-trip delivery.

The construction traffic information was combined with EMFAC2021 motor vehicle emissions factors. EMFAC2021 provides aggregate emission rates in grams per mile for each vehicle type. The vehicle mix for this study was based on CalEEMod default assumptions, where worker trips are assumed to be comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, including cement trucks, are comprised of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips and 20 miles for hauling. Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On road emissions in San Mateo County for the years 2022 - 2025 were used in these calculations. Table 3 provides the traffic inputs that were combined with the EMFAC2021 emission database to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2021 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Worker Trips[1]	Vendor Trips[1]	Haul Trips[2]	
Vehicle mix[1]	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HDDT	
Trip Length (miles)	10.8	7.3	20.0	CalEEMod default distance with 5-min truck idle time.
Demolition	300	-	546	3,700 tons of building and 900 tons of pavement demolition. CalEEMod default worker trips.
Below Grade Garage Excavation	975	-	15,125	121,000-cy soil export. CalEEMod default worker trips.
Below Grade Foundations	250	-	-	CalEEMod default worker trips.
Garage Concrete	20,358	9,135	8,080	4,040 cement round trips. CalEEMod default worker and vendor trips.
Phase 1 – Building Construction North	42,120	18,900	380	190 cement round trips. CalEEMod default worker and vendor trips.
Phase 1 – Site	1,600	-	26	13 asphalt round trips. CalEEMod default worker trips.
Phase 2 – Building Construction South	46,800	21,000	590	295 cement round trips. CalEEMod default worker and vendor trips.
Phase 2 - Site	1,600	-	24	12 asphalt round trips. CalEEMod default worker trips.

Notes: [1] Based on 2022-2025 EMFAC2021 light-duty vehicle fleet mix for San Mateo County.
[2] Includes demolition and grading trips estimated by CalEEMod based on amount of material to be removed. Cement and asphalt trips estimated based on data provided by the applicant.

Conclusion AIR-2.1

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions and dividing those emissions by the number of active workdays during that year. Table 4 shows the annualized average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 4, predicted annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 4. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2022	0.16	1.87	0.09	0.06
2023	0.13	1.56	0.08	0.05
2024 + 2025	1.97	1.65	0.09	0.05
Average Daily Construction Emissions Per Year (pounds/day)				
2022 (235 construction workdays)	1.34	15.88	0.76	0.51
2023 (261 construction workdays)	0.98	11.92	0.61	0.37
2024 + 2025 (278 construction workdays)	14.18	11.90	0.62	0.37
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices*.

Mitigation Measure AQ-1: **Include measures to control dust and exhaust during construction.**

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Mitigation Measure AQ-1

The measures above are consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future employees and two emergency generators. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed project.

CalEEMod Inputs

Land Uses

The project operational land uses were entered into CalEEMod as described above for the construction period modeling.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest full year of operation would be 2026 if construction begins in 2022.

Traffic Information

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model.[11] The project would produce 3,606 daily trips. When considering the 1,260 existing use trips applied in the traffic analysis, the project would result in 2,346 net daily trips. The daily trip generation was calculated using the size of the project land uses and the adjusted total automobile trips per land use. The Saturday and Sunday trip rates were adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate. The default trip types and lengths specified by CalEEMod were used.

EMFAC2021 Adjustment

The vehicle emission factors and fleet mix used in CalEEMod are based on EMFAC2017, which is an older CARB emission inventory for on road and off-road mobile sources. Since the release of CalEEMod Version 2020.4.0, new emission factors have been produced by CARB. EMFAC2021 became available for use in January 2021. It includes the latest data on California's car and truck fleets and travel activity. The CalEEMod default vehicle emission factors and fleet mix were updated using the emission rates and fleet mix from EMFAC2021. On road emission rates from 2026 San Mateo County were used (See *Attachment 3*). More details about the updates in emissions calculation methodologies and data are available in the EMFAC2021 Technical Support Document.[12]

Energy

The City of San Carlos has banned natural gas from new construction.[13] As a result, the energy intensity factor for natural gas in CalEEMod was set to zero. GHG emissions modeling includes those indirect emissions from electricity consumption. The model has a default rate of 0 pounds of CO_2 per megawatt of electricity produced, which is based on Peninsula Clean Energy's 2019 emissions rate.

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[11] W-Trans, 803-851 Old County Road Project Memorandum of Transportation Analysis Assumptions, February 15, 2022.
[12] See CARB 2021: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac
[13] City of San Carlos Local Building Energy Standards, Reach Code, URL: https://www.cityofsancarlos.org/Home/ShowDocument?id=6531

Project Generator

The project proposes to include one stand-by emergency diesel generator located on the northeastern boundary of the property to power both buildings in the event of a power failure. The project also proposes to leave room for a second generator to be installed by the tenant. The day-1 standby generator will be a 450-kilowatt (kW) generator powered by a 600-horsepower (hp) engine. The tenant generator is expected to be a 500kW generator powered by a 670hp engine. These generators would be tested periodically and power the buildings in the event of a power failure. For modeling purposes, it was assumed that both generators would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

Project Cooling Tower

The project would include one cooling tower to be located on the top of the southern building. Based on information provided by the applicant, the cooling tower would have a water flow rate of 4,500 gallons per minute (GPM), using public water with an average total dissolved solids (TDS) of 72 parts per million (ppm), and a mist eliminator efficiency of 0.005 percent. Details of the cooling tower PM emissions calculations are provided in *Attachment 3*.

Other Inputs

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Water/wastewater use was changed to 100% aerobic conditions to represent wastewater treatment plant conditions since the project site would not send wastewater to septic tanks or facultative lagoons.

Existing Uses

The existing site consists of 2,800-sf of General Light Industrial, 6,800-sf of Nursery (Garden Center), and 16,450-sf of Pet Day Care Center land use types. The Unrefrigerated Warehouse - No Rail land use type was substituted for the Nursery since CalEEMod does not have a Nursery land use type. Based on the traffic consultant's project-specific trip generation rates for the existing land uses, the existing conditions at the site account for 1,260 trips. A CalEEMod run for existing land uses was developed for this project.

Conclusion AIR-2.2

Annual emissions were predicted using CalEEMod and daily emissions were estimating assuming 365 days of operation. Table 5 shows average daily construction emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project. The operational period emissions would not exceed the BAAQMD significance thresholds.

Table 5. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2026 Annual Project Operational Emissions (*tons/year*)	2.54	1.15	2.43	0.63
2022 Existing Use Operational Emissions (*tons/year*)	0.57	0.48	0.71	0.18
Net Total Operating Emissions	1.96	0.66	1.73	0.45
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2025 Daily Project Operational Emissions (*pounds/day*)[1]	10.77	3.63	9.47	2.45
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*
Note: [1]Assumes 365-day operation.				

Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., stationary and mobile sources).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would include the installation of two stand-by generators powered by a diesel engine and a cooling tower, which would produce TAC and air pollutant emissions. Traffic generated by the project would consist of mostly light-duty gasoline-powered vehicles, which would produce TAC and air pollutant emissions.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TAC was also assessed in terms of the cumulative risk which includes the project contribution.

Community Risk Methodology

Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risk from construction and operation sources. These sources include on-site construction activity, construction truck hauling, project generator use, and increased traffic from the project. To evaluate the increased cancer risks from

the project, a 30-year exposure period was used, per BAAQMD guidance,[14] with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

The project increased cancer risk is computed by summing the project construction cancer risk and operation cancer risk contribution. Unlike, the increased maximum cancer risk, the annual $PM_{2.5}$ concentration, and HI values are not additive but based on an annual maximum risk for the entirety of the project. The project maximally exposed individual (MEI) is identified as the sensitive receptor that is most impacted by the project's construction and operation.

The methodology for computing community risks impacts is contained in *Attachment 1*. This involved the calculation of TAC and $PM_{2.5}$ emissions, dispersion modeling of these emissions, and computations of cancer risk and non-cancer health effects.

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for
extended periods of time (i.e., chronic exposures). This includes the nearby existing residences south, west, and north of the project site, as well as The Children's Place Preschool and Little Learners Preschool, as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions. Based on information gathered from the websites for each preschool, children at both locations are expected to range in ages from 2 – 5 years old.

Community Risks from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impacts associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust (i.e., DPM) poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[15] This assessment included dispersion modeling to predict the offsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod and EMFAC2021 models provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages of 0.12 tons (232 pounds).

[14] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines.* December 2016.
[15] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.03 tons (52 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[16] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

Construction Sources

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.[17] The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

AERMOD Inputs and Meteorological Data

The modeling used a five-year meteorological data set (2011-2015) from the San Carlos Airport prepared for use with the AERMOD model by the BAAQMD. Construction emissions were modeled as occurring daily between 8:00 a.m. to 5:00 p.m., when the majority of construction

[16] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.
[17] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology*. April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm

activity would occur. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2022 - 2025 periods were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 5 feet (1.5 meters), 15 feet (4.5 meters), and 25 feet (7.6 meters) were used to represent the breathing heights on the first, second, and third floors of sensitive receptors in the residences near the site. A receptor height of 3 feet (1 meter) was used for both preschools.

Summary of Construction Community Risk Impacts

The increased cancer risk calculations were based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations, as described in *Attachment 1*. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Third trimester, infant, child, and adult exposures were assumed to occur at all residences during the entire construction period. Child exposures were assumed to occur at the preschools.

The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI values was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation refence exposure level of 5 $\mu g/m^3$.

The maximum modeled annual DPM and $PM_{2.5}$ concentrations, which includes both the DPM and fugitive $PM_{2.5}$ concentrations, were identified at nearby sensitive receptors to find the MEI. Results of this assessment indicated that the MEI most affected by construction was located on the first floor (5 feet above ground) of the multi-family residence to the southwest of the project. The location of the MEI and nearby sensitive receptors are shown in Figure 1. Table 6 lists the community risks from construction at the location of the residential MEI. *Attachment 4* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Additionally, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations associated with construction activities at the nearby preschools. The maximum increased cancer risks were adjusted using child exposure parameters. The uncontrolled cancer risk, $PM_{2.5}$ concentration, and HI at the nearby preschools do not exceed their respective BAAQMD single-source significance thresholds, as shown in Table 5. Children at both preschools would not have exposure to the project's operational generators. Both preschools admit children from ages 2 through 5. By the time construction would end, the children present at each preschool would have graduated and be elsewhere. Therefore, those children would have no exposure to the operation of the project generators, only project construction.

Figure 1. Location of Project Construction Site, Off-Site Sensitive Receptors, and Maximum TAC Impact (MEI)

Community Risks from Project Operation

Operation of the project would have long-term emissions from mobile sources (i.e., traffic) and stationary sources (i.e., generators and cooling towers). While these emissions would not be as intensive at or near the site as construction activity, they would contribute to long-term effects to sensitive receptors.

Project Traffic

Diesel powered vehicles are the primary concern with local traffic-generated TAC impacts. This project would generate a net of 2,346 daily trips[18] with a majority of the trips being from light-duty gasoline-powered vehicles (i.e., passenger cars). The project is not anticipated to generate large amounts of truck trips that would involve diesel vehicles. Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicle per day is considered a low-

[18] W-Trans, *803-851 Old County Road Project Memorandum of Transportation Analysis Assumptions*, February 15, 2022.

impact source of TACs and do not need to be considered in the CEQA analysis.[19] In addition, projects with the potential to cause or contribute to increased cancer risk from traffic include those that have attract high numbers of diesel-powered on road trucks or use off-road diesel equipment on site, such as a distribution center, a quarry, or a manufacturing facility, may potentially expose existing or future planned receptors to substantial cancer risk levels and/or health hazards. This is not a project of concern for non-BAAQMD permitted mobile sources. Emissions from project traffic are considered negligible and not included within this analysis.

Project Stand-By Diesel Generator

The project proposes to include one stand-by emergency diesel generator located on the northeastern boundary of the property to power both buildings in the event of a power failure. The project also proposes to leave room for a second generator to be installed by the tenant. The day-1 standby generator will be a 450-kilowatt (kW) generator powered by a 600-horsepower (hp) engine. The tenant generator is expected to be a 500kW generator powered by a 670hp engine. These generators would be tested periodically and power the buildings in the event of a power failure. For modeling purposes, it was assumed that both generators would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

These diesel engines would be subject to CARB's Stationary Diesel Airborne Toxics Control Measure (ATCM) and require permits from the BAAQMD, since they will be equipped with an engine larger than 50-HP. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions will have to meet Best Available Control Technology for Toxics (TBACT) and pass the toxic risk screening level of less than ten in a million. The risk assessment would be prepared by BAAQMD. Depending on results, BAAQMD would set limits for DPM emissions (e.g., more restricted engine operation periods). Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality community risk impact.

To obtain an estimate of potential cancer risks and $PM_{2.5}$ impacts from operation of the emergency generators the U.S. EPA AERMOD dispersion model was used to calculate the maximum annual DPM concentration at off-site sensitive receptor locations (nearby residences, students). The same receptors and breathing heights used in the construction dispersion modeling were used for the generator model. Additionally, the same BAAQMD San Carlos Airport meteorological data was used. Stack parameters (stack height, exhaust flow rate, and exhaust gas temperature) for modeling the generators was based on BAAQMD default parameters for emergency generators.[20] Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator operation could occur at any time of the day (24 hours per day, 365 days per year).

[19] Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

[20] The San Francisco Community Risk Reduction Plan: Technical Support Document, BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

To calculate the increased cancer risk from the generators at the MEI, the cancer risks were also adjusted for exposure duration to account for the MEI being exposed to construction for the first two years of the 30-year period. The exposure duration was adjusted for 26 years of exposure. Table 6 lists the community risks from stand-by diesel generators at the location of residential MEI. The emissions and health risk calculations for the proposed generators are included in *Attachment 4*.

Project Cooling Towers

The project would include one cooling tower on the roof of the proposed southern building. Particulate matter emissions from evaporative cooling can occur and are a result of evaporation of liquid water entrained in the discharge air stream and carried out of the tower as "drift" droplets that contain dissolved solids in the water. Drift droplets that evaporate can produce small particulate matter (i.e., PM_{10} and $PM_{2.5}$) emissions. These emissions are generated when the drift droplets evaporate and leave the particulate matter formed by crystallization of dissolved solids. The cooling towers are not powered by a diesel engine, so no DPM emissions would be produced.

For the health risk assessment, the $PM_{2.5}$ emissions from evaporative cooling were calculated based on a worst-case assumptions including use of evaporative cooling for 100 percent of the time, a water flow rate of 4,500 gallons per minute (gpm), use of 0.005 percent drift eliminators, a total dissolved solids (TDS) concentration of 72 parts per million (ppm) in the recirculating water.[21] Based on a calculated total drift rate, recirculating water TDS concentration of 72 ppm, and PM fractions based on SCAQMD,[22] the $PM_{2.5}$ emissions were calculated as 0.01 tons per year.

To obtain an estimate of potential $PM_{2.5}$ concentrations from operation of the cooling towers, the U.S. EPA AERMOD dispersion model was used to calculate the annual $PM_{2.5}$ concentration at off-site sensitive receptor locations (nearby childcare/school and residences). The same receptors, breathing heights, and BAAQMD San Carlos International Airport meteorological data used in the construction dispersion modeling were used for the generator models. Volume source parameters for modeling the cooling tower were based on project-specific cooling tower parameters (i.e., length of side, release height, emission rate (flow rate, TDS, mist eliminator efficiency)). Annual $PM_{2.5}$ concentrations were modeled assuming that cooling tower would operate at any time of the day (24 hours per day, 365 days per year).

The annual $PM_{2.5}$ concentration were based on an annual maximum risk. Table 6 lists the community risks from cooling towers at the location of childcare MEI and residential maximum receptor. The particulate matter emissions for the proposed cooling towers are included in *Attachment 5*.

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[21] Recirculating water flow rate and maximum TDS concentration provided by the applicant.

[22] South Coast AQMD, *Final-Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds, Appendix A.* October 2006. Web: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-(pm)-2.5-significance-thresholds-and-calculation-methodology/final_pm2_5methodology.pdf

Laboratories

This type of project may include research and manufacturing type laboratories. Since a specific user or type of lab use is not known at this time, it is not possible to predict whether there would be any TAC emissions and, if so, the quantities that would be emitted. Typically, laboratory uses have fume hoods and would employ appropriate exhaust systems to control any emission of air pollutants. Emissions of air pollutants or TACs are subject to BAAQMD permitting requirements that would require the District to apply all applicable rules and regulations to limit or control these emissions. Regulation 2, Rule 1: General Requirements, and Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants would apply to any potential emissions from these sources. The District's risk policy is to not issue a permit to any source that would cause a cancer risk of greater than 10 chances per million.

Summary of Project-Related Community Risks at the Offsite Project MEI

The cumulative risk impacts from a project are the combination of construction and operation sources. These sources include on-site construction activity and the project generator and cooling tower. The project impact is computed by adding the construction cancer risk for an infant to the increased cancer risk for the project operational conditions for the roadway and generator at the MEI over a 30-year period. The project MEI is identified as the sensitive receptor that is most impacted by the project's construction and operation.

For this project, the sensitive receptor identified in Figure 1 as the construction MEI is also the project MEI. At this location, the MEI would be exposed to 4 year of construction cancer risks and 26 years of operational (includes stand-by generators and cooling tower) cancer risks. The cancer risks from construction and operation of the project were summed together. Unlike the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI risks are not additive but based on an annual maximum risk for the entirety of the project.

Project risk impacts are shown in Table 6. The unmitigated maximum cancer risks, annual $PM_{2.5}$ concentration, and Hazard Index from construction activities at the residential project MEI location would not exceed the single-source significance thresholds.

Table 6. Construction and Operation Risk Impacts at the Off-Site Project MEI

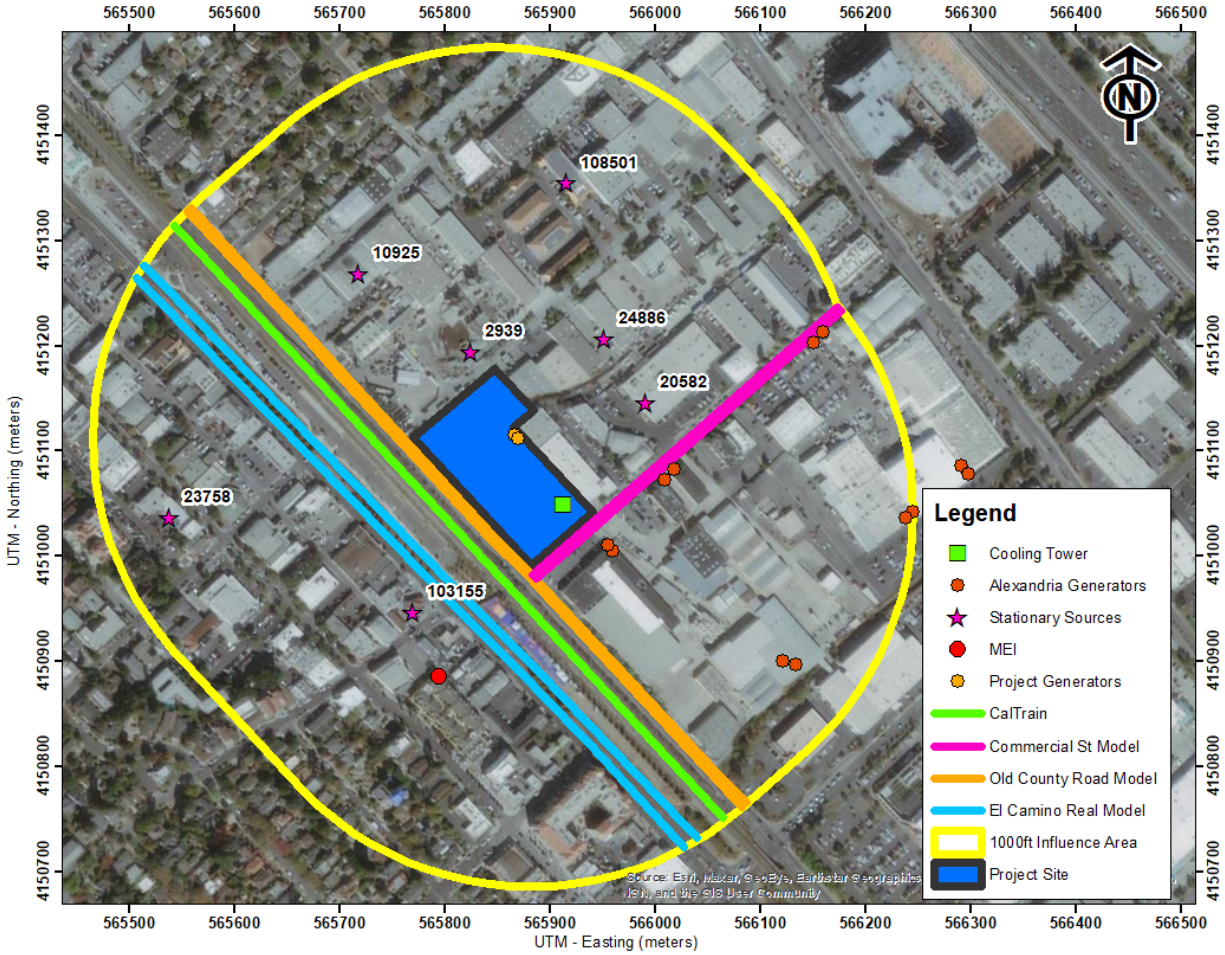
Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction (Years 0 - 4) Unmitigated	4.10 (infant)	0.02	<0.01
Project Generator Operation (Years 4 - 30)	0.11 (child)	0.01	<0.01
Project Cooling Towers (Years 4 - 30)	-	<0.01	-
Total/Maximum Project Impact (Years 0 - 30) Unmitigated	4.21 (infant)	0.02	<0.01
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold? Unmitigated	*No*	*No*	*No*
Most Affected Preschool – Children's Place Preschool			
Project Construction Unmitigated	0.70 (child)	0.01	<0.01
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold? Unmitigated	*No*	*No*	*No*

Cumulative Community Risks of all TAC Sources at the Off-Site Project MEI

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site (i.e., influence area). These sources include freeways or highways, rail lines, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area indicates that traffic on El Camino Real, Old County Road, and Commercial Street would exceed 10,000 vehicles per day. Other nearby streets would have less than 10,000 vehicles per day. Caltrain rail lines are located near the project site. A review of BAAQMD's stationary source map website identified ten stationary sources with the potential to affect the project MEI. Figure 2 shows the location of the sources affecting the MEI. Community risk impacts from these sources upon the MEI reported in Table 7. Details of the modeling and community risk calculations are included in *Attachment 5*.

Figure 2. Project Site, Project Generators, and Nearby TAC and $PM_{2.5}$ Sources



Rail Line Community Risk Impacts

The Caltrain analysis for this project was borrowed from the *Illingworth & Rodkin, Inc.* analysis for the 960 Industrial Road and 915 Commercial Street project, henceforth known in this report as the Alexandria Center for Life Sciences (ACLS) project. The ACLS project is located across Commercial Street from the project site in this analysis. As a result, the MEI for this project is located near the MEI for the ACLS project, but is further away from the rail line. As such, the unmodified inclusion of this CalTrain analysis is considered a conservative approach to analyzing the rail line impacts at the project MEI.

The Caltrain rail lines are about 80 feet southwest of the site. Rail activity on these lines currently generates TAC and $PM_{2.5}$ emissions from locomotive exhaust. These rail lines are used primarily for Caltrain passenger service; however, there is some freight service by trains using diesel-fueled locomotives. Based on the current Caltrain schedule effective August 30, 2021 there are 104 trains that pass the project site during weekdays and 32 on weekends. In addition to the passenger trains there are about four freight trains that use the rail lines on a daily basis.[23]

[23] U.S. Department of Transportation, Federal Railroad Administration. U.S. DOT Crossing Inventory Form for Crossing 754935A. September 2, 2019.

Currently, all of Caltrain's trains use diesel locomotives. The Peninsula Corridor Electrification Project is a key component of the Caltrain Modernization Program that would electrify the Caltrain Corridor from San Francisco to the Tamien Caltrain station in San José. As part of the program to modernize operation of the Caltrain rail corridor between San José and San Francisco, Caltrain is planning to phase in the change from using diesel locomotives to use of electric trains.[24] This plan was formally adopted on January 8, 2015[25] and electrified service is anticipated to begin in late 2024.[26]

Caltrain plans are that initial service between San José and San Francisco would use a mixed fleet of electric and diesel locomotives, with approximately 75 percent of the service being electric and 25 percent being diesel. After the initial implementation period, diesel locomotives would be replaced with electric trains over time as they reach the end of their service life. Caltrain's diesel-powered locomotives would continue to be used to provide service between the San José Diridon Station and Gilroy. It is expected that all of the San José to San Francisco fleet would be electric trains about five to eight years after initial electric service begins.[27]

Starting in 2024 with Caltrain electrification, there would be 24 daily weekday trips and 4 daily weekend trips using trains with diesel locomotives[28]. On an annual average basis this would be a total of 18 daily trains using diesel locomotives. Use of these diesel trains by Caltrain between San Francisco and San Jose would be phased out over time and replaced by electric trains. All trains used for freight service were assumed to use diesel powered locomotives.

Rail Line Emissions

For this evaluation it was assumed that during the period from 2022 through 2024 all trains would continue to use diesel locomotives. Along the rail line near the project site there would be a total of 83 daily trains using diesel locomotives on an annual average basis. Starting in 2025 when Caltrain electrification occurs there would be 24 daily weekday trips and 4 daily weekend trips using trains with diesel locomotives[29]. On an annual average basis there would be a total of 18 daily trains using diesel locomotives. Although these diesel locomotives would be replaced over time with electric locomotives, it was conservatively assumed for this evaluation that diesel emissions would remain at the 2025 levels in the future. All trains used for freight service were assumed to use diesel powered locomotives. In the vicinity of the project site all trains were assumed to be traveling at an average speed 40 mph.

DPM and $PM_{2.5}$ emissions from trains on the rail line were calculated using EPA emission factors for locomotives[30] and CARB adjustment factors to account for fuels used in California[31]. Caltrain's current locomotive fleet consists of twenty-three 3,200 hp locomotives of model year

[24] Caltrain, 2014. *Peninsula Corridor Electrification Project. Final Environmental Impact Report.* December 2014.
[25] Caltrain, 2015. *Peninsula Corridor Electrification Fact Sheet.* May 2015.
[26] Caltrain, 2021. *Caltrain Electrification Delayed to 2024*. June 3, 2021. See:
www.caltrain.com/about/MediaRelations/news/Caltrain_Electrification_Delayed_to_2024.html
[27] Caltrain 2015. *Short Range Transit Plan:FY2015-2024.* October 1, 2015.
[28] Caltrain 2015. *Short Range Transit Plan:FY2015-2024.* October 1, 2015.
[29] Caltrain 2015. *Short Range Transit Plan:FY2015-2024.* October 1, 2015.
[30] *Emission Factors for Locomotives*, USEPA 2009 (EPA-420-F-09-025)
[31] *Offroad Modeling, Change Technical Memo*, Changes to the Locomotive Inventory, CARB July 2006.

or overhaul date of 1999 or later, three 3,200 hp locomotives of model year 1998, and six 3,600 hp locomotives of model year 2003.[32] The current fleet average locomotive engine size is about 3,285 hp. In estimating diesel emissions for 2021 through 2024 prior to electrification a fleet average locomotive engine size of 3,285 hp was used. When electrification occurs, Caltrain will initially retain the six 3,600 hp locomotives and the three model year 1998 3,200 hp locomotives[33]. In estimating diesel locomotive emissions for the case of electrification, an average locomotive horsepower of 3,467 hp was used. Emissions from the freight trains were calculated assuming they would use two diesel locomotives with 2,300 hp engines (total of 4,600 hp) and would be traveling at 40 mph. Since the exposure duration used in calculating residential cancer risks is 30 years (in this case the period from 2021 through 2050), the passenger and freight train average DPM and $PM_{2.5}$ emissions were calculated based on average EPA emission factors for the periods 2021-2024 and 2025-2050.

Local Roadways – El Camino Real, Old County Road, Commercial Street

A refined analysis of potential health impacts from vehicle traffic on El Camino Real, Old County Road, and Commercial Street was conducted. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on the roadway near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks are then computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

Emission Rates

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on both roadways using the Caltrans version of the EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (e.g., TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear and from re-entrained roadway dust were included in these emissions. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (San Mateo County), type of road (major/collector), truck percentage for non-state highways in San Mateo County (3.13 percent),[34] traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (2022 – construction start year), and season (annual).

In order to estimate TAC and $PM_{2.5}$ emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the MEI and project site, the CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2022 (first project

[32] Caltrain *Commute Fleets*. Available at: http://www.caltrain.com/about/statsandreports.html. Accessed January 4, 2022.
[33] Caltrain 2015. *Short Range Transit Plan:FY2015-2024*. October 1, 2015.
[34] Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

construction year). Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CT-EMFAC2017. Year 2022 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions, will decrease in the future.

The average daily traffic (ADT) for El Camino Real, Old County Road, and Commercial Street was based on traffic data and trip generation data for the ACLS project. Assuming a full build out of the ACLS project results in operational trips from that project of 23,472 trips. The calculated ADT on El Camino Real was 35,086 vehicles. The ADTs for Old County Road and Commercial Street also included the operational trips of the ACLS project, even though that project will not be fully constructed until 2029. The calculated ADT for Old County Road and Commercial Street was 34,472 vehicles. Average hourly traffic distributions for San Mateo County roadways were developed using the EMFAC model,[35] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for the roadway. An average travel speed of 35 mph on El Camino Real and Old County Road, and 25 mph on Commercial Street, was used for all hours of the day based on posted speed limit signs on the roadways.

Caltrain and Roadway Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the U.S. EPA AERMOD dispersion model, which is recommended by the BAAQMD for this type of analysis.[36] TAC and $PM_{2.5}$ emissions from the nearby Caltrain line and each roadway within about 1,000 feet of the project site were evaluated with the model. Emissions from vehicle traffic and train travel were modeled in AERMOD using a series of volume sources along a line (line volume sources), with line segments used to represent opposing travel lanes on each roadway, and the Caltrain rail line. The same meteorological data and off-site sensitive receptors used in the previous project dispersion modeling were used in the highway and roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations and heights. Annual TAC and $PM_{2.5}$ concentrations for 2022 from traffic on each local roadway were calculated using the model. Concentrations were calculated at the project MEI with receptor heights of 5 feet (1.5 meters) to represent the breathing heights on the first floor of the nearby residence. Community risk impacts from the rail line and roadways sources upon the MEI are reported in Table 7 and calculations are included in *Attachment 5*.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2018* geographic information system (GIS) map website.[37] This mapping tool identifies the location of nearby stationary sources and their

[35] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2014 does not include Burden type output with hour by hour traffic volume information.
[36] BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012
[37] BAAQMD, Web: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

estimated risk and hazard impacts. Ten sources were identified using this tool, however, only seven sources will still be operational upon completion of this project. The three other sources are to be demolished as part of this project or the ACLS project. The BAAQMD GIS website did not provide screening risks and hazards for all sources, so a stationary source information request was submitted to BAAQMD. Further, the adjacent ACLS project is anticipated to include 12 diesel-fired emergency generators. The effects of those generators on the project MEI are included in this analysis.

The screening risk and hazard levels for the sources were adjusted for distance using BAAQMD's *Gasoline Dispensing Facility, Diesel Internal Combustion Engine, and Generic Equipment Distance Adjustment Multiplier Tools*. Estimated community risk values for the permitted stationary source is listed in Table 7.

Stationary-Source: CEMEX Construction Materials Pacific, LLC (Plant #2939)

The project site is near a ready-mix concrete manufacturing plant, CEMEX Construction Materials Pacific, LLC, that is permitted to operate as Plant #2939. Concrete plants are a source of $PM_{2.5}$ emissions associated with the pulverization of raw material, kiln burning, clinker production and storage, and other processes at the facility. BAAQMD provides screening $PM_{2.5}$ risk predictions for this facility through their Source Risk & Hazards Screening Report that was ran on December 1, 2021. The screening annual $PM_{2.5}$ concentration at the facility was reported at 8.5 ug/m^3. However, this is an over prediction because BAAQMD uses maximum permitted values rather than actual production values. Since screening projections indicated the annual $PM_{2.5}$ emissions would be above the single-source threshold, the next step in this evaluation was to conduct a more refined screening assessment of the facility based on additional tools. This involves obtaining actual emissions data for the facility reported by the California Air Resource Boards' California Emissions Inventory Data Analysis and Reporting System (CEIDARS) and conducting dispersion modeling.

For modeling fugitive $PM_{2.5}$ emissions, an area source with a near-ground level release height of 7 feet (2 meters) was used. The emission rate for the area source was based on the size of the parcel the CEMEX plant is located on, and the $PM_{2.5}$ emissions reported in 2019 to CEIDARS. It is assumed that the emissions generated by the CEMEX plant would be distributed evenly over the entire area source. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For this reason, a 7-foot release height was used as the average release height across the CEMEX site.

Stationary-Source: ACLS Project (960 Industrial Road and 915 Commercial Street)

The project site is adjacent to the ongoing construction of the ACLS project, located at 960 Industrial Road and 915 Commercial Street. That project is expected to construct a total of 12 generators, six of which would be 1,500-kW diesel-fired emergency generators powered by 2,000-hp engines, three would be 1,250-kW diesel-fired emergency generators powered by 1,675-hp engines, and the final three would be 1,000-kW diesel-fired emergency generators powered by 1,350-hp engines. Even though this adjacent project isn't projected to finish construction until 2029, operation of all generators is included in this analysis.

To obtain an estimate of potential cancer risks and $PM_{2.5}$ impacts from operation of the emergency generators at the project MEI, the U.S. EPA AERMOD dispersion model was used to calculate the maximum annual DPM concentration at off-site sensitive receptor locations (nearby childcare/school and residences). The same receptors, breathing heights, and BAAQMD San Carlos Airport meteorological data used in the construction dispersion modeling were used for the generator models. Stack parameters for modeling the generators were based on BAAQMD default parameters (i.e., exhaust gas flowrate, stack diameter, stack height, and exhaust gas temperature) for stand-by diesel generators.[38] Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator testing could occur at any time of the day (24 hours per day, 365 days per year).

Construction Risk Impacts from Nearby Developments

A. **ACLS Project** – this project is located at 960 Industrial Road and 915 Commercial Street, approximately 65 feet southeast of the project site. The project proposes the construction of 1,734,532-sf of Research and Development space across multiple life science buildings. The ACLS project has been analyzed by *Illingworth & Rodkin, Inc.* and is proposed to have simultaneous construction with this project. The MEI for this project was included in the analysis for the ACLS project, but was not the MEI for the ACLS project. However, for conservatism, the risk values from the ACLS project are applied to this project's MEI as if it were the MEI for the ACLS project. There are a number of other development projects approved by the City of San Carlos. With the exception of the ACLS Project mentioned above, none of the other approved projects are within the 1,000-foot influence area of this project. Other projects could be proposed within the 1,000-foot influence area of this project. However, such projects would not affect the significance conclusions made in this analysis and would require their own analysis to determine the effects of their construction and operation on surrounding sensitive receptors.

Conclusion AIR-3

Table 7 reports both the project and cumulative community risk impacts at the sensitive receptors most affected by project construction and operation (i.e., the project MEI). As shown in Table 7, the MEI would experience a significant cumulative impact with respect to $PM_{2.5}$ concentration. As noted in the Significance Thresholds section, in circumstances where a cumulative risk threshold is exceeded, a project's contribution would be considered cumulatively considerable if the project's risk exceeds the single source threshold. The project's unmitigated $PM_{2.5}$ concentration represents about 1.4 percent of the total cumulative concentration and does not exceed the single source threshold. Because the project's community risk would not exceed the single source thresholds, the project would not be considered to have a cumulatively significant

[38] Bay Area Air Quality Management District, San Francisco Department of Public Health, and San Francisco Planning Department, 2012. *The San Francisco Community Risk Reduction Plan: Technical Support Document,* BAAQMD, December. Web: https://www.gsweventcenter.com/Appeal_Response_References/2012_1201_BAAQMD.pdf

impact on the MEI as the contribution from the project is not cumulatively considerable. The cumulative cancer risk, HI, and annual $PM_{2.5}$ concentrations by source are provided in Table 7. As shown, cumulative $PM_{2.5}$ concentration thresholds at the MEI are exceeded primarily due to the MEI's location near one significant source of TAC emissions: CEMEX Construction Materials Pacific, LLC. This existing source of TAC emissions is shown by BAAQMD to exceed the single source threshold. This source is permitted by BAAQMD and subject to CARB and EPA permitting requirements.

Table 7. Cumulative Community Risk Impacts at the Location of the Project MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Total/Maximum Project Impact (Years 0-30)	Unmitigated	4.21 (infant)	0.02	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
Additional Cumulative Sources				
El Camino Real, ADT 35,086		4.43	0.28	<0.01
Old County Road, ADT 34,472		3.42	0.13	<0.01
Commercial Street, ADT 34,472		1.31	0.04	<0.01
Caltrain and freight rail[1]		28.80	0.06	<0.01
ACLS project Generators[2]		<0.01	<0.01	<0.01
CEMEX Construction Materials Pacific, LLC (Facility ID #2939, Ready-Mix Concrete Manufacturing), MEI at 1000+ feet[3]		0.36	0.67	0.01
Royalite Manufacturing Inc (Facility ID #10925, Metal Coating Operation), MEI at 1000+ feet		<0.01	<0.01	<0.01
Nxedge San Carlos (Facility ID #20582, Generator, Boilers, Solvent Coating Operations), MEI at 1000+ feet		0.10	0.01	<0.01
Grove Construction (Facility ID #24886, Sub-slab Vapor Mitigation System), MEI at 1000+ feet		0.02	-	<0.01
Plantation Coffee Roastery (Facility ID #23758, Coffee Roaster), MEI at 950 feet		<0.01	<0.01	<0.01
Nielsen Automotive Inc (Facility ID #103155, Gas Dispensing Facility), MEI at 220 feet		1.93	-	0.01
City of San Carlos – Corporation Yard (Facility ID #108501, Gas Dispensing Facility), MEI at 1000+ feet		0.14	<0.01	<0.01
ACLS project Construction Emissions – 65 feet southeast		7.03	0.19	<0.03
Combined Sources	Unmitigated	<51.78	**<1.44**	<0.16
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	***Yes***	*No*

[1]For a conservative analysis, planned electrification of Caltrain was not factored into this analysis.
[2]Emissions from all generators at the ACLS project have been modeled in AERMOD
[3]The annual $PM_{2.5}$ concentration for the CEMEX source was modeled using AERMOD.

GREENHOUSE GAS EMISSIONS

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2, CH_4, and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Recent Regulatory Actions for GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's

GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 – California Global Warming Solutions Act (2006)

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05, which has a target of reducing GHG emissions 80 percent below 1990 levels.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO_2e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*. [39] While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect

[39] California Air Resource Board, 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets.* November. Web: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf

the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikeable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons (MT) CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

Senate Bill 375 – California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives

for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

Senate Bill 350 - Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California's RPS program goals, furthering California's focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retails sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2017 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.[40] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during

[40] See: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.

the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1,2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[41]

CEC studies have identified the most aggressive electrification scenario as putting the building sector on track to reach the carbon neutrality goal by 2045.[42] Installing new natural gas infrastructure in new buildings will interfere with this goal. To meet the State's goal, communities have been adopting "Reach" codes that prohibit natural gas connections in new and remodeled buildings.

Requirements for electric vehicle (EV) charging infrastructure are set forth in Title 24 of the California Code of Regulations and are regularly updated on a 3-year cycle. The CALGreen standards consist of a set of mandatory standards required for new development, as well as two more voluntary standards known as Tier 1 and Tier 2. The CalGreen standards have recently been updated (2022 version) to require deployment of additional EV chargers in various building types, including multifamily residential and nonresidential land uses. They include requirements for both EV capable parking spaces and the installation of Level 2 EV supply equipment for multifamily residential and nonresidential buildings. The 2022 CALGreen standards include requirements for both EV readiness and the actual installation of EV chargers. The 2022 CALGreen standards include both mandatory requirements and more aggressive voluntary Tier 1 and Tier 2 provisions. Providing EV charging infrastructure that meets current CALGreen requirements will not be sufficient to power the anticipated more extensive level of EV penetration in the future that is needed to meet SB 30 climate goals.

SB 743 Transportation Impacts

Senate Bill 743 required lead agencies to abandon the old "level of service" metric for evaluating a project's transportation impacts, which was based solely on the amount of delay experienced by motor vehicles. In response, the Governor's Office of Planning and Research (OPR) developed a VMT metric that considered other factors such as reducing GHG emissions and developing multimodal transportation[43]. A VMT-per-capita metric was adopted into the CEQA Guidelines Section 15064.3 in November 2017. Given current baseline per-capita VMT levels computed by CARB in the 2030 Scoping Plan of 22.24 miles per day for light-duty vehicles and 24.61 miles per day for all vehicle types, the reductions needed to achieve the 2050 climate goal are 16.8 percent for light-duty vehicles and 14.3 percent for all vehicle types combined. Based on this analysis (as well as other factors), OPR recommended using a 15-percent reduction in per capita VMT as an appropriate threshold of significance for evaluating transportation impacts.

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[41] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

[42] California Energy Commission. 2021. F*inal Commission Report: California Building Decarbonization Assessment. Publication Number CEC-400-2021-006-CMF*.August

[43] Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December.

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2018, total gross nationwide GHG emissions were 6,676.6 million metric tons (MMT) carbon dioxide equivalent (CO_2e).[44] These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2017 emissions.[45] In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017. The most recent Bay Area emission inventory was computed for the year 2011.[46] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011

City of San Carlos 2030 General Plan

The City of San Carlos General Plan 2030 includes policies and programs to reduce exposure of the City's sensitive population to exposure of air pollution, TACs, and GHG emissions. The following policies and programs are applicable to the proposed project:

Policies

Policy EM-7.1: Take appropriate action to address climate change and reduce greenhouse gas emissions.

Policy EM-7.3: Participate in regional, State, and federal efforts to reduce greenhouse gas emissions and mitigate the impacts resulting from climate change.

Policy EM-7.6: Support greenhouse gas (GHG) emission reduction measures and climate change resiliency strategies that are cost effective and help create an environmentally sustainable, livable, and equitable community. The cost of implementation to the City and private sector shall be considered prior to the adoption of any GHG reduction strategy.

BAAQMD GHG Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on

[44] United States Environmental Protection Agency, 2020. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018.* April. Web: https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf
[45] CARB. 2019. *2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017.* Web: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf
[46] BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011.* January. Web: http://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf accessed Nov. 26, 2019.

meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate.

This assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_2e/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels. [47] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_2e/year threshold. Evidence published by the State indicates the AB 32 goal of reducing statewide GHG emissions to 1990 levels was met prior to 2020. Current State plans are to further reduce emissions to 40% below 1990 levels by 2030. Assuming statewide emissions are at 1990 levels or lower in 2020, it would be logical to reduce the BAAQMD-recommended threshold for meeting the AB 32 threshold by 40% to develop a threshold for 2030.

Since BAAQMD has now adopted their new thresholds of significance for operational GHG emissions from land use projects, this assessment also measures compliance against those new thresholds. The following framework is how BAAQMD will determine GHG significance moving forward[48].

A. Projects must include, at a minimum, the following project design elements:
    a. Buildings
        i. The project will not include natural gas appliances or natural gas plumbing (in both residential and non-residential development).
        ii. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
    b. Transportation
        i. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
            1. Residential Projects: 15 percent below the existing VMT per capita
            2. Office Projects: 15 percent below the existing VMT per employee
            3. Retail Projects: no net increase in existing VMT
        ii. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

[47] Bay Area Air Quality Management District, 2016. *CLE International 12th Annual Super-Conference CEQA Guidelines, Case Law and Policy Update*. December.
[48] Justification Report: BAAQMD CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Project and Plans. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en

B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

Any new land use project would have to include either section A or B from the above list, not both, to be considered in compliance for GHG emissions from project operation.

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

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the construction period emissions. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future employees. For this project, the traffic consultant provided their estimate for the service population, which was also used for this analysis, of 1,085 employees[49].

GHG Emissions

GHG emissions associated with construction were computed at 2,272 MT of CO_2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable. As is standard practice, construction emissions have been amortized over the average 40-year life-space of a building and added to the operational emissions for analysis.

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully-developed site under the proposed project. As shown in Table 12, net annual GHG emissions resulting from operation of the proposed

[49] W-Trans, *803-851 Old County Road Project Memorandum of Transportation Analysis Assumptions*, February 15, 2022.

project are predicted to be, when including amortized construction GHG emissions, 1,695 MT of CO_2e in 2030. The service population emission for the year 2030, when including amortized construction GHG emissions, is predicted to be 2.32 MT/CO_2e/year/service population.

Conclusion GHG-1

To be considered an exceedance, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold in the future year of 2030. The project would exceed the annual emissions bright-line threshold of 660 MT CO_2e/year in 2030 but not the service population significance threshold. Therefore, the GHG emissions from the project would be considered less than significant.

Table 9. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Existing Use	Proposed Project	Net Increase
Construction (amortized)	0.00	56.8	56.8
Area	0.00	0.02	0.02
Energy Consumption	18.61	0.00	-18.61
Mobile	791.30	2,351.59	1,560.29
Solid Waste Generation	15.72	12.99	-2.73
Water Usage	3.98	102.55	98.57
Total (MT CO_2e/year)	829.61	2,523.95	1,694.34
Bright-Line Significance Threshold			***660 MT CO_2e/year***
Exceeds Bright-Line Threshold?			***Yes***
Service Population Emissions (MT CO_2e/year/service population)		2.32	1.56
Service Population Significance Threshold		***2.8 in 2030***	***2.8 in 2030***
Exceeds Service Population Threshold?		***No***	***No***
Exceeds Both Significance Thresholds?		***No***	***No***

Impact GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed buildings would be constructed in conformance with CALGreen and the Title 24 Building Code, which requires high-efficiency water fixtures, water-efficient irrigation systems, and compliance with current energy efficacy standards. To avoid interference with statewide GHG reduction measures identified in CARB's Scoping Plan and SB 100 goals, the project would include the following standard requirements:

1. Avoid construction of new natural gas connections for the residential building,
    - Conforms – compliance with City Reach Code would prohibit natural gas infrastructure in new buildings.
2. Avoid wasteful or inefficient use of electricity,

- Conforms – would meet CALGreen Building Standards Code requirements that are considered to be energy efficient.

3. Include electric vehicle charging infrastructure that meets current Building Code CALGreen Tier 2 compliance, and
    - Conforms – project would provide 75 EV standard spaces, 2 EV accessible spaces, and 1 EV van accessible space.
4. Reduce VMT per service population by 15 percent over regional average.
    - Conforms – With implementation of a City-required TDM Plan to achieve a 20% reduction in vehicle trips, the project was calculated to achieve greater than 20% VMT reductions for resultant VMT rates at least 15 percent below the county average.[50] The San Mateo countywide average VMT rate for employment based VMT per service population is 17.0. After mitigation, the project's reduced VMT rate is 12.2, a 28% reduction.

Conclusion GHG-2

Conformity with the requirements outlined in *Impact GHG-2* would also constitute conformity with the newly adopted BAAQMD GHG thresholds since these requirements align with the standard requirements outlined by BAAQMD as their GHG thresholds for land use projects[51]. Since four out of four requirements are met, the project's GHG impacts would be considered less than significant, and conformity with the new BAAQMD GHG thresholds are met.

[50] W-Trans, 841 Old County Road CEQA Transportation Analysis

[51] Justification Report: BAAQMD CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Project and Plans. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en

Supporting Documentation

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute increased cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant. The operational output for existing and 2030 project uses is also included in this attachment. Also included are any modeling assumptions.

Attachment 3 includes the EMFAC2017 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 is the health risk assessment. This includes the summary of the dispersion modeling and the cancer risk calculations for construction. The AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 5 includes the cumulative community risk calculations, modeling results, and health risk calculations from sources affecting the MEI.

Attachment 1: Health Risk Calculation Methodology

Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[52] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[53] This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[54] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs is calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day) or liters per kilogram of body weight per 8-hour period for the case of worker or school child exposures. As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile

[52] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.
[53] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[54] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

8-hour breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = $CPF \times Inhalation\ Dose \times ASF \times ED/AT \times FAH \times 10^6$

Where:

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR^* \times A \times (EF/365) \times 10^{-6}$

Where:

C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

* An 8-hour breathing rate (8HrBR) is used for worker and school child exposures.

The health risk parameters used in this evaluation are summarized as follows:

Parameter	*Exposure Type* →	Infant		Child	Adult
	Age Range →	3rd Trimester	0<2	2 < 16	16 - 30
DPM Cancer Potency Factor (mg/kg-day)$^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	745	335
8-hour Breathing Rate (L/kg-8 hours) 95th Percentile Rate		-	1,200	520	240
Inhalation Absorption Factor		1	1	1	1
Averaging Time (years)		70	70	70	70
Exposure Duration (years)		0.25	2	14	14*
Exposure Frequency (days/year)		350	350	350	350*
Age Sensitivity Factor		10	10	3	1
Fraction of Time at Home (FAH)		0.85-1.0	0.85-1.0	0.72-1.0	0.73*

* For worker exposures (adult) the exposure duration and frequency are 25 years 250 days/year and FAH is not applicable.

Non-Cancer Hazards

Non-cancer health risk is usually determined by comparing the predicted level of exposure to a chemical to the level of exposure that is not expected to cause any adverse effects (reference exposure level), even to the most susceptible people. Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu g/m^3$).

Annual $PM_{2.5}$ Concentrations

While not a TAC, fine particulate matter ($PM_{2.5}$) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for $PM_{2.5}$ (project level and cumulative) are in terms of an increase in the annual average concentration. When considering $PM_{2.5}$ impacts, the contribution from all sources of $PM_{2.5}$ emissions should be included. For projects with potential impacts from nearby local roadways, the $PM_{2.5}$ impacts should include those from vehicle exhaust emissions, $PM_{2.5}$ generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: CalEEMod Input Assumptions and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: 803 - 851 Old County Road

See Equipment Type TAB for type, horsepower and load factor

Complete ALL Portions in Yellow

Project Size	____	Dwelling Units	3.41 total project acres disturbed
	____	s.f. residential	
	____	s.f. retail	
	339,733	s.f. office/commercial	
	____	s.f. other, specify:	
	270,872	s.f. parking garage	748 spaces
	____	s.f. parking lot	____ spaces
Construction Hours		am to	pm

Pile Driving? Y/N? No

Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? __N__

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available):

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Abatement	**Start Date:**	**1/3/2022**	**Total phase:**	**25**			**Overall Import/Export Volumes**
		End Date:	**2/4/2022**					
						0	0	**Abatement completed with hand tools only using permanent power**
						0	0	
	Other Equipment?							
	Demolition	**Start Date:**	**2/7/2022**	**Total phase:**	**20**			**Overall Import/Export Volumes**
		End Date:	**3/7/2022**					
1	Concrete/Industrial Saws	81	0.73	1	2.5	0.125	148	**Demolition Volume**
3	Excavators	158	0.38	8	20	8	28819	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	4	10	2	7904	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37	0		0	0	
	Other Equipment?							**_3700_** Hauling volume (tons)
								Any pavement demolished and hauled **900 tons**
	Below Grade Garage Excavation and Grading	**Start Date:**	**3/8/2022**	**Total phase:**	**65**			
		End Date:	**6/8/2022**					**Soil Hauling Volume**
2	Excavators	158	0.38	8	65	8	62442	Export volume = **_121000_** cubic yards
1	Graders	187	0.41	8	6	0.73846154	3680	Import volume = **_0_** cubic yards
1	Rubber Tired Dozers	247	0.4	8	6	0.73846154	4742	
0	Scrapers	367	0.48	0	0	0	0	
2	Tractors/Loaders/Backhoes	97	0.37	8	32	3.93846154	18376	
	Other Equipment?							
	Below Grade Garage Foundations	**Start Date:**	**5/24/2022**	**Total phase:**	**50**			
		End Date:	**8/5/2022**					
1	Excavators	158	0.38	8	50	8	24016	
1	Tractors/Loaders/Backhoes	97	0.37	8	25	4	7178	
	Other Equipment?							
	Garage Concrete	**Start Date:**	**6/23/2022**	**Total phase:**	**87**			**Cement Trucks _4040_ Total Round-Trips**
		End Date:	**10/27/2022**					
1	Cranes	231	0.29	8	87	8	46625	Electric? (Y/N) _Y__ Otherwise assumed diesel
3	Forklifts	89	0.2	6	87	6	27875	Liquid Propane (LPG)? (Y/N) __N_ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	20	1.83908046	9946	Or temporary line power? (Y/N) __Y_
0	Tractors/Loaders/Backhoes	97	0.37	0	0			
0	Welders	46	0.45			0	0	
	Other Equipment?							
	Phase 1 - Building Construction North	**Start Date:**	**10/28/2022**	**Total phase:**	**180**			**Cement Trucks _190_ Total Round-Trips**
		End Date:	**7/21/2023**					
1	Cranes	231	0.29	8	180	8	96466	Electric? (Y/N) __Y_ Otherwise assumed diesel
3	Forklifts	89	0.2	6	180	6	57672	Liquid Propane (LPG)? (Y/N) __N_ Otherwise Assumed diesel
0	Generator Sets	84	0.74	0	0	0	0	Or temporary line power? (Y/N) _Y__
2	Tractors/Loaders/Backhoes	97	0.37	8	40	1.77777778	22970	
3	Welders	46	0.45	8	20	0.88888889	9936	
	Other Equipment?							
	Phase 1 - Site	**Start Date:**	**7/24/2023**	**Total phase:**	**80**			
		End Date:	**11/14/2023**					
2	Pavers	130	0.42	8	5	0.5	4368	
2	Paving Equipment	132	0.36	8	5	0.5	3802	**Asphalt? _338__ cubic yards or ___13_ round trips?**
2	Rollers	80	0.38	8	5	0.5	2432	
2	Tractors/Loaders/Backhoes	97	0.37	8	75	3	43068	
	Other Equipment?							
	Phase 2 - Building Construction South	**Start Date:**	**12/15/2023**	**Total phase:**	**200**			**Cement Trucks _295_ Total Round-Trips**
		Start Date:	**10/2/2024**					
1	Cranes	231	0.29	8	200	8	107184	Electric? (Y/N) _Y__ Otherwise assumed diesel
3	Forklifts	89	0.2	6	200	6	64080	Liquid Propane (LPG)? (Y/N) _N__ Otherwise Assumed diesel
0	Generator Sets	84	0.74	0	0	0	0	Or temporary line power? (Y/N) __Y_
2	Tractors/Loaders/Backhoes	97	0.37	8	40	1.6	22970	
3	Welders	46	0.45	8	20	0.8	9936	
	Other Equipment?							
	Phase 2 - Site	**Start Date:**	**10/3/2024**	**Total phase:**	**80**			
		Start Date:	**1/30/2025**					
2	Pavers	130	0.42	8	5	0.5	4368	
2	Paving Equipment	132	0.36	8	5	0.5	3802	**Asphalt? _312__ cubic yards or __12__ round trips?**
2	Rollers	80	0.38	8	5	0.5	2432	
2	Tractors/Loaders/Backhoes	97	0.37	8	75	3	43068	
	Other Equipment?							
						#DIV/0!	0	
						#DIV/0!	0	
Building - Interior/Architectural Coating		**Start Date:**		**Total phase:**	**0**			
		End Date:						
0	Air Compressors	78	0.48	0	0	#DIV/0!	0	
0	Aerial Lift	62	0.31	0	0	#DIV/0!	0	
	Other Equipment?							

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**	
Year	Tons				MT	
Construction Equipment						
2022	0.09	0.87	0.04	0.04	138.81	
2023	0.06	0.59	0.03	0.03	85.96	
2024 + 2025	1.90	0.68	0.03	0.03	106.19	
EMFAC						
2022	0.07	1.00	0.05	0.02	599.61	
2023	0.07	0.97	0.05	0.02	656.30	
2024 + 2025	0.07	0.98	0.05	0.02	684.92	
Total Construction Emissions by Year						
2022	0.16	1.87	0.09	0.06	738.42	
2023	0.13	1.56	0.08	0.05	742.25	
2024 + 2025	1.97	1.65	0.09	0.05	791.10	
	Total Construction Emissions					
Tons	2.26	5.08	0.26	0.16	2271.78	
Pounds/Workdays	*Average Daily Emissions*				Workdays	
2022	1.34	15.88	0.76	0.51		**235**
2023	0.98	11.92	0.61	0.37		**261**
2024 + 2025	14.18	11.90	0.62	0.37		**278**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		
	Total Construction Emissions					
Pounds	16.50	39.71	1.99	1.24	0.00	
Average	5.83	13.12	0.66	0.41	0.00	774.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		
Year	Tons					
Total	2.54	1.15	2.43	0.63		
	Existing Use Emissions					
Total	0.57	0.48	0.71	0.18		
	Net Annual Operational Emissions					
Tons/year	1.96	0.66	1.73	0.45		
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**		
	Average Daily Emissions					
Pounds Per Day	10.77	3.63	9.47	2.45		
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Category	**CO2e**			
	Project	Existing	Project 2030	Existing
Area	0.02	0.00	0.02	0.00
Energy	0.00	18.61	0.00	18.61
Mobile	2351.59	791.30	2351.59	791.30
Waste	12.99	15.72	12.99	15.72
Water	102.55	3.98	102.55	3.98
TOTAL	2467.15	829.61	2467.14	829.61
Net GHG Emissions		1637.54		1637.53
Service Population	1085.00			
Per Capita Emissions		2.27		1.51

Traffic Consultant Trip Gen						CalEEMod Default		
Land Use		**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**
Research & Development		325.473	3606	3606	***11.08***	11.26	1.9	1.11
	Reduction		*0*			*Rev*	***1.87***	***1.09***
	Reduction		*0*					

Traffic Consultant Trip Gen - Existing Use					CalEEMod Default		
Land Use	**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**
General Light Industrial	2.8	14	477	***4.87***	4.96	1.99	5
					Rev	***1.95***	***4.91***
Unrefrigerated Warehouse - No Rail	6.8	463	463	***68.09***	1.74	1.74	1.74
					Rev	***68.09***	***68.09***
Pet Day Care Center	16.45	783	783	***47.60***	47.62	6.22	5.84
					Rev	***6.22***	***5.84***

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	339.73	1000sqft	3.41	339,733.00	0
Enclosed Parking with Elevator	748.00	Space	0.00	299,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2026
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assume peninsula

Land Use - Applicant provided square footage, and lot acreage. Parking spaces from plot plan.

Construction Phase - Phase dates and lengths provided by applicant

Off-road Equipment - AC phase just for coatings.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment -

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Date: 3/4/2022 11:37 AM

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Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Trips and VMT - All trips entered into EMFAC2021

Demolition -

Grading -

Vehicle Trips - 11.08 ITE 11th Gen rate for R&D.

Vehicle Emission Factors - Emission factors from EMFAC2021

Energy Use - No Natural gas usage

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - All equipment t4i, BMP

Fleet Mix - Fleet Mix from EMFAC2021

Stationary Sources - Emergency Generators and Fire Pumps - Generator information supplied by applicant as 450kW and 500kW. Engine sizes assumed.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	169867	169967
tblAreaCoating	Area_Nonresidential_Interior	509600	509900
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	8.00	65.00
tblConstructionPhase	NumDays	230.00	87.00
tblConstructionPhase	NumDays	230.00	180.00
tblConstructionPhase	NumDays	18.00	80.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	NumDays	18.00	80.00
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	T24NG	17.67	0.00
tblFleetMix	HHD	1.9940e-003	7.1990e-003
tblFleetMix	HHD	1.9940e-003	7.1990e-003
tblFleetMix	LDA	0.46	0.43
tblFleetMix	LDA	0.46	0.43
tblFleetMix	LDT1	0.07	0.04
tblFleetMix	LDT1	0.07	0.04
tblFleetMix	LDT2	0.24	0.29
tblFleetMix	LDT2	0.24	0.29

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tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	6.5760e-003	7.5870e-003
tblFleetMix	LHD2	6.5760e-003	7.5870e-003
tblFleetMix	MCY	0.03	4.3200e-003
tblFleetMix	MCY	0.03	4.3200e-003
tblFleetMix	MDV	0.15	0.17
tblFleetMix	MDV	0.15	0.17
tblFleetMix	MH	2.7100e-003	6.6100e-004
tblFleetMix	MH	2.7100e-003	6.6100e-004
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	1.4220e-003	4.8150e-003
tblFleetMix	OBUS	1.4220e-003	4.8150e-003
tblFleetMix	SBUS	4.2900e-004	4.2000e-004
tblFleetMix	SBUS	4.2900e-004	4.2000e-004
tblFleetMix	UBUS	5.5300e-004	1.8380e-003
tblFleetMix	UBUS	5.5300e-004	1.8380e-003
tblGrading	MaterialExported	0.00	121,000.00
tblLandUse	LandUseSquareFeet	339,730.00	339,733.00
tblLandUse	LotAcreage	7.80	3.41
tblLandUse	LotAcreage	6.73	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.10
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	1.80
tblOffRoadEquipment	UsageHours	8.00	0.70
tblOffRoadEquipment	UsageHours	8.00	0.50
tblOffRoadEquipment	UsageHours	8.00	0.50
tblOffRoadEquipment	UsageHours	6.00	0.50
tblOffRoadEquipment	UsageHours	6.00	0.50
tblOffRoadEquipment	UsageHours	6.00	0.50
tblOffRoadEquipment	UsageHours	6.00	0.50
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	0.70
tblOffRoadEquipment	UsageHours	7.00	1.80
tblOffRoadEquipment	UsageHours	7.00	1.60
tblOffRoadEquipment	UsageHours	8.00	3.90
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	8.00	0.90
tblOffRoadEquipment	UsageHours	8.00	0.80

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tblSolidWaste	SolidWasteGenerationRate	25.82	25.83
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	600.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	670.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	366.00	0.00
tblTripsAndVMT	HaulingTripNumber	15,125.00	0.00
tblTripsAndVMT	VendorTripNumber	105.00	0.00
tblTripsAndVMT	VendorTripNumber	105.00	0.00
tblTripsAndVMT	VendorTripNumber	105.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	234.00	0.00
tblTripsAndVMT	WorkerTripNumber	234.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	234.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	47.00	0.00
tblVehicleEF	HHD	0.03	0.26
tblVehicleEF	HHD	0.18	0.24
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	HHD	5.33	4.67
tblVehicleEF	HHD	0.98	1.62
tblVehicleEF	HHD	0.04	0.02
tblVehicleEF	HHD	918.32	754.99
tblVehicleEF	HHD	1,552.18	1,706.42

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tblVehicleEF	HHD	0.30	0.27
tblVehicleEF	HHD	0.15	0.12
tblVehicleEF	HHD	0.25	0.27
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	HHD	5.18	3.87
tblVehicleEF	HHD	2.98	2.37
tblVehicleEF	HHD	2.40	2.76
tblVehicleEF	HHD	3.5170e-003	2.8090e-003
tblVehicleEF	HHD	0.06	0.09
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	2.0000e-006	4.0000e-006
tblVehicleEF	HHD	3.3650e-003	2.6810e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.7260e-003	8.6280e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	2.0000e-006	3.0000e-006
tblVehicleEF	HHD	4.0000e-006	4.9900e-004
tblVehicleEF	HHD	2.2300e-004	1.5400e-004
tblVehicleEF	HHD	0.36	0.28
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	1.0400e-004	1.1170e-003
tblVehicleEF	HHD	1.4000e-005	3.0000e-006
tblVehicleEF	HHD	8.1670e-003	6.2420e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	4.0000e-006	4.9900e-004
tblVehicleEF	HHD	2.2300e-004	1.5400e-004
tblVehicleEF	HHD	0.42	0.57

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tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	HHD	0.22	0.27
tblVehicleEF	HHD	1.0400e-004	1.1170e-003
tblVehicleEF	HHD	1.6000e-005	3.0000e-006
tblVehicleEF	LDA	1.2190e-003	1.4700e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.43	0.50
tblVehicleEF	LDA	1.93	2.58
tblVehicleEF	LDA	216.60	234.63
tblVehicleEF	LDA	46.19	61.06
tblVehicleEF	LDA	3.3450e-003	3.3860e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.14	0.20
tblVehicleEF	LDA	0.04	6.3890e-003
tblVehicleEF	LDA	1.1380e-003	1.0580e-003
tblVehicleEF	LDA	1.5520e-003	1.8410e-003
tblVehicleEF	LDA	0.02	2.2360e-003
tblVehicleEF	LDA	1.0480e-003	9.7400e-004
tblVehicleEF	LDA	1.4270e-003	1.6920e-003
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	4.4790e-003	5.5190e-003
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.16	0.25
tblVehicleEF	LDA	2.1430e-003	2.3190e-003
tblVehicleEF	LDA	4.5700e-004	6.0400e-004
tblVehicleEF	LDA	0.03	0.23

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tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	6.5080e-003	8.0440e-003
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDT1	1.8700e-003	3.5960e-003
tblVehicleEF	LDT1	0.04	0.08
tblVehicleEF	LDT1	0.55	0.90
tblVehicleEF	LDT1	2.04	3.87
tblVehicleEF	LDT1	256.44	305.82
tblVehicleEF	LDT1	54.67	79.07
tblVehicleEF	LDT1	3.8820e-003	6.2380e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.04	0.08
tblVehicleEF	LDT1	0.16	0.29
tblVehicleEF	LDT1	0.04	8.0030e-003
tblVehicleEF	LDT1	1.3340e-003	1.4570e-003
tblVehicleEF	LDT1	1.7860e-003	2.3270e-003
tblVehicleEF	LDT1	0.02	2.8010e-003
tblVehicleEF	LDT1	1.2270e-003	1.3400e-003
tblVehicleEF	LDT1	1.6420e-003	2.1390e-003
tblVehicleEF	LDT1	0.03	0.39
tblVehicleEF	LDT1	0.08	0.11
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	7.4400e-003	0.02
tblVehicleEF	LDT1	0.06	0.31
tblVehicleEF	LDT1	0.18	0.38
tblVehicleEF	LDT1	2.5380e-003	3.0230e-003
tblVehicleEF	LDT1	5.4100e-004	7.8200e-004

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tblVehicleEF	LDT1	0.03	0.39
tblVehicleEF	LDT1	0.08	0.11
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	0.06	0.31
tblVehicleEF	LDT1	0.20	0.42
tblVehicleEF	LDT2	1.7740e-003	1.7890e-003
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.53	0.58
tblVehicleEF	LDT2	2.45	2.85
tblVehicleEF	LDT2	266.61	314.27
tblVehicleEF	LDT2	57.23	79.26
tblVehicleEF	LDT2	4.0120e-003	4.2030e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.18	0.24
tblVehicleEF	LDT2	0.04	7.7090e-003
tblVehicleEF	LDT2	1.2490e-003	1.1420e-003
tblVehicleEF	LDT2	1.6240e-003	1.8740e-003
tblVehicleEF	LDT2	0.02	2.6980e-003
tblVehicleEF	LDT2	1.1500e-003	1.0510e-003
tblVehicleEF	LDT2	1.4930e-003	1.7230e-003
tblVehicleEF	LDT2	0.03	0.18
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.04	0.00
tblVehicleEF	LDT2	6.7290e-003	6.6320e-003
tblVehicleEF	LDT2	0.05	0.14
tblVehicleEF	LDT2	0.21	0.27
tblVehicleEF	LDT2	2.6370e-003	3.1060e-003

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tblVehicleEF	LDT2	5.6600e-004	7.8400e-004
tblVehicleEF	LDT2	0.03	0.18
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.04	0.00
tblVehicleEF	LDT2	9.7820e-003	9.6640e-003
tblVehicleEF	LDT2	0.05	0.14
tblVehicleEF	LDT2	0.22	0.30
tblVehicleEF	LHD1	4.5140e-003	4.8760e-003
tblVehicleEF	LHD1	5.4950e-003	4.5650e-003
tblVehicleEF	LHD1	9.5940e-003	0.02
tblVehicleEF	LHD1	0.18	0.20
tblVehicleEF	LHD1	0.48	0.64
tblVehicleEF	LHD1	0.94	2.37
tblVehicleEF	LHD1	8.47	8.15
tblVehicleEF	LHD1	737.51	728.24
tblVehicleEF	LHD1	10.85	18.41
tblVehicleEF	LHD1	7.2000e-004	5.6800e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.03
tblVehicleEF	LHD1	0.30	0.30
tblVehicleEF	LHD1	0.24	0.37
tblVehicleEF	LHD1	8.6800e-004	6.2400e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8230e-003	9.3120e-003
tblVehicleEF	LHD1	6.7560e-003	8.0740e-003
tblVehicleEF	LHD1	2.1800e-004	1.5000e-004
tblVehicleEF	LHD1	8.3100e-004	5.9700e-004
tblVehicleEF	LHD1	0.03	0.03

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tblVehicleEF	LHD1	2.4560e-003	2.3280e-003
tblVehicleEF	LHD1	6.4180e-003	7.6900e-003
tblVehicleEF	LHD1	2.0100e-004	1.3800e-004
tblVehicleEF	LHD1	1.0160e-003	0.08
tblVehicleEF	LHD1	0.04	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	6.6400e-004	0.00
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.14	0.12
tblVehicleEF	LHD1	0.05	0.09
tblVehicleEF	LHD1	8.2000e-005	7.9000e-005
tblVehicleEF	LHD1	7.1980e-003	7.1160e-003
tblVehicleEF	LHD1	1.0700e-004	1.8200e-004
tblVehicleEF	LHD1	1.0160e-003	0.08
tblVehicleEF	LHD1	0.04	0.02
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	6.6400e-004	0.00
tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.14	0.12
tblVehicleEF	LHD1	0.05	0.10
tblVehicleEF	LHD2	2.7780e-003	2.7520e-003
tblVehicleEF	LHD2	5.2910e-003	4.5630e-003
tblVehicleEF	LHD2	5.4930e-003	9.8130e-003
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.45	0.40
tblVehicleEF	LHD2	0.54	1.29
tblVehicleEF	LHD2	13.15	13.03
tblVehicleEF	LHD2	714.58	767.93
tblVehicleEF	LHD2	7.23	9.65

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tblVehicleEF	LHD2	1.6420e-003	1.5760e-003
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.33	0.42
tblVehicleEF	LHD2	0.14	0.20
tblVehicleEF	LHD2	1.4300e-003	1.3600e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.1600e-004	7.1000e-005
tblVehicleEF	LHD2	1.3680e-003	1.3010e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.6940e-003	2.6520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.0700e-004	6.5000e-005
tblVehicleEF	LHD2	5.2600e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5200e-004	0.00
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.07	0.06
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2600e-004	1.2500e-004
tblVehicleEF	LHD2	6.9000e-003	7.3970e-003
tblVehicleEF	LHD2	7.2000e-005	9.5000e-005
tblVehicleEF	LHD2	5.2600e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.02	0.02

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tblVehicleEF	LHD2	3.5200e-004	0.00
tblVehicleEF	LHD2	0.11	0.09
tblVehicleEF	LHD2	0.07	0.06
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	MCY	0.32	0.14
tblVehicleEF	MCY	0.25	0.16
tblVehicleEF	MCY	18.15	10.37
tblVehicleEF	MCY	9.30	7.65
tblVehicleEF	MCY	212.73	186.06
tblVehicleEF	MCY	59.56	43.37
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	6.7190e-003
tblVehicleEF	MCY	1.15	0.50
tblVehicleEF	MCY	0.27	0.11
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.1750e-003	2.0430e-003
tblVehicleEF	MCY	3.0860e-003	3.7110e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	2.0290e-003	1.9080e-003
tblVehicleEF	MCY	2.8900e-003	3.4790e-003
tblVehicleEF	MCY	0.60	3.07
tblVehicleEF	MCY	0.50	3.55
tblVehicleEF	MCY	0.35	0.00
tblVehicleEF	MCY	2.16	0.86
tblVehicleEF	MCY	0.41	3.70
tblVehicleEF	MCY	1.92	1.17
tblVehicleEF	MCY	2.1050e-003	1.8390e-003
tblVehicleEF	MCY	5.8900e-004	4.2900e-004
tblVehicleEF	MCY	0.60	0.07

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tblVehicleEF	MCY	0.50	3.55
tblVehicleEF	MCY	0.35	0.00
tblVehicleEF	MCY	2.70	1.05
tblVehicleEF	MCY	0.41	3.70
tblVehicleEF	MCY	2.09	1.27
tblVehicleEF	MDV	1.7570e-003	1.9290e-003
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.52	0.58
tblVehicleEF	MDV	2.51	2.91
tblVehicleEF	MDV	319.87	375.63
tblVehicleEF	MDV	67.56	94.16
tblVehicleEF	MDV	5.2310e-003	4.9850e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.19	0.27
tblVehicleEF	MDV	0.04	7.7320e-003
tblVehicleEF	MDV	1.2510e-003	1.1370e-003
tblVehicleEF	MDV	1.6150e-003	1.8700e-003
tblVehicleEF	MDV	0.02	2.7060e-003
tblVehicleEF	MDV	1.1530e-003	1.0470e-003
tblVehicleEF	MDV	1.4850e-003	1.7190e-003
tblVehicleEF	MDV	0.04	0.20
tblVehicleEF	MDV	0.08	0.06
tblVehicleEF	MDV	0.04	0.00
tblVehicleEF	MDV	6.7990e-003	7.4810e-003
tblVehicleEF	MDV	0.05	0.15
tblVehicleEF	MDV	0.22	0.31
tblVehicleEF	MDV	3.1610e-003	3.7120e-003
tblVehicleEF	MDV	6.6900e-004	9.3100e-004

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tblVehicleEF	MDV	0.04	0.20
tblVehicleEF	MDV	0.08	0.06
tblVehicleEF	MDV	0.04	0.00
tblVehicleEF	MDV	9.8500e-003	0.01
tblVehicleEF	MDV	0.05	0.15
tblVehicleEF	MDV	0.24	0.34
tblVehicleEF	MH	5.1820e-003	7.1470e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.37	0.57
tblVehicleEF	MH	1.73	2.16
tblVehicleEF	MH	1,396.02	1,665.32
tblVehicleEF	MH	16.23	21.04
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	0.90	1.10
tblVehicleEF	MH	0.23	0.27
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	2.3700e-004	2.8300e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2820e-003	3.3260e-003
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	2.1800e-004	2.6000e-004
tblVehicleEF	MH	0.22	18.29
tblVehicleEF	MH	0.02	5.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	5.1170e-003	0.12

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tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6100e-004	2.0800e-004
tblVehicleEF	MH	0.22	18.29
tblVehicleEF	MH	0.02	5.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	5.1170e-003	0.12
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MHD	3.9230e-003	0.02
tblVehicleEF	MHD	1.2630e-003	0.01
tblVehicleEF	MHD	9.2080e-003	0.01
tblVehicleEF	MHD	0.38	0.67
tblVehicleEF	MHD	0.18	0.28
tblVehicleEF	MHD	1.00	1.20
tblVehicleEF	MHD	60.51	145.05
tblVehicleEF	MHD	1,025.16	1,231.98
tblVehicleEF	MHD	9.37	10.40
tblVehicleEF	MHD	8.5730e-003	0.02
tblVehicleEF	MHD	0.13	0.14
tblVehicleEF	MHD	8.1030e-003	7.9490e-003
tblVehicleEF	MHD	0.32	0.78
tblVehicleEF	MHD	1.30	0.88
tblVehicleEF	MHD	1.66	1.29
tblVehicleEF	MHD	2.0600e-004	1.4680e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	6.2330e-003	9.8980e-003
tblVehicleEF	MHD	1.1600e-004	1.2900e-004
tblVehicleEF	MHD	1.9700e-004	1.4040e-003

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tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	5.9560e-003	9.4580e-003
tblVehicleEF	MHD	1.0700e-004	1.1800e-004
tblVehicleEF	MHD	2.5000e-004	0.02
tblVehicleEF	MHD	0.01	5.7950e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	1.6800e-004	0.00
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	5.7500e-004	1.3410e-003
tblVehicleEF	MHD	9.7860e-003	0.01
tblVehicleEF	MHD	9.3000e-005	1.0300e-004
tblVehicleEF	MHD	2.5000e-004	0.02
tblVehicleEF	MHD	0.01	5.7950e-003
tblVehicleEF	MHD	0.03	0.05
tblVehicleEF	MHD	1.6800e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	OBUS	6.7250e-003	6.6740e-003
tblVehicleEF	OBUS	2.3110e-003	7.8490e-003
tblVehicleEF	OBUS	0.01	9.7750e-003
tblVehicleEF	OBUS	0.64	0.49
tblVehicleEF	OBUS	0.28	0.20
tblVehicleEF	OBUS	1.45	1.00
tblVehicleEF	OBUS	104.30	90.30
tblVehicleEF	OBUS	1,266.64	1,277.63
tblVehicleEF	OBUS	12.68	8.98

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tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.01	9.4470e-003
tblVehicleEF	OBUS	0.45	0.38
tblVehicleEF	OBUS	1.48	0.70
tblVehicleEF	OBUS	1.21	1.12
tblVehicleEF	OBUS	1.4700e-004	2.2800e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.7360e-003	8.1660e-003
tblVehicleEF	OBUS	1.4400e-004	9.5000e-005
tblVehicleEF	OBUS	1.4000e-004	2.1800e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.3880e-003	7.8060e-003
tblVehicleEF	OBUS	1.3200e-004	8.7000e-005
tblVehicleEF	OBUS	7.3600e-004	0.03
tblVehicleEF	OBUS	0.01	7.8480e-003
tblVehicleEF	OBUS	0.05	0.03
tblVehicleEF	OBUS	3.9100e-004	0.00
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	0.07	0.05
tblVehicleEF	OBUS	9.9000e-004	8.5000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.2600e-004	8.9000e-005
tblVehicleEF	OBUS	7.3600e-004	0.03
tblVehicleEF	OBUS	0.01	7.8480e-003
tblVehicleEF	OBUS	0.06	0.04
tblVehicleEF	OBUS	3.9100e-004	0.00
tblVehicleEF	OBUS	0.02	0.03

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tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	0.08	0.05
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	8.2290e-003	0.08
tblVehicleEF	SBUS	0.01	8.6540e-003
tblVehicleEF	SBUS	4.36	2.49
tblVehicleEF	SBUS	0.74	1.29
tblVehicleEF	SBUS	1.65	1.24
tblVehicleEF	SBUS	369.41	205.13
tblVehicleEF	SBUS	954.24	943.80
tblVehicleEF	SBUS	8.70	6.19
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.10	0.11
tblVehicleEF	SBUS	8.9290e-003	5.9080e-003
tblVehicleEF	SBUS	2.98	1.32
tblVehicleEF	SBUS	3.77	2.30
tblVehicleEF	SBUS	0.78	0.49
tblVehicleEF	SBUS	3.1040e-003	1.2450e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	1.4100e-004	8.3000e-005
tblVehicleEF	SBUS	2.9700e-003	1.1900e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.5030e-003	2.5040e-003
tblVehicleEF	SBUS	0.02	9.9830e-003
tblVehicleEF	SBUS	1.3000e-004	7.6000e-005
tblVehicleEF	SBUS	7.2700e-004	0.05
tblVehicleEF	SBUS	8.9440e-003	0.01

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tblVehicleEF	SBUS	0.53	0.29
tblVehicleEF	SBUS	3.6900e-004	0.00
tblVehicleEF	SBUS	0.08	0.07
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.06	0.05
tblVehicleEF	SBUS	3.5400e-003	1.8780e-003
tblVehicleEF	SBUS	9.1900e-003	8.8440e-003
tblVehicleEF	SBUS	8.6000e-005	6.1000e-005
tblVehicleEF	SBUS	7.2700e-004	0.05
tblVehicleEF	SBUS	8.9440e-003	0.01
tblVehicleEF	SBUS	0.76	0.46
tblVehicleEF	SBUS	3.6900e-004	0.00
tblVehicleEF	SBUS	0.10	0.16
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	UBUS	1.52	0.55
tblVehicleEF	UBUS	0.01	5.0270e-003
tblVehicleEF	UBUS	11.42	6.31
tblVehicleEF	UBUS	0.83	0.91
tblVehicleEF	UBUS	1,603.70	1,056.63
tblVehicleEF	UBUS	9.22	5.43
tblVehicleEF	UBUS	0.26	0.16
tblVehicleEF	UBUS	7.4890e-003	8.0120e-003
tblVehicleEF	UBUS	0.69	0.25
tblVehicleEF	UBUS	0.11	0.05
tblVehicleEF	UBUS	0.08	0.14
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	4.9940e-003	4.6950e-003
tblVehicleEF	UBUS	5.3000e-005	2.5000e-005

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tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	7.8010e-003	0.01
tblVehicleEF	UBUS	4.7760e-003	4.4860e-003
tblVehicleEF	UBUS	4.9000e-005	2.3000e-005
tblVehicleEF	UBUS	7.4200e-004	0.01
tblVehicleEF	UBUS	0.01	4.1030e-003
tblVehicleEF	UBUS	5.8200e-004	0.00
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	5.2500e-003	0.01
tblVehicleEF	UBUS	0.06	0.02
tblVehicleEF	UBUS	0.01	8.4680e-003
tblVehicleEF	UBUS	9.1000e-005	5.4000e-005
tblVehicleEF	UBUS	7.4200e-004	0.01
tblVehicleEF	UBUS	0.01	4.1030e-003
tblVehicleEF	UBUS	5.8200e-004	0.00
tblVehicleEF	UBUS	1.55	0.61
tblVehicleEF	UBUS	5.2500e-003	0.01
tblVehicleEF	UBUS	0.07	0.02
tblVehicleTrips	ST_TR	1.90	1.87
tblVehicleTrips	SU_TR	1.11	1.09
tblVehicleTrips	WD_TR	11.26	11.08
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	167,043,184.68	167,141,523.47
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0882	0.8650	0.8937	1.5700e-003	0.0666	0.0429	0.1095	0.0168	0.0397	0.0564	0.0000	137.7426	137.7426	0.0427	0.0000	138.8103
2023	0.0604	0.5889	0.5360	9.8000e-004	0.0000	0.0286	0.0286	0.0000	0.0264	0.0264	0.0000	85.2918	85.2918	0.0266	0.0000	85.9570
2024	1.9028	0.6667	0.6245	1.1800e-003	0.0000	0.0310	0.0310	0.0000	0.0286	0.0286	0.0000	102.7193	102.7193	0.0320	0.0000	103.5203
2025	1.2500e-003	0.0123	0.0207	3.0000e-005	0.0000	5.3000e-004	5.3000e-004	0.0000	4.9000e-004	4.9000e-004	0.0000	2.6451	2.6451	8.6000e-004	0.0000	2.6665
Maximum	**1.9028**	**0.8650**	**0.8937**	**1.5700e-003**	**0.0666**	**0.0429**	**0.1095**	**0.0168**	**0.0397**	**0.0564**	**0.0000**	**137.7426**	**137.7426**	**0.0427**	**0.0000**	**138.8103**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0183	0.4834	0.8293	1.1200e-003	0.0300	2.1700e-003	0.0321	7.5500e-003	2.1700e-003	9.7200e-003	0.0000	98.4976	98.4976	0.0315	0.0000	99.2861
2023	0.0119	0.2595	0.4151	5.6000e-004	0.0000	1.9500e-003	1.9500e-003	0.0000	1.9500e-003	1.9500e-003	0.0000	48.5377	48.5377	0.0147	0.0000	48.9057
2024	1.8475	0.2937	0.4688	6.4000e-004	0.0000	2.2500e-003	2.2500e-003	0.0000	2.2500e-003	2.2500e-003	0.0000	54.8132	54.8132	0.0166	0.0000	55.2269

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2025	5.8000e-004	0.0132	0.0227	3.0000e-005	0.0000	5.0000e-005	5.0000e-005	0.0000	5.0000e-005	5.0000e-005	0.0000	2.6451	2.6451	8.6000e-004	0.0000	2.6665
Maximum	**1.8475**	**0.4834**	**0.8293**	**1.1200e-003**	**0.0300**	**2.2500e-003**	**0.0321**	**7.5500e-003**	**2.2500e-003**	**9.7200e-003**	**0.0000**	**98.4976**	**98.4976**	**0.0315**	**0.0000**	**99.2861**

	ROG	NOx	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	**8.50**	**50.79**	**16.34**	**37.50**	**54.99**	**93.77**	**78.55**	**54.98**	**93.25**	**87.52**	**0.00**	**37.73**	**37.73**	**37.71**	**0.00**	**37.73**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-3-2022**	**4-2-2022**	0.1661	0.1363
2	**4-3-2022**	**7-2-2022**	0.2343	0.1988
3	**7-3-2022**	**10-2-2022**	0.2913	0.0849
4	**10-3-2022**	**1-2-2023**	0.2590	0.0779
5	**1-3-2023**	**4-2-2023**	0.2533	0.0902
6	**4-3-2023**	**7-2-2023**	0.2561	0.0912
7	**7-3-2023**	**10-2-2023**	0.0611	0.0475
8	**10-3-2023**	**1-2-2024**	0.0795	0.0420
9	**1-3-2024**	**4-2-2024**	0.2326	0.0868
10	**4-3-2024**	**7-2-2024**	0.2326	0.0868
11	**7-3-2024**	**10-2-2024**	0.2020	0.0753
12	**10-3-2024**	**1-2-2025**	1.9528	1.9485
13	**1-3-2025**	**4-2-2025**	0.0121	0.0123
		Highest	1.9528	1.9485

2.2 Overall Operational

Unmitigated Operational

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Area	1.5306	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.9553	1.0001	7.9634	0.0265	2.3912	0.0159	2.4072	0.5968	0.0149	0.6117	0.0000	2,459.1164	2,459.1164	0.0988	0.1054	2,493.0057
Stationary	0.0521	0.1456	0.1329	2.5000e-004		7.6600e-003	7.6600e-003		7.6600e-003	7.6600e-003	0.0000	24.1806	24.1806	3.3900e-003	0.0000	24.2654
Waste						0.0000	0.0000		0.0000	0.0000	5.2433	0.0000	5.2433	0.3099	0.0000	12.9900
Water						0.0000	0.0000		0.0000	0.0000	59.1349	0.0000	59.1349	0.2035	0.1286	102.5459
Total	**2.5380**	**1.1458**	**8.1062**	**0.0268**	**2.3912**	**0.0236**	**2.4149**	**0.5968**	**0.0226**	**0.6194**	**64.3782**	**2,483.3165**	**2,547.6947**	**0.6157**	**0.2340**	**2,632.8276**

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	1.5306	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.9553	1.0001	7.9634	0.0265	2.3912	0.0159	2.4072	0.5968	0.0149	0.6117	0.0000	2,459.1164	2,459.1164	0.0988	0.1054	2,493.0057
Stationary	0.0521	0.1456	0.1329	2.5000e-004		7.6600e-003	7.6600e-003		7.6600e-003	7.6600e-003	0.0000	24.1806	24.1806	3.3900e-003	0.0000	24.2654
Waste						0.0000	0.0000		0.0000	0.0000	5.2433	0.0000	5.2433	0.3099	0.0000	12.9900

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Water						0.0000	0.0000		0.0000	0.0000	59.1349	0.0000	59.1349	0.2035	0.1286	102.5459
Total	**2.5380**	**1.1458**	**8.1062**	**0.0268**	**2.3912**	**0.0236**	**2.4149**	**0.5968**	**0.0226**	**0.6194**	**64.3782**	**2,483.3165**	**2,547.6947**	**0.6157**	**0.2340**	**2,632.8276**

	ROG	NOx	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	2/7/2022	3/4/2022	5	20	
2	Below Grade Garage Excavation and Grading	Grading	3/8/2022	6/6/2022	5	65	
3	Below Grade Foundations	Trenching	5/24/2022	8/1/2022	5	50	
4	Garage Concrete	Building Construction	6/23/2022	10/21/2022	5	87	
5	Phase 1 - Building Construction North	Building Construction	10/28/2022	7/6/2023	5	180	
6	Phase 1 - Site	Paving	7/24/2023	11/10/2023	5	80	
7	Phase 2 - Building Construction South	Building Construction	12/15/2023	9/19/2024	5	200	
8	Phase 2 - Site	Paving	10/3/2024	1/22/2025	5	80	
9	Architechural Coating	Architectural Coating	10/3/2024	10/28/2024	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5.69

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 509,600; Non-Residential Outdoor: 169,867; Striped Parking Area: 17,952

OffRoad Equipment

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.10	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	2.00	247	0.40
Below Grade Garage Excavation and Grading	Excavators	2	8.00	158	0.38
Below Grade Garage Excavation and Grading	Graders	1	0.70	187	0.41
Below Grade Garage Excavation and Grading	Rubber Tired Dozers	1	0.70	247	0.40
Below Grade Garage Excavation and Grading	Tractors/Loaders/Backhoes	2	3.90	97	0.37
Below Grade Foundations	Excavators	1	8.00	158	0.38
Below Grade Foundations	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Garage Concrete	Cranes	1	8.00	231	0.29
Garage Concrete	Forklifts	3	6.00	89	0.20
Garage Concrete	Generator Sets	1	1.80	84	0.74
Phase 1 - Building Construction North	Cranes	1	8.00	231	0.29
Phase 1 - Building Construction North	Forklifts	3	6.00	89	0.20
Phase 1 - Building Construction North	Tractors/Loaders/Backhoes	2	1.80	97	0.37
Phase 1 - Building Construction North	Welders	3	0.90	46	0.45
Phase 1 - Site	Pavers	2	0.50	130	0.42
Phase 1 - Site	Paving Equipment	2	0.50	132	0.36
Phase 1 - Site	Rollers	2	0.50	80	0.38
Phase 1 - Site	Tractors/Loaders/Backhoes	2	3.00	97	0.37
Phase 2 - Building Construction South	Cranes	1	8.00	231	0.29
Phase 2 - Building Construction South	Forklifts	3	6.00	89	0.20
Phase 2 - Building Construction South	Tractors/Loaders/Backhoes	2	1.60	97	0.37
Phase 2 - Building Construction South	Welders	3	0.80	46	0.45
Phase 2 - Site	Pavers	2	0.50	130	0.42
Phase 2 - Site	Paving Equipment	2	0.50	132	0.36
Phase 2 - Site	Rollers	2	0.50	80	0.38
Phase 2 - Site	Tractors/Loaders/Backhoes	2	3.00	97	0.37

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architechural Coating	Air Compressors	0	0.00	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	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Below Grade Garage Excavation and Gradin	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Below Grade Foundations	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Garage Concrete	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 1 - Building Construction North	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 1 - Site	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2 - Building Construction South	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2 - Site	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architechural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fugitive Dust					0.0396	0.0000	0.0396	5.9900e-003	0.0000	5.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.0976	0.1160	2.0000e-004		4.6800e-003	4.6800e-003		4.3100e-003	4.3100e-003	0.0000	17.4268	17.4268	5.6200e-003	0.0000	17.5672
Total	**0.0103**	**0.0976**	**0.1160**	**2.0000e-004**	**0.0396**	**4.6800e-003**	**0.0443**	**5.9900e-003**	**4.3100e-003**	**0.0103**	**0.0000**	**17.4268**	**17.4268**	**5.6200e-003**	**0.0000**	**17.5672**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fugitive Dust					0.0178	0.0000	0.0178	2.7000e-003	0.0000	2.7000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6200e-003	0.0798	0.1407	2.0000e-004		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	17.4267	17.4267	5.6200e-003	0.0000	17.5672
Total	**2.6200e-003**	**0.0798**	**0.1407**	**2.0000e-004**	**0.0178**	**3.2000e-004**	**0.0181**	**2.7000e-003**	**3.2000e-004**	**3.0200e-003**	**0.0000**	**17.4267**	**17.4267**	**5.6200e-003**	**0.0000**	**17.5672**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Below Grade Garage Excavation and Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fugitive Dust					0.0270	0.0000	0.0270	0.0108	0.0000	0.0108	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0219	0.2086	0.2976	4.8000e-004		0.0101	0.0101		9.2900e-003	9.2900e-003	0.0000	41.9319	41.9319	0.0136	0.0000	42.2710
Total	**0.0219**	**0.2086**	**0.2976**	**4.8000e-004**	**0.0270**	**0.0101**	**0.0371**	**0.0108**	**9.2900e-003**	**0.0201**	**0.0000**	**41.9319**	**41.9319**	**0.0136**	**0.0000**	**42.2710**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fugitive Dust					0.0121	0.0000	0.0121	4.8500e-003	0.0000	4.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0400e-003	0.2023	0.3518	4.8000e-004		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	41.9319	41.9319	0.0136	0.0000	42.2709
Total	**7.0400e-003**	**0.2023**	**0.3518**	**4.8000e-004**	**0.0121**	**7.8000e-004**	**0.0129**	**4.8500e-003**	**7.8000e-004**	**5.6300e-003**	**0.0000**	**41.9319**	**41.9319**	**0.0136**	**0.0000**	**42.2709**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Below Grade Foundations - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-Road	7.1200e-003	0.0654	0.1094	1.7000e-004		3.2700e-003	3.2700e-003		3.0100e-003	3.0100e-003	0.0000	14.7562	14.7562	4.7700e-003	0.0000	14.8755
Total	**7.1200e-003**	**0.0654**	**0.1094**	**1.7000e-004**		**3.2700e-003**	**3.2700e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**14.7562**	**14.7562**	**4.7700e-003**	**0.0000**	**14.8755**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.4600e-003	0.0739	0.1272	1.7000e-004		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	14.7561	14.7561	4.7700e-003	0.0000	14.8754

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Total	**2.4600e-003**	**0.0739**	**0.1272**	**1.7000e-004**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**14.7561**	**14.7561**	**4.7700e-003**	**0.0000**	**14.8754**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Garage Concrete - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0306	0.3139	0.2312	4.6000e-004		0.0158	0.0158		0.0147	0.0147	0.0000	40.7286	40.7286	0.0117	0.0000	41.0198
Total	**0.0306**	**0.3139**	**0.2312**	**4.6000e-004**		**0.0158**	**0.0158**		**0.0147**	**0.0147**	**0.0000**	**40.7286**	**40.7286**	**0.0117**	**0.0000**	**41.0198**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.3800e-003	0.0658	0.1137	1.5000e-004		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	13.1438	13.1438	4.2500e-003	0.0000	13.2500
Total	**3.3800e-003**	**0.0658**	**0.1137**	**1.5000e-004**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**13.1438**	**13.1438**	**4.2500e-003**	**0.0000**	**13.2500**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Phase 1 - Building Construction North - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0183	0.1795	0.1396	2.6000e-004		9.0400e-003	9.0400e-003		8.3600e-003	8.3600e-003	0.0000	22.8992	22.8992	7.1100e-003	0.0000	23.0769
Total	**0.0183**	**0.1795**	**0.1396**	**2.6000e-004**		**9.0400e-003**	**9.0400e-003**		**8.3600e-003**	**8.3600e-003**	**0.0000**	**22.8992**	**22.8992**	**7.1100e-003**	**0.0000**	**23.0769**

Unmitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.8500e-003	0.0617	0.0960	1.3000e-004		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	11.2391	11.2391	3.3400e-003	0.0000	11.3225
Total	**2.8500e-003**	**0.0617**	**0.0960**	**1.3000e-004**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**11.2391**	**11.2391**	**3.3400e-003**	**0.0000**	**11.3225**

Mitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Phase 1 - Building Construction North - 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	0.0493	0.4787	0.4007	7.7000e-004		0.0232	0.0232		0.0214	0.0214	0.0000	66.7150	66.7150	0.0207	0.0000	67.2316
Total	**0.0493**	**0.4787**	**0.4007**	**7.7000e-004**		**0.0232**	**0.0232**		**0.0214**	**0.0214**	**0.0000**	**66.7150**	**66.7150**	**0.0207**	**0.0000**	**67.2316**

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

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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	8.3000e-003	0.1797	0.2796	3.8000e-004		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003	0.0000	32.7491	32.7491	9.6800e-003	0.0000	32.9911
Total	**8.3000e-003**	**0.1797**	**0.2796**	**3.8000e-004**		**1.5900e-003**	**1.5900e-003**		**1.5900e-003**	**1.5900e-003**	**0.0000**	**32.7491**	**32.7491**	**9.6800e-003**	**0.0000**	**32.9911**

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					

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Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Phase 1 - Site - 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	7.1200e-003	0.0716	0.1034	1.5000e-004		3.5500e-003	3.5500e-003		3.2700e-003	3.2700e-003	0.0000	13.2143	13.2143	4.2700e-003	0.0000	13.3211
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.1200e-003**	**0.0716**	**0.1034**	**1.5000e-004**		**3.5500e-003**	**3.5500e-003**		**3.2700e-003**	**3.2700e-003**	**0.0000**	**13.2143**	**13.2143**	**4.2700e-003**	**0.0000**	**13.3211**

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					

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Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.9200e-003	0.0657	0.1135	1.5000e-004		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	13.2143	13.2143	4.2700e-003	0.0000	13.3211
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.9200e-003**	**0.0657**	**0.1135**	**1.5000e-004**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**13.2143**	**13.2143**	**4.2700e-003**	**0.0000**	**13.3211**

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					

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Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Phase 2 - Building Construction South - 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	3.9500e-003	0.0386	0.0319	6.0000e-005		1.8700e-003	1.8700e-003		1.7300e-003	1.7300e-003	0.0000	5.3625	5.3625	1.6700e-003	0.0000	5.4042
Total	**3.9500e-003**	**0.0386**	**0.0319**	**6.0000e-005**		**1.8700e-003**	**1.8700e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**5.3625**	**5.3625**	**1.6700e-003**	**0.0000**	**5.4042**

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

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Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	6.5000e-004	0.0140	0.0220	3.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	2.5743	2.5743	7.7000e-004	0.0000	2.5935
Total	**6.5000e-004**	**0.0140**	**0.0220**	**3.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**2.5743**	**2.5743**	**7.7000e-004**	**0.0000**	**2.5935**

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Phase 2 - Building Construction South - 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	0.0635	0.6129	0.5416	1.0600e-003		0.0285	0.0285		0.0263	0.0263	0.0000	92.1438	92.1438	0.0286	0.0000	92.8593
Total	**0.0635**	**0.6129**	**0.5416**	**1.0600e-003**		**0.0285**	**0.0285**		**0.0263**	**0.0263**	**0.0000**	**92.1438**	**92.1438**	**0.0286**	**0.0000**	**92.8593**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0112	0.2411	0.3779	5.2000e-004		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	44.2378	44.2378	0.0131	0.0000	44.5659
Total	**0.0112**	**0.2411**	**0.3779**	**5.2000e-004**		**2.0500e-003**	**2.0500e-003**		**2.0500e-003**	**2.0500e-003**	**0.0000**	**44.2378**	**44.2378**	**0.0131**	**0.0000**	**44.5659**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3.9 Phase 2 - Site - 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	5.4300e-003	0.0538	0.0829	1.2000e-004		2.5300e-003	2.5300e-003		2.3300e-003	2.3300e-003	0.0000	10.5755	10.5755	3.4200e-003	0.0000	10.6610
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.4300e-003**	**0.0538**	**0.0829**	**1.2000e-004**		**2.5300e-003**	**2.5300e-003**		**2.3300e-003**	**2.3300e-003**	**0.0000**	**10.5755**	**10.5755**	**3.4200e-003**	**0.0000**	**10.6610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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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	2.3400e-003	0.0526	0.0908	1.2000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	10.5755	10.5755	3.4200e-003	0.0000	10.6610
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.3400e-003**	**0.0526**	**0.0908**	**1.2000e-004**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**10.5755**	**10.5755**	**3.4200e-003**	**0.0000**	**10.6610**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3.9 Phase 2 - Site - 2025

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	1.2500e-003	0.0123	0.0207	3.0000e-005		5.3000e-004	5.3000e-004		4.9000e-004	4.9000e-004	0.0000	2.6451	2.6451	8.6000e-004	0.0000	2.6665
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2500e-003**	**0.0123**	**0.0207**	**3.0000e-005**		**5.3000e-004**	**5.3000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**2.6451**	**2.6451**	**8.6000e-004**	**0.0000**	**2.6665**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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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	5.8000e-004	0.0132	0.0227	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.6451	2.6451	8.6000e-004	0.0000	2.6665
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.8000e-004**	**0.0132**	**0.0227**	**3.0000e-005**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**2.6451**	**2.6451**	**8.6000e-004**	**0.0000**	**2.6665**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3.10 Architechural 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	1.8339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.8339**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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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	1.8339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.8339**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9553	1.0001	7.9634	0.0265	2.3912	0.0159	2.4072	0.5968	0.0149	0.6117	0.0000	2,459.1164	2,459.1164	0.0988	0.1054	2,493.0057
Unmitigated	0.9553	1.0001	7.9634	0.0265	2.3912	0.0159	2.4072	0.5968	0.0149	0.6117	0.0000	2,459.1164	2,459.1164	0.0988	0.1054	2,493.0057

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Research & Development	3,764.21	635.30	370.31	7,098,639	7,098,639
Total	3,764.21	635.30	370.31	7,098,639	7,098,639

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.430608	0.039010	0.288195	0.168896	0.033969	0.007587	0.012483	0.007199	0.004815	0.001838	0.004320	0.000420	0.000661
Research & Development	0.430608	0.039010	0.288195	0.168896	0.033969	0.007587	0.012483	0.007199	0.004815	0.001838	0.004320	0.000420	0.000661

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

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Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.62765e+006	0.0000	0.0000	0.0000	0.0000
Research & Development	2.52422e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.62765e+006	0.0000	0.0000	0.0000	0.0000
Research & Development	2.52422e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5306	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Unmitigated	1.5306	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207

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	0.1835					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3462					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.2000e-004	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Total	**1.5306**	**9.0000e-005**	**9.9700e-003**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0194**	**0.0194**	**5.0000e-005**	**0.0000**	**0.0207**

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

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SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1835					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3462					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.2000e-004	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Total	**1.5306**	**9.0000e-005**	**9.9700e-003**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0194**	**0.0194**	**5.0000e-005**	**0.0000**	**0.0207**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	59.1349	0.2035	0.1286	102.5459
Unmitigated	59.1349	0.2035	0.1286	102.5459

7.2 Water by Land Use

Unmitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	167.142 / 0	59.1349	0.2035	0.1286	102.5459
Total		**59.1349**	**0.2035**	**0.1286**	**102.5459**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	167.142 / 0	59.1349	0.2035	0.1286	102.5459
Total		**59.1349**	**0.2035**	**0.1286**	**102.5459**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.2433	0.3099	0.0000	12.9900
Unmitigated	5.2433	0.3099	0.0000	12.9900

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Research & Development	25.83	5.2433	0.3099	0.0000	12.9900
Total		**5.2433**	**0.3099**	**0.0000**	**12.9900**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Research & Development	25.83	5.2433	0.3099	0.0000	12.9900
Total		**5.2433**	**0.3099**	**0.0000**	**12.9900**

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
Emergency Generator	1	0	50	600	0.73	Diesel
Emergency Generator	1	0	50	670	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (... - 750 HP)	0.0521	0.1456	0.1329	2.5000e-004		7.6600e-003	7.6600e-003		7.6600e-003	7.6600e-003	0.0000	24.1806	24.1806	3.3900e-003	0.0000	24.2654
Total	**0.0521**	**0.1456**	**0.1329**	**2.5000e-004**		**7.6600e-003**	**7.6600e-003**		**7.6600e-003**	**7.6600e-003**	**0.0000**	**24.1806**	**24.1806**	**3.3900e-003**	**0.0000**	**24.2654**

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	339.73	1000sqft	3.41	339,733.00	0
Enclosed Parking with Elevator	748.00	Space	0.00	299,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2030
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assume peninsula

Land Use - Applicant provided square footage, and lot acreage. Parking spaces from plot plan.

Construction Phase - Operation Only

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Operation Only

Trips and VMT - All trips entered into EMFAC2021

Demolition -

Grading -

Vehicle Trips - 11.08 ITE 11th Gen rate for R&D.

Vehicle Emission Factors - Emission factors from EMFAC2021

Energy Use - No Natural gas usage

Date: 3/4/2022 11:41 AM

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Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - All equipment t4i, BMP

Fleet Mix - Fleet Mix from EMFAC2021

Stationary Sources - Emergency Generators and Fire Pumps - Generator information supplied by applicant as 450kW and 500kW. Engine sizes assumed.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	169867	169967
tblAreaCoating	Area_Nonresidential_Interior	509600	509900
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	18.00	0.00
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	T24NG	17.67	0.00
tblFleetMix	HHD	1.7910e-003	7.3150e-003
tblFleetMix	HHD	1.7910e-003	7.3150e-003
tblFleetMix	LDA	0.43	0.39
tblFleetMix	LDA	0.43	0.39
tblFleetMix	LDT1	0.08	0.04
tblFleetMix	LDT1	0.08	0.04
tblFleetMix	LDT2	0.25	0.31
tblFleetMix	LDT2	0.25	0.31
tblFleetMix	LHD1	0.03	0.04

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tblFleetMix	LHD1	0.03	0.04
tblFleetMix	LHD2	7.1360e-003	8.4120e-003
tblFleetMix	LHD2	7.1360e-003	8.4120e-003
tblFleetMix	MCY	0.03	4.4930e-003
tblFleetMix	MCY	0.03	4.4930e-003
tblFleetMix	MDV	0.16	0.18
tblFleetMix	MDV	0.16	0.18
tblFleetMix	MH	2.9170e-003	7.0600e-004
tblFleetMix	MH	2.9170e-003	7.0600e-004
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	1.3500e-003	4.7190e-003
tblFleetMix	OBUS	1.3500e-003	4.7190e-003
tblFleetMix	SBUS	4.2100e-004	4.4200e-004
tblFleetMix	SBUS	4.2100e-004	4.4200e-004
tblFleetMix	UBUS	4.9600e-004	1.8230e-003
tblFleetMix	UBUS	4.9600e-004	1.8230e-003
tblLandUse	LandUseSquareFeet	339,730.00	339,733.00
tblLandUse	LotAcreage	7.80	3.41
tblLandUse	LotAcreage	6.73	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.50
tblOffRoadEquipment	UsageHours	6.00	0.50
tblOffRoadEquipment	UsageHours	6.00	0.50
tblOffRoadEquipment	UsageHours	8.00	3.00

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tblSolidWaste	SolidWasteGenerationRate	25.82	25.83
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	600.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	670.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleEF	HHD	0.04	0.23
tblVehicleEF	HHD	0.19	0.18
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	HHD	5.46	4.57
tblVehicleEF	HHD	1.06	1.44
tblVehicleEF	HHD	0.04	0.02
tblVehicleEF	HHD	860.08	692.39
tblVehicleEF	HHD	1,405.74	1,514.61
tblVehicleEF	HHD	0.35	0.20
tblVehicleEF	HHD	0.14	0.11
tblVehicleEF	HHD	0.23	0.24
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	HHD	5.01	3.57
tblVehicleEF	HHD	2.73	1.87
tblVehicleEF	HHD	2.40	2.65
tblVehicleEF	HHD	2.7380e-003	2.0820e-003
tblVehicleEF	HHD	0.06	0.09
tblVehicleEF	HHD	0.04	0.03
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.0000e-006
tblVehicleEF	HHD	2.6200e-003	1.9850e-003
tblVehicleEF	HHD	0.03	0.03

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tblVehicleEF	HHD	8.7570e-003	8.6350e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.0000e-006
tblVehicleEF	HHD	6.0000e-006	2.3600e-004
tblVehicleEF	HHD	3.2200e-004	6.5000e-005
tblVehicleEF	HHD	0.36	0.27
tblVehicleEF	HHD	5.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	1.5200e-004	3.9100e-004
tblVehicleEF	HHD	1.4000e-005	2.0000e-006
tblVehicleEF	HHD	7.5950e-003	5.6170e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	3.0000e-006	2.0000e-006
tblVehicleEF	HHD	6.0000e-006	2.3600e-004
tblVehicleEF	HHD	3.2200e-004	6.5000e-005
tblVehicleEF	HHD	0.43	0.53
tblVehicleEF	HHD	5.0000e-006	0.00
tblVehicleEF	HHD	0.23	0.21
tblVehicleEF	HHD	1.5200e-004	3.9100e-004
tblVehicleEF	HHD	1.6000e-005	2.0000e-006
tblVehicleEF	LDA	8.5200e-004	1.0910e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.38	0.43
tblVehicleEF	LDA	1.70	2.12
tblVehicleEF	LDA	197.85	218.14
tblVehicleEF	LDA	41.93	56.38
tblVehicleEF	LDA	2.9620e-003	2.8890e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.02	0.02

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tblVehicleEF	LDA	0.12	0.18
tblVehicleEF	LDA	0.04	6.3460e-003
tblVehicleEF	LDA	8.6000e-004	8.0000e-004
tblVehicleEF	LDA	1.2290e-003	1.4710e-003
tblVehicleEF	LDA	0.02	2.2210e-003
tblVehicleEF	LDA	7.9200e-004	7.3600e-004
tblVehicleEF	LDA	1.1300e-003	1.3530e-003
tblVehicleEF	LDA	0.02	0.21
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	2.9250e-003	3.8520e-003
tblVehicleEF	LDA	0.03	0.16
tblVehicleEF	LDA	0.12	0.20
tblVehicleEF	LDA	1.9570e-003	2.1560e-003
tblVehicleEF	LDA	4.1500e-004	5.5700e-004
tblVehicleEF	LDA	0.02	0.21
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	4.2480e-003	5.6170e-003
tblVehicleEF	LDA	0.03	0.16
tblVehicleEF	LDA	0.13	0.22
tblVehicleEF	LDT1	1.1990e-003	2.2150e-003
tblVehicleEF	LDT1	0.03	0.06
tblVehicleEF	LDT1	0.44	0.66
tblVehicleEF	LDT1	1.81	2.84
tblVehicleEF	LDT1	236.05	285.53
tblVehicleEF	LDT1	50.08	72.58
tblVehicleEF	LDT1	3.1790e-003	4.5000e-003
tblVehicleEF	LDT1	0.02	0.03

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tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.14	0.23
tblVehicleEF	LDT1	0.04	7.9630e-003
tblVehicleEF	LDT1	9.9000e-004	1.0380e-003
tblVehicleEF	LDT1	1.3910e-003	1.7650e-003
tblVehicleEF	LDT1	0.02	2.7870e-003
tblVehicleEF	LDT1	9.1100e-004	9.5500e-004
tblVehicleEF	LDT1	1.2790e-003	1.6230e-003
tblVehicleEF	LDT1	0.03	0.31
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	4.4220e-003	9.0470e-003
tblVehicleEF	LDT1	0.05	0.24
tblVehicleEF	LDT1	0.13	0.27
tblVehicleEF	LDT1	2.3360e-003	2.8230e-003
tblVehicleEF	LDT1	4.9600e-004	7.1700e-004
tblVehicleEF	LDT1	0.03	0.31
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	6.4520e-003	0.01
tblVehicleEF	LDT1	0.05	0.24
tblVehicleEF	LDT1	0.14	0.29
tblVehicleEF	LDT2	1.3110e-003	1.4510e-003
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.47	0.52
tblVehicleEF	LDT2	2.22	2.46
tblVehicleEF	LDT2	241.10	296.13
tblVehicleEF	LDT2	51.42	74.14
tblVehicleEF	LDT2	3.4280e-003	3.6740e-003

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tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.15	0.21
tblVehicleEF	LDT2	0.04	7.7670e-003
tblVehicleEF	LDT2	9.8200e-004	8.8300e-004
tblVehicleEF	LDT2	1.3140e-003	1.4990e-003
tblVehicleEF	LDT2	0.02	2.7180e-003
tblVehicleEF	LDT2	9.0400e-004	8.1200e-004
tblVehicleEF	LDT2	1.2080e-003	1.3780e-003
tblVehicleEF	LDT2	0.03	0.16
tblVehicleEF	LDT2	0.06	0.04
tblVehicleEF	LDT2	0.03	0.00
tblVehicleEF	LDT2	4.7820e-003	5.1450e-003
tblVehicleEF	LDT2	0.05	0.12
tblVehicleEF	LDT2	0.16	0.22
tblVehicleEF	LDT2	2.3850e-003	2.9270e-003
tblVehicleEF	LDT2	5.0900e-004	7.3300e-004
tblVehicleEF	LDT2	0.03	0.16
tblVehicleEF	LDT2	0.06	0.04
tblVehicleEF	LDT2	0.03	0.00
tblVehicleEF	LDT2	6.9400e-003	7.4940e-003
tblVehicleEF	LDT2	0.05	0.12
tblVehicleEF	LDT2	0.17	0.24
tblVehicleEF	LHD1	3.9860e-003	4.1000e-003
tblVehicleEF	LHD1	4.4850e-003	2.8900e-003
tblVehicleEF	LHD1	7.3910e-003	0.01
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.40	0.47
tblVehicleEF	LHD1	0.86	2.16

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tblVehicleEF	LHD1	8.08	7.48
tblVehicleEF	LHD1	689.79	647.78
tblVehicleEF	LHD1	9.94	16.36
tblVehicleEF	LHD1	7.0800e-004	5.3200e-004
tblVehicleEF	LHD1	0.04	0.03
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.04	0.03
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.20	0.30
tblVehicleEF	LHD1	9.1600e-004	6.1700e-004
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	9.8940e-003	9.2640e-003
tblVehicleEF	LHD1	5.8960e-003	6.6480e-003
tblVehicleEF	LHD1	2.0100e-004	1.0400e-004
tblVehicleEF	LHD1	8.7600e-004	5.9000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4740e-003	2.3160e-003
tblVehicleEF	LHD1	5.5970e-003	6.3310e-003
tblVehicleEF	LHD1	1.8500e-004	9.6000e-005
tblVehicleEF	LHD1	8.5500e-004	0.06
tblVehicleEF	LHD1	0.04	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	5.9000e-004	0.00
tblVehicleEF	LHD1	0.07	0.04
tblVehicleEF	LHD1	0.14	0.08
tblVehicleEF	LHD1	0.03	0.07
tblVehicleEF	LHD1	7.8000e-005	7.3000e-005
tblVehicleEF	LHD1	6.7280e-003	6.3250e-003
tblVehicleEF	LHD1	9.8000e-005	1.6200e-004

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tblVehicleEF	LHD1	8.5500e-004	0.06
tblVehicleEF	LHD1	0.04	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	5.9000e-004	0.00
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.14	0.08
tblVehicleEF	LHD1	0.04	0.07
tblVehicleEF	LHD2	2.4420e-003	2.3110e-003
tblVehicleEF	LHD2	4.9160e-003	3.5820e-003
tblVehicleEF	LHD2	4.1310e-003	7.5520e-003
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.44	0.32
tblVehicleEF	LHD2	0.49	1.19
tblVehicleEF	LHD2	12.62	12.88
tblVehicleEF	LHD2	670.16	684.09
tblVehicleEF	LHD2	6.49	8.64
tblVehicleEF	LHD2	1.6020e-003	1.5980e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.21	0.28
tblVehicleEF	LHD2	0.12	0.16
tblVehicleEF	LHD2	1.4740e-003	1.4290e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.0700e-004	5.0000e-005
tblVehicleEF	LHD2	1.4100e-003	1.3670e-003
tblVehicleEF	LHD2	0.04	0.03

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tblVehicleEF	LHD2	2.7060e-003	2.6170e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.9000e-005	4.6000e-005
tblVehicleEF	LHD2	4.2300e-004	0.03
tblVehicleEF	LHD2	0.02	8.3390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.0400e-004	0.00
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	1.2100e-004	1.2300e-004
tblVehicleEF	LHD2	6.4670e-003	6.5820e-003
tblVehicleEF	LHD2	6.4000e-005	8.5000e-005
tblVehicleEF	LHD2	4.2300e-004	0.03
tblVehicleEF	LHD2	0.02	8.3390e-003
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.0400e-004	0.00
tblVehicleEF	LHD2	0.11	0.08
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	MCY	0.32	0.13
tblVehicleEF	MCY	0.25	0.14
tblVehicleEF	MCY	17.76	9.71
tblVehicleEF	MCY	9.39	7.58
tblVehicleEF	MCY	212.58	185.26
tblVehicleEF	MCY	58.78	39.68
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	5.5840e-003
tblVehicleEF	MCY	1.14	0.47

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tblVehicleEF	MCY	0.27	0.09
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.2180e-003	2.0690e-003
tblVehicleEF	MCY	3.0130e-003	3.6390e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	2.0680e-003	1.9300e-003
tblVehicleEF	MCY	2.8140e-003	3.4020e-003
tblVehicleEF	MCY	0.61	2.69
tblVehicleEF	MCY	0.49	3.54
tblVehicleEF	MCY	0.36	0.00
tblVehicleEF	MCY	2.13	0.79
tblVehicleEF	MCY	0.39	3.67
tblVehicleEF	MCY	1.89	1.03
tblVehicleEF	MCY	2.1040e-003	1.8310e-003
tblVehicleEF	MCY	5.8200e-004	3.9200e-004
tblVehicleEF	MCY	0.61	0.07
tblVehicleEF	MCY	0.49	3.54
tblVehicleEF	MCY	0.36	0.00
tblVehicleEF	MCY	2.68	0.98
tblVehicleEF	MCY	0.39	3.67
tblVehicleEF	MCY	2.06	1.12
tblVehicleEF	MDV	1.2400e-003	1.4660e-003
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.45	0.52
tblVehicleEF	MDV	2.21	2.46
tblVehicleEF	MDV	289.25	352.66
tblVehicleEF	MDV	60.44	87.77
tblVehicleEF	MDV	4.5060e-003	4.1700e-003
tblVehicleEF	MDV	0.02	0.03

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tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.15	0.22
tblVehicleEF	MDV	0.04	7.7870e-003
tblVehicleEF	MDV	9.5700e-004	8.5800e-004
tblVehicleEF	MDV	1.2840e-003	1.4690e-003
tblVehicleEF	MDV	0.02	2.7250e-003
tblVehicleEF	MDV	8.8200e-004	7.9000e-004
tblVehicleEF	MDV	1.1810e-003	1.3510e-003
tblVehicleEF	MDV	0.03	0.17
tblVehicleEF	MDV	0.07	0.05
tblVehicleEF	MDV	0.04	0.00
tblVehicleEF	MDV	4.5430e-003	5.3030e-003
tblVehicleEF	MDV	0.05	0.13
tblVehicleEF	MDV	0.16	0.24
tblVehicleEF	MDV	2.8580e-003	3.4850e-003
tblVehicleEF	MDV	5.9800e-004	8.6800e-004
tblVehicleEF	MDV	0.03	0.17
tblVehicleEF	MDV	0.07	0.05
tblVehicleEF	MDV	0.04	0.00
tblVehicleEF	MDV	6.5690e-003	7.7170e-003
tblVehicleEF	MDV	0.05	0.13
tblVehicleEF	MDV	0.18	0.26
tblVehicleEF	MH	4.0670e-003	4.8170e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.22	0.26
tblVehicleEF	MH	1.59	1.85
tblVehicleEF	MH	1,315.39	1,657.15
tblVehicleEF	MH	15.06	19.91
tblVehicleEF	MH	0.05	0.07

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tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	0.84	1.00
tblVehicleEF	MH	0.22	0.25
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	9.1290e-003	0.01
tblVehicleEF	MH	2.2300e-004	2.4800e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2890e-003	3.3360e-003
tblVehicleEF	MH	8.6970e-003	0.01
tblVehicleEF	MH	2.0500e-004	2.2800e-004
tblVehicleEF	MH	0.16	10.82
tblVehicleEF	MH	0.01	2.82
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	2.9870e-003	0.07
tblVehicleEF	MH	0.07	0.08
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.4900e-004	1.9700e-004
tblVehicleEF	MH	0.16	10.82
tblVehicleEF	MH	0.01	2.82
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	2.9870e-003	0.07
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MHD	3.9010e-003	0.02
tblVehicleEF	MHD	9.3700e-004	9.6240e-003
tblVehicleEF	MHD	8.5280e-003	9.1350e-003
tblVehicleEF	MHD	0.38	0.63

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tblVehicleEF	MHD	0.14	0.16
tblVehicleEF	MHD	0.87	0.98
tblVehicleEF	MHD	55.53	130.08
tblVehicleEF	MHD	958.82	1,103.52
tblVehicleEF	MHD	8.66	9.48
tblVehicleEF	MHD	7.8550e-003	0.02
tblVehicleEF	MHD	0.12	0.13
tblVehicleEF	MHD	8.0480e-003	6.8930e-003
tblVehicleEF	MHD	0.29	0.66
tblVehicleEF	MHD	1.31	0.56
tblVehicleEF	MHD	1.67	1.12
tblVehicleEF	MHD	1.1600e-004	6.3600e-004
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	6.3200e-003	5.3910e-003
tblVehicleEF	MHD	1.1300e-004	1.1800e-004
tblVehicleEF	MHD	1.1100e-004	6.0800e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.0400e-003	5.1470e-003
tblVehicleEF	MHD	1.0400e-004	1.0900e-004
tblVehicleEF	MHD	2.1500e-004	0.02
tblVehicleEF	MHD	0.01	3.9100e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.5500e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	5.2700e-004	1.1950e-003
tblVehicleEF	MHD	9.1510e-003	0.01
tblVehicleEF	MHD	8.6000e-005	9.4000e-005

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tblVehicleEF	MHD	2.1500e-004	0.02
tblVehicleEF	MHD	0.01	3.9100e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.5500e-004	0.00
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	OBUS	6.7860e-003	6.9140e-003
tblVehicleEF	OBUS	1.7360e-003	0.01
tblVehicleEF	OBUS	0.01	8.2390e-003
tblVehicleEF	OBUS	0.67	0.50
tblVehicleEF	OBUS	0.22	0.16
tblVehicleEF	OBUS	1.34	0.83
tblVehicleEF	OBUS	104.99	88.87
tblVehicleEF	OBUS	1,195.47	1,192.98
tblVehicleEF	OBUS	11.93	7.62
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.12	0.16
tblVehicleEF	OBUS	0.01	7.5270e-003
tblVehicleEF	OBUS	0.47	0.34
tblVehicleEF	OBUS	1.49	0.65
tblVehicleEF	OBUS	1.22	1.02
tblVehicleEF	OBUS	1.5600e-004	2.0700e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	8.0770e-003	7.6200e-003
tblVehicleEF	OBUS	1.4600e-004	8.4000e-005
tblVehicleEF	OBUS	1.4900e-004	1.9800e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.7140e-003	7.2850e-003

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tblVehicleEF	OBUS	1.3400e-004	7.7000e-005
tblVehicleEF	OBUS	6.9700e-004	0.03
tblVehicleEF	OBUS	0.01	6.5600e-003
tblVehicleEF	OBUS	0.05	0.03
tblVehicleEF	OBUS	3.8500e-004	0.00
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.07	0.04
tblVehicleEF	OBUS	9.9600e-004	8.3400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.1800e-004	7.5000e-005
tblVehicleEF	OBUS	6.9700e-004	0.03
tblVehicleEF	OBUS	0.01	6.5600e-003
tblVehicleEF	OBUS	0.06	0.04
tblVehicleEF	OBUS	3.8500e-004	0.00
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.07	0.05
tblVehicleEF	SBUS	0.16	0.11
tblVehicleEF	SBUS	5.7190e-003	0.07
tblVehicleEF	SBUS	0.01	8.9860e-003
tblVehicleEF	SBUS	5.81	2.80
tblVehicleEF	SBUS	0.52	0.91
tblVehicleEF	SBUS	2.02	1.22
tblVehicleEF	SBUS	372.76	200.53
tblVehicleEF	SBUS	883.04	857.53
tblVehicleEF	SBUS	11.09	6.59
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.08	0.09

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tblVehicleEF	SBUS	0.01	6.2860e-003
tblVehicleEF	SBUS	2.28	1.04
tblVehicleEF	SBUS	2.37	1.45
tblVehicleEF	SBUS	0.99	0.50
tblVehicleEF	SBUS	1.7990e-003	7.5800e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	9.6950e-003	9.8790e-003
tblVehicleEF	SBUS	0.01	7.0920e-003
tblVehicleEF	SBUS	1.8900e-004	9.4000e-005
tblVehicleEF	SBUS	1.7210e-003	7.2300e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.4240e-003	2.4700e-003
tblVehicleEF	SBUS	0.01	6.7620e-003
tblVehicleEF	SBUS	1.7400e-004	8.6000e-005
tblVehicleEF	SBUS	1.0240e-003	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.71	0.33
tblVehicleEF	SBUS	5.6900e-004	0.00
tblVehicleEF	SBUS	0.06	0.05
tblVehicleEF	SBUS	0.02	0.04
tblVehicleEF	SBUS	0.08	0.05
tblVehicleEF	SBUS	3.5870e-003	1.8280e-003
tblVehicleEF	SBUS	8.5360e-003	8.0270e-003
tblVehicleEF	SBUS	1.1000e-004	6.5000e-005
tblVehicleEF	SBUS	1.0240e-003	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	1.03	0.51
tblVehicleEF	SBUS	5.6900e-004	0.00
tblVehicleEF	SBUS	0.07	0.13

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tblVehicleEF	SBUS	0.02	0.04
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	UBUS	1.75	0.64
tblVehicleEF	UBUS	8.0630e-003	4.5120e-003
tblVehicleEF	UBUS	13.25	7.38
tblVehicleEF	UBUS	0.82	0.83
tblVehicleEF	UBUS	1,616.16	954.90
tblVehicleEF	UBUS	7.49	5.22
tblVehicleEF	UBUS	0.27	0.14
tblVehicleEF	UBUS	5.7250e-003	6.8380e-003
tblVehicleEF	UBUS	0.67	0.21
tblVehicleEF	UBUS	0.07	0.04
tblVehicleEF	UBUS	0.08	0.16
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	4.9300e-003	3.9500e-003
tblVehicleEF	UBUS	9.1000e-005	2.5000e-005
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	7.8010e-003	0.02
tblVehicleEF	UBUS	4.7140e-003	3.7730e-003
tblVehicleEF	UBUS	8.3000e-005	2.3000e-005
tblVehicleEF	UBUS	1.3500e-004	0.01
tblVehicleEF	UBUS	1.6730e-003	3.4250e-003
tblVehicleEF	UBUS	8.4000e-005	0.00
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	5.1800e-004	0.01
tblVehicleEF	UBUS	0.04	0.02
tblVehicleEF	UBUS	0.01	7.2300e-003
tblVehicleEF	UBUS	7.4000e-005	5.2000e-005
tblVehicleEF	UBUS	1.3500e-004	0.01

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tblVehicleEF	UBUS	1.6730e-003	3.4250e-003
tblVehicleEF	UBUS	8.4000e-005	0.00
tblVehicleEF	UBUS	1.79	0.69
tblVehicleEF	UBUS	5.1800e-004	0.01
tblVehicleEF	UBUS	0.04	0.02
tblVehicleTrips	ST_TR	1.90	1.87
tblVehicleTrips	SU_TR	1.11	1.09
tblVehicleTrips	WD_TR	11.26	11.08
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	167,043,184.68	167,141,523.47
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5306	9.0000e-005	9.9500e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Mobile	0.7927	0.7951	6.8905	0.0250	2.3927	0.0127	2.4054	0.5973	0.0119	0.6092	0.0000	2,320.9358	2,320.9358	0.0828	0.0959	2,351.5873
Stationary	0.0521	0.1456	0.1329	2.5000e-004		7.6600e-003	7.6600e-003		7.6600e-003	7.6600e-003	0.0000	24.1806	24.1806	3.3900e-003	0.0000	24.2654
Waste						0.0000	0.0000		0.0000	0.0000	5.2433	0.0000	5.2433	0.3099	0.0000	12.9900
Water						0.0000	0.0000		0.0000	0.0000	59.1349	0.0000	59.1349	0.2035	0.1286	102.5459
Total	**2.3754**	**0.9408**	**7.0333**	**0.0253**	**2.3927**	**0.0204**	**2.4131**	**0.5973**	**0.0196**	**0.6169**	**64.3782**	**2,345.1359**	**2,409.5141**	**0.5997**	**0.2245**	**2,491.4092**

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	1.5306	9.0000e-005	9.9500e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.7927	0.7951	6.8905	0.0250	2.3927	0.0127	2.4054	0.5973	0.0119	0.6092	0.0000	2,320.9358	2,320.9358	0.0828	0.0959	2,351.5873
Stationary	0.0521	0.1456	0.1329	2.5000e-004		7.6600e-003	7.6600e-003		7.6600e-003	7.6600e-003	0.0000	24.1806	24.1806	3.3900e-003	0.0000	24.2654
Waste						0.0000	0.0000		0.0000	0.0000	5.2433	0.0000	5.2433	0.3099	0.0000	12.9900
Water						0.0000	0.0000		0.0000	0.0000	59.1349	0.0000	59.1349	0.2035	0.1286	102.5459
Total	**2.3754**	**0.9408**	**7.0333**	**0.0253**	**2.3927**	**0.0204**	**2.4131**	**0.5973**	**0.0196**	**0.6169**	**64.3782**	**2,345.1359**	**2,409.5141**	**0.5997**	**0.2245**	**2,491.4092**

	ROG	NOx	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

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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	tons/yr										MT/yr					
Mitigated	0.7927	0.7951	6.8905	0.0250	2.3927	0.0127	2.4054	0.5973	0.0119	0.6092	0.0000	2,320.9358	2,320.9358	0.0828	0.0959	2,351.5873
Unmitigated	0.7927	0.7951	6.8905	0.0250	2.3927	0.0127	2.4054	0.5973	0.0119	0.6092	0.0000	2,320.9358	2,320.9358	0.0828	0.0959	2,351.5873

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Research & Development	3,764.21	635.30	370.31	7,098,639	7,098,639
Total	3,764.21	635.30	370.31	7,098,639	7,098,639

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.392953	0.038140	0.309697	0.182164	0.036329	0.008412	0.012807	0.007315	0.004719	0.001823	0.004493	0.000442	0.000706

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Research & Development	0.392953	0.038140	0.309697	0.182164	0.036329	0.008412	0.012807	0.007315	0.004719	0.001823	0.004493	0.000442	0.000706

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					

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Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.62765e+006	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Research & Development	2.52422e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.62765e+006	0.0000	0.0000	0.0000	0.0000
Research & Development	2.52422e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					

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Mitigated	1.5306	9.0000e-005	9.9500e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Unmitigated	1.5306	9.0000e-005	9.9500e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207

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	0.1835					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3462					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.1000e-004	9.0000e-005	9.9500e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Total	**1.5306**	**9.0000e-005**	**9.9500e-003**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0194**	**0.0194**	**5.0000e-005**	**0.0000**	**0.0207**

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	0.1835					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products	1.3462					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.1000e-004	9.0000e-005	9.9500e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Total	**1.5306**	**9.0000e-005**	**9.9500e-003**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0194**	**0.0194**	**5.0000e-005**	**0.0000**	**0.0207**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	59.1349	0.2035	0.1286	102.5459
Unmitigated	59.1349	0.2035	0.1286	102.5459

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

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Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	167.142 / 0	59.1349	0.2035	0.1286	102.5459
Total		**59.1349**	**0.2035**	**0.1286**	**102.5459**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	167.142 / 0	59.1349	0.2035	0.1286	102.5459
Total		**59.1349**	**0.2035**	**0.1286**	**102.5459**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e

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	MT/yr			
Mitigated	5.2433	0.3099	0.0000	12.9900
Unmitigated	5.2433	0.3099	0.0000	12.9900

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Research & Development	25.83	5.2433	0.3099	0.0000	12.9900
Total		**5.2433**	**0.3099**	**0.0000**	**12.9900**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000

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Research & Development	25.83	5.2433	0.3099	0.0000	12.9900
Total		**5.2433**	**0.3099**	**0.0000**	**12.9900**

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
Emergency Generator	1	0	50	600	0.73	Diesel
Emergency Generator	1	0	50	670	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					

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Emergency Generator - Diesel (... 750 HP)	0.0521	0.1456	0.1329	2.5000e-004		7.6600e-003	7.6600e-003		7.6600e-003	7.6600e-003	0.0000	24.1806	24.1806	3.3900e-003	0.0000	24.2654
Total	**0.0521**	**0.1456**	**0.1329**	**2.5000e-004**		**7.6600e-003**	**7.6600e-003**		**7.6600e-003**	**7.6600e-003**	**0.0000**	**24.1806**	**24.1806**	**3.3900e-003**	**0.0000**	**24.2654**

11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Day-Care Center	16.45	1000sqft	0.38	16,450.00	0
Unrefrigerated Warehouse-No Rail	6.80	1000sqft	0.16	6,800.00	0
General Light Industry	2.80	1000sqft	0.06	2,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2022
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Library land use type used for Nursery. Nursery land use not available in CalEEMod.

Construction Phase - Operation Only

Off-road Equipment - Operation Only

Vehicle Trips - Trip rates adjusted based on information provided by traffic consultant.

Vehicle Emission Factors - Emission factors from EMFAC2021

Fleet Mix - Fleet Mix from EMFAC2021

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	2.2470e-003	7.1773e-003

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tblFleetMix	HHD	2.2470e-003	7.1773e-003
tblFleetMix	HHD	2.2470e-003	7.1773e-003
tblFleetMix	LDA	0.49	0.49
tblFleetMix	LDA	0.49	0.49
tblFleetMix	LDA	0.49	0.49
tblFleetMix	LDT1	0.07	0.04
tblFleetMix	LDT1	0.07	0.04
tblFleetMix	LDT1	0.07	0.04
tblFleetMix	LDT2	0.22	0.25
tblFleetMix	LDT2	0.22	0.25
tblFleetMix	LDT2	0.22	0.25
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	5.8150e-003	6.2253e-003
tblFleetMix	LHD2	5.8150e-003	6.2253e-003
tblFleetMix	LHD2	5.8150e-003	6.2253e-003
tblFleetMix	MCY	0.03	3.8922e-003
tblFleetMix	MCY	0.03	3.8922e-003
tblFleetMix	MCY	0.03	3.8922e-003
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MH	2.4690e-003	5.7217e-004
tblFleetMix	MH	2.4690e-003	5.7217e-004
tblFleetMix	MH	2.4690e-003	5.7217e-004
tblFleetMix	MHD	9.9900e-003	0.01
tblFleetMix	MHD	9.9900e-003	0.01
tblFleetMix	MHD	9.9900e-003	0.01

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tblFleetMix	OBUS	1.5780e-003	5.0436e-003
tblFleetMix	OBUS	1.5780e-003	5.0436e-003
tblFleetMix	OBUS	1.5780e-003	5.0436e-003
tblFleetMix	SBUS	4.4000e-004	3.9279e-004
tblFleetMix	SBUS	4.4000e-004	3.9279e-004
tblFleetMix	SBUS	4.4000e-004	3.9279e-004
tblFleetMix	UBUS	6.3600e-004	1.8797e-003
tblFleetMix	UBUS	6.3600e-004	1.8797e-003
tblFleetMix	UBUS	6.3600e-004	1.8797e-003
tblVehicleEF	HHD	0.03	0.26
tblVehicleEF	HHD	0.17	0.28
tblVehicleEF	HHD	3.0000e-006	6.7753e-007
tblVehicleEF	HHD	4.86	4.44
tblVehicleEF	HHD	1.00	1.69
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	986.47	817.56
tblVehicleEF	HHD	1,722.89	1,847.10
tblVehicleEF	HHD	0.24	0.31
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.28	0.30
tblVehicleEF	HHD	3.0000e-006	7.7195e-007
tblVehicleEF	HHD	5.83	4.43
tblVehicleEF	HHD	4.02	3.26
tblVehicleEF	HHD	2.10	2.39
tblVehicleEF	HHD	5.0230e-003	3.8271e-003
tblVehicleEF	HHD	0.06	0.10
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	2.0000e-006	5.8093e-006

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tblVehicleEF	HHD	4.8060e-003	3.6571e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.6930e-003	8.6225e-003
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	1.0000e-006	5.3415e-006
tblVehicleEF	HHD	3.0000e-006	9.9091e-004
tblVehicleEF	HHD	1.6300e-004	2.7701e-004
tblVehicleEF	HHD	0.36	0.29
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.09	0.05
tblVehicleEF	HHD	7.5000e-005	2.2865e-003
tblVehicleEF	HHD	1.5000e-005	3.6777e-006
tblVehicleEF	HHD	8.8510e-003	6.9761e-003
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	2.0000e-006	3.1058e-006
tblVehicleEF	HHD	3.0000e-006	9.9091e-004
tblVehicleEF	HHD	1.6300e-004	2.7701e-004
tblVehicleEF	HHD	0.42	0.58
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.27	0.33
tblVehicleEF	HHD	7.5000e-005	2.2865e-003
tblVehicleEF	HHD	1.7000e-005	4.0266e-006
tblVehicleEF	LDA	2.0280e-003	2.3194e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.56	0.66
tblVehicleEF	LDA	2.27	3.35
tblVehicleEF	LDA	246.96	260.55
tblVehicleEF	LDA	52.49	67.65
tblVehicleEF	LDA	4.3020e-003	4.5172e-003

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tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.19	0.25
tblVehicleEF	LDA	0.04	6.4734e-003
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.3690e-003	1.2842e-003
tblVehicleEF	LDA	1.8120e-003	2.1481e-003
tblVehicleEF	LDA	0.02	2.2657e-003
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.2610e-003	1.1824e-003
tblVehicleEF	LDA	1.6660e-003	1.9752e-003
tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.09	0.08
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	7.9910e-003	9.2860e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.23	0.34
tblVehicleEF	LDA	2.4430e-003	2.5755e-003
tblVehicleEF	LDA	5.1900e-004	6.6878e-004
tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.09	0.08
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.25	0.37
tblVehicleEF	LDT1	3.2790e-003	6.2872e-003
tblVehicleEF	LDT1	0.06	0.11
tblVehicleEF	LDT1	0.78	1.36
tblVehicleEF	LDT1	2.36	5.61

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tblVehicleEF	LDT1	287.63	330.88
tblVehicleEF	LDT1	61.36	87.79
tblVehicleEF	LDT1	5.4800e-003	9.5155e-003
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.06	0.13
tblVehicleEF	LDT1	0.21	0.39
tblVehicleEF	LDT1	0.04	8.0921e-003
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	1.7500e-003	1.9809e-003
tblVehicleEF	LDT1	2.2560e-003	3.0326e-003
tblVehicleEF	LDT1	0.02	2.8322e-003
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	1.6100e-003	1.8230e-003
tblVehicleEF	LDT1	2.0740e-003	2.7886e-003
tblVehicleEF	LDT1	0.05	0.54
tblVehicleEF	LDT1	0.12	0.16
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.07	0.45
tblVehicleEF	LDT1	0.27	0.57
tblVehicleEF	LDT1	2.8460e-003	3.2711e-003
tblVehicleEF	LDT1	6.0700e-004	8.6787e-004
tblVehicleEF	LDT1	0.05	0.54
tblVehicleEF	LDT1	0.12	0.16
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.07	0.45
tblVehicleEF	LDT1	0.30	0.62
tblVehicleEF	LDT2	2.6450e-003	2.6021e-003

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tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.66	0.74
tblVehicleEF	LDT2	2.77	3.68
tblVehicleEF	LDT2	306.08	343.01
tblVehicleEF	LDT2	65.86	87.58
tblVehicleEF	LDT2	5.3110e-003	5.5378e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.25	0.32
tblVehicleEF	LDT2	0.04	7.7144e-003
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.4770e-003	1.3869e-003
tblVehicleEF	LDT2	1.8690e-003	2.1925e-003
tblVehicleEF	LDT2	0.02	2.7000e-003
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.3590e-003	1.2760e-003
tblVehicleEF	LDT2	1.7190e-003	2.0159e-003
tblVehicleEF	LDT2	0.04	0.22
tblVehicleEF	LDT2	0.09	0.07
tblVehicleEF	LDT2	0.04	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.17
tblVehicleEF	LDT2	0.28	0.37
tblVehicleEF	LDT2	3.0280e-003	3.3905e-003
tblVehicleEF	LDT2	6.5200e-004	8.6580e-004
tblVehicleEF	LDT2	0.04	0.22
tblVehicleEF	LDT2	0.09	0.07
tblVehicleEF	LDT2	0.04	0.00
tblVehicleEF	LDT2	0.02	0.01

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tblVehicleEF	LDT2	0.05	0.17
tblVehicleEF	LDT2	0.31	0.41
tblVehicleEF	LHD1	5.3000e-003	5.8431e-003
tblVehicleEF	LHD1	7.2240e-003	7.3839e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.19	0.21
tblVehicleEF	LHD1	0.62	0.87
tblVehicleEF	LHD1	1.08	2.43
tblVehicleEF	LHD1	8.84	8.65
tblVehicleEF	LHD1	796.65	802.84
tblVehicleEF	LHD1	12.03	20.18
tblVehicleEF	LHD1	7.1700e-004	5.7945e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.52	0.56
tblVehicleEF	LHD1	0.31	0.47
tblVehicleEF	LHD1	7.9700e-004	5.8283e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.6980e-003	9.2052e-003
tblVehicleEF	LHD1	8.2510e-003	0.01
tblVehicleEF	LHD1	2.4800e-004	2.2575e-004
tblVehicleEF	LHD1	7.6300e-004	5.5762e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4250e-003	2.3013e-003
tblVehicleEF	LHD1	7.8460e-003	0.01
tblVehicleEF	LHD1	2.2800e-004	2.0757e-004
tblVehicleEF	LHD1	1.2870e-003	0.11
tblVehicleEF	LHD1	0.06	0.03

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tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.9700e-004	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.16	0.16
tblVehicleEF	LHD1	0.07	0.12
tblVehicleEF	LHD1	8.6000e-005	8.4366e-005
tblVehicleEF	LHD1	7.7840e-003	7.8580e-003
tblVehicleEF	LHD1	1.1900e-004	1.9952e-004
tblVehicleEF	LHD1	1.2870e-003	0.11
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	7.9700e-004	0.00
tblVehicleEF	LHD1	0.10	0.09
tblVehicleEF	LHD1	0.16	0.16
tblVehicleEF	LHD1	0.07	0.13
tblVehicleEF	LHD2	3.3550e-003	3.6129e-003
tblVehicleEF	LHD2	6.3020e-003	6.7184e-003
tblVehicleEF	LHD2	8.1370e-003	0.01
tblVehicleEF	LHD2	0.14	0.15
tblVehicleEF	LHD2	0.52	0.58
tblVehicleEF	LHD2	0.67	1.46
tblVehicleEF	LHD2	13.62	13.35
tblVehicleEF	LHD2	772.49	845.43
tblVehicleEF	LHD2	8.39	11.54
tblVehicleEF	LHD2	1.6520e-003	1.5390e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.57	0.73

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tblVehicleEF	LHD2	0.19	0.28
tblVehicleEF	LHD2	1.3540e-003	1.2417e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.3800e-004	1.2418e-004
tblVehicleEF	LHD2	1.2960e-003	1.1880e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.6700e-003	2.6257e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.2700e-004	1.1418e-004
tblVehicleEF	LHD2	7.5600e-004	0.07
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.6600e-004	0.00
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.04	0.07
tblVehicleEF	LHD2	1.3000e-004	1.2823e-004
tblVehicleEF	LHD2	7.4680e-003	8.1627e-003
tblVehicleEF	LHD2	8.3000e-005	1.1409e-004
tblVehicleEF	LHD2	7.5600e-004	0.07
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.6600e-004	0.00
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.04	0.08
tblVehicleEF	MCY	0.33	0.16

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tblVehicleEF	MCY	0.26	0.19
tblVehicleEF	MCY	19.02	12.33
tblVehicleEF	MCY	9.17	7.96
tblVehicleEF	MCY	213.08	188.69
tblVehicleEF	MCY	60.80	50.07
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	8.6711e-003
tblVehicleEF	MCY	1.15	0.56
tblVehicleEF	MCY	0.27	0.15
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	2.0940e-003	2.0074e-003
tblVehicleEF	MCY	3.3370e-003	4.0700e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9560e-003	1.8799e-003
tblVehicleEF	MCY	3.1380e-003	3.8358e-003
tblVehicleEF	MCY	0.62	3.59
tblVehicleEF	MCY	0.57	3.56
tblVehicleEF	MCY	0.38	0.00
tblVehicleEF	MCY	2.21	1.05
tblVehicleEF	MCY	0.44	3.72
tblVehicleEF	MCY	1.97	1.43
tblVehicleEF	MCY	2.1090e-003	1.8654e-003
tblVehicleEF	MCY	6.0200e-004	4.9500e-004
tblVehicleEF	MCY	0.62	0.08
tblVehicleEF	MCY	0.57	3.56
tblVehicleEF	MCY	0.38	0.00
tblVehicleEF	MCY	2.75	1.26
tblVehicleEF	MCY	0.44	3.72

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tblVehicleEF	MCY	2.14	1.56
tblVehicleEF	MDV	2.8920e-003	3.2007e-003
tblVehicleEF	MDV	0.07	0.10
tblVehicleEF	MDV	0.69	0.80
tblVehicleEF	MDV	3.04	3.95
tblVehicleEF	MDV	368.66	412.18
tblVehicleEF	MDV	78.55	104.66
tblVehicleEF	MDV	6.9690e-003	7.1729e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.29	0.40
tblVehicleEF	MDV	0.04	7.7630e-003
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.5500e-003	1.4522e-003
tblVehicleEF	MDV	1.9760e-003	2.3427e-003
tblVehicleEF	MDV	0.02	2.7170e-003
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.4290e-003	1.3380e-003
tblVehicleEF	MDV	1.8170e-003	2.1542e-003
tblVehicleEF	MDV	0.04	0.26
tblVehicleEF	MDV	0.10	0.08
tblVehicleEF	MDV	0.05	0.00
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.05	0.20
tblVehicleEF	MDV	0.34	0.48
tblVehicleEF	MDV	3.6430e-003	4.0724e-003
tblVehicleEF	MDV	7.7700e-004	1.0347e-003
tblVehicleEF	MDV	0.04	0.26
tblVehicleEF	MDV	0.10	0.08

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tblVehicleEF	MDV	0.05	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.05	0.20
tblVehicleEF	MDV	0.37	0.52
tblVehicleEF	MH	7.8210e-003	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	0.73	1.52
tblVehicleEF	MH	2.03	2.75
tblVehicleEF	MH	1,502.52	1,675.54
tblVehicleEF	MH	18.02	23.04
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.03	1.39
tblVehicleEF	MH	0.24	0.29
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.7100e-004	3.6558e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2730e-003	3.3158e-003
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	2.4900e-004	3.3613e-004
tblVehicleEF	MH	0.38	30.99
tblVehicleEF	MH	0.04	9.08
tblVehicleEF	MH	0.16	0.00
tblVehicleEF	MH	0.05	0.09
tblVehicleEF	MH	8.9160e-003	0.21
tblVehicleEF	MH	0.09	0.12
tblVehicleEF	MH	0.01	0.02

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tblVehicleEF	MH	1.7800e-004	2.2778e-004
tblVehicleEF	MH	0.38	30.99
tblVehicleEF	MH	0.04	9.08
tblVehicleEF	MH	0.16	0.00
tblVehicleEF	MH	0.07	0.12
tblVehicleEF	MH	8.9160e-003	0.21
tblVehicleEF	MH	0.10	0.13
tblVehicleEF	MHD	3.9210e-003	0.01
tblVehicleEF	MHD	4.7020e-003	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.38	0.65
tblVehicleEF	MHD	0.43	0.60
tblVehicleEF	MHD	1.26	1.48
tblVehicleEF	MHD	68.23	157.17
tblVehicleEF	MHD	1,119.63	1,289.87
tblVehicleEF	MHD	10.33	11.01
tblVehicleEF	MHD	9.7120e-003	0.02
tblVehicleEF	MHD	0.14	0.15
tblVehicleEF	MHD	8.1860e-003	7.8622e-003
tblVehicleEF	MHD	0.49	1.01
tblVehicleEF	MHD	1.73	1.59
tblVehicleEF	MHD	1.39	1.20
tblVehicleEF	MHD	9.9300e-004	3.1933e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.2700e-004	1.4438e-004
tblVehicleEF	MHD	9.5000e-004	3.0547e-003
tblVehicleEF	MHD	0.06	0.02

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tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.1700e-004	1.3275e-004
tblVehicleEF	MHD	3.4300e-004	0.03
tblVehicleEF	MHD	0.02	8.8146e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.1300e-004	0.00
tblVehicleEF	MHD	0.07	0.07
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.06	0.07
tblVehicleEF	MHD	6.4800e-004	1.4597e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	1.0200e-004	1.0883e-004
tblVehicleEF	MHD	3.4300e-004	0.03
tblVehicleEF	MHD	0.02	8.8146e-003
tblVehicleEF	MHD	0.03	0.05
tblVehicleEF	MHD	2.1300e-004	0.00
tblVehicleEF	MHD	0.08	0.09
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.06	0.07
tblVehicleEF	OBUS	6.7140e-003	8.1587e-003
tblVehicleEF	OBUS	5.0760e-003	8.2525e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.58	0.46
tblVehicleEF	OBUS	0.49	0.31
tblVehicleEF	OBUS	1.56	1.18
tblVehicleEF	OBUS	107.54	92.23
tblVehicleEF	OBUS	1,354.47	1,344.38
tblVehicleEF	OBUS	13.26	10.27

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tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.14	0.17
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.54	0.43
tblVehicleEF	OBUS	1.87	0.94
tblVehicleEF	OBUS	1.06	1.06
tblVehicleEF	OBUS	7.9200e-004	2.5835e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.02	9.2437e-003
tblVehicleEF	OBUS	1.3600e-004	1.0260e-004
tblVehicleEF	OBUS	7.5800e-004	2.4709e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	0.02	8.8368e-003
tblVehicleEF	OBUS	1.2500e-004	9.4337e-005
tblVehicleEF	OBUS	7.7900e-004	0.03
tblVehicleEF	OBUS	0.01	8.9138e-003
tblVehicleEF	OBUS	0.05	0.03
tblVehicleEF	OBUS	3.9500e-004	0.00
tblVehicleEF	OBUS	0.06	0.03
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	0.07	0.06
tblVehicleEF	OBUS	1.0200e-003	8.6709e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3100e-004	1.0148e-004
tblVehicleEF	OBUS	7.7900e-004	0.03
tblVehicleEF	OBUS	0.01	8.9138e-003
tblVehicleEF	OBUS	0.06	0.05

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleEF	OBUS	3.9500e-004	0.00
tblVehicleEF	OBUS	0.07	0.05
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	0.08	0.06
tblVehicleEF	SBUS	0.08	0.09
tblVehicleEF	SBUS	0.01	0.09
tblVehicleEF	SBUS	8.1020e-003	7.9979e-003
tblVehicleEF	SBUS	2.98	2.07
tblVehicleEF	SBUS	1.00	1.81
tblVehicleEF	SBUS	1.26	1.18
tblVehicleEF	SBUS	360.00	206.71
tblVehicleEF	SBUS	1,028.45	1,021.11
tblVehicleEF	SBUS	6.23	5.49
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.12	0.12
tblVehicleEF	SBUS	5.9500e-003	4.8573e-003
tblVehicleEF	SBUS	3.52	1.58
tblVehicleEF	SBUS	5.24	3.32
tblVehicleEF	SBUS	0.62	0.44
tblVehicleEF	SBUS	4.5830e-003	1.8679e-003
tblVehicleEF	SBUS	0.74	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	9.6000e-005	7.3044e-005
tblVehicleEF	SBUS	4.3850e-003	1.7861e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.5990e-003	2.6003e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	8.9000e-005	6.7161e-005

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tblVehicleEF	SBUS	5.6200e-004	0.05
tblVehicleEF	SBUS	7.2750e-003	0.01
tblVehicleEF	SBUS	0.36	0.24
tblVehicleEF	SBUS	2.5600e-004	0.00
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.05	0.05
tblVehicleEF	SBUS	3.4360e-003	1.8974e-003
tblVehicleEF	SBUS	9.8650e-003	9.5734e-003
tblVehicleEF	SBUS	6.2000e-005	5.4266e-005
tblVehicleEF	SBUS	5.6200e-004	0.05
tblVehicleEF	SBUS	7.2750e-003	0.01
tblVehicleEF	SBUS	0.51	0.38
tblVehicleEF	SBUS	2.5600e-004	0.00
tblVehicleEF	SBUS	0.14	0.20
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.05	0.05
tblVehicleEF	UBUS	0.84	0.16
tblVehicleEF	UBUS	0.01	7.7749e-003
tblVehicleEF	UBUS	5.26	2.06
tblVehicleEF	UBUS	0.82	0.83
tblVehicleEF	UBUS	1,802.99	1,395.58
tblVehicleEF	UBUS	9.26	5.76
tblVehicleEF	UBUS	0.28	0.20
tblVehicleEF	UBUS	7.0140e-003	0.01
tblVehicleEF	UBUS	3.45	2.45
tblVehicleEF	UBUS	0.09	0.08
tblVehicleEF	UBUS	0.08	0.11
tblVehicleEF	UBUS	0.03	0.03

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tblVehicleEF	UBUS	7.7550e-003	6.8419e-003
tblVehicleEF	UBUS	5.0000e-005	1.5333e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	7.8010e-003	7.3406e-003
tblVehicleEF	UBUS	7.4180e-003	6.5413e-003
tblVehicleEF	UBUS	4.6000e-005	1.4098e-005
tblVehicleEF	UBUS	3.7600e-004	0.02
tblVehicleEF	UBUS	6.3660e-003	8.2353e-003
tblVehicleEF	UBUS	2.8300e-004	0.00
tblVehicleEF	UBUS	0.01	0.14
tblVehicleEF	UBUS	2.2390e-003	0.01
tblVehicleEF	UBUS	0.06	0.03
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	9.2000e-005	5.6929e-005
tblVehicleEF	UBUS	3.7600e-004	0.02
tblVehicleEF	UBUS	6.3660e-003	8.2353e-003
tblVehicleEF	UBUS	2.8300e-004	0.00
tblVehicleEF	UBUS	0.86	0.31
tblVehicleEF	UBUS	2.2390e-003	0.01
tblVehicleEF	UBUS	0.06	0.03
tblVehicleTrips	ST_TR	1.74	68.09
tblVehicleTrips	SU_TR	1.74	68.09
tblVehicleTrips	WD_TR	47.62	47.60
tblVehicleTrips	WD_TR	1.74	68.09

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Date: 3/11/2022 10:21 AM

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
Year	tons/yr										MT/yr					
2022	3.6600e-003	0.0322	0.0384	6.0000e-005	3.9000e-004	1.6900e-003	2.0800e-003	1.0000e-004	1.6100e-003	1.7200e-003	0.0000	5.5090	5.5090	9.7000e-004	1.0000e-005	5.5356
Maximum	**3.6600e-003**	**0.0322**	**0.0384**	**6.0000e-005**	**3.9000e-004**	**1.6900e-003**	**2.0800e-003**	**1.0000e-004**	**1.6100e-003**	**1.7200e-003**	**0.0000**	**5.5090**	**5.5090**	**9.7000e-004**	**1.0000e-005**	**5.5356**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	3.6600e-003	0.0322	0.0384	6.0000e-005	3.9000e-004	1.6900e-003	2.0800e-003	1.0000e-004	1.6100e-003	1.7200e-003	0.0000	5.5090	5.5090	9.7000e-004	1.0000e-005	5.5356
Maximum	**3.6600e-003**	**0.0322**	**0.0384**	**6.0000e-005**	**3.9000e-004**	**1.6900e-003**	**2.0800e-003**	**1.0000e-004**	**1.6100e-003**	**1.7200e-003**	**0.0000**	**5.5090**	**5.5090**	**9.7000e-004**	**1.0000e-005**	**5.5356**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.0307	0.0307
		Highest	0.0307	0.0307

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2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1153	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Energy	1.8700e-003	0.0170	0.0143	1.0000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	18.4982	18.4982	3.5000e-004	3.4000e-004	18.6082
Mobile	0.4559	0.4668	3.3375	8.4200e-003	0.6999	6.0500e-003	0.7060	0.1746	5.6400e-003	0.1802	0.0000	778.7586	778.7586	0.0427	0.0385	791.3029
Waste						0.0000	0.0000		0.0000	0.0000	6.3435	0.0000	6.3435	0.3749	0.0000	15.7157
Water						0.0000	0.0000		0.0000	0.0000	0.9281	0.0000	0.9281	0.0953	2.2500e-003	3.9821
Total	**0.5731**	**0.4838**	**3.3520**	**8.5200e-003**	**0.6999**	**7.3400e-003**	**0.7073**	**0.1746**	**6.9300e-003**	**0.1815**	**7.2716**	**797.2573**	**804.5289**	**0.5132**	**0.0411**	**829.6094**

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	0.1153	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Energy	1.8700e-003	0.0170	0.0143	1.0000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	18.4982	18.4982	3.5000e-004	3.4000e-004	18.6082
Mobile	0.4559	0.4668	3.3375	8.4200e-003	0.6999	6.0500e-003	0.7060	0.1746	5.6400e-003	0.1802	0.0000	778.7586	778.7586	0.0427	0.0385	791.3029

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Waste						0.0000	0.0000		0.0000	0.0000	6.3435	0.0000	6.3435	0.3749	0.0000	15.7157
Water						0.0000	0.0000		0.0000	0.0000	0.9281	0.0000	0.9281	0.0953	2.2500e-003	3.9821
Total	**0.5731**	**0.4838**	**3.3520**	**8.5200e-003**	**0.6999**	**7.3400e-003**	**0.7073**	**0.1746**	**6.9300e-003**	**0.1815**	**7.2716**	**797.2573**	**804.5289**	**0.5132**	**0.0411**	**829.6094**

	ROG	NOx	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	1/3/2022	1/14/2022	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

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	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**		**1.6900e-003**	**1.6900e-003**		**1.6100e-003**	**1.6100e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

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-004	8.0000e-005	1.0400e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3022	0.3022	1.0000e-005	1.0000e-005	0.3048

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Total	**1.1000e-004**	**8.0000e-005**	**1.0400e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3022**	**0.3022**	**1.0000e-005**	**1.0000e-005**	**0.3048**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**		**1.6900e-003**	**1.6900e-003**		**1.6100e-003**	**1.6100e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

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-004	8.0000e-005	1.0400e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3022	0.3022	1.0000e-005	1.0000e-005	0.3048
Total	**1.1000e-004**	**8.0000e-005**	**1.0400e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3022**	**0.3022**	**1.0000e-005**	**1.0000e-005**	**0.3048**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4559	0.4668	3.3375	8.4200e-003	0.6999	6.0500e-003	0.7060	0.1746	5.6400e-003	0.1802	0.0000	778.7586	778.7586	0.0427	0.0385	791.3029
Unmitigated	0.4559	0.4668	3.3375	8.4200e-003	0.6999	6.0500e-003	0.7060	0.1746	5.6400e-003	0.1802	0.0000	778.7586	778.7586	0.0427	0.0385	791.3029

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	783.02	102.32	96.07	692,023	692,023
General Light Industry	13.89	5.57	14.00	37,125	37,125
Unrefrigerated Warehouse-No Rail	463.01	463.01	463.01	1,351,769	1,351,769
Total	1,259.92	570.90	573.08	2,080,916	2,080,916

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
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14

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General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Unrefrigerated Warehouse-No Rai	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Day-Care Center	0.491086	0.041086	0.253609	0.146583	0.030190	0.006225	0.012264	0.007177	0.005044	0.001880	0.003892	0.000393	0.000572
General Light Industry	0.491086	0.041086	0.253609	0.146583	0.030190	0.006225	0.012264	0.007177	0.005044	0.001880	0.003892	0.000393	0.000572
Unrefrigerated Warehouse-No Rail	0.491086	0.041086	0.253609	0.146583	0.030190	0.006225	0.012264	0.007177	0.005044	0.001880	0.003892	0.000393	0.000572

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	1.8700e-003	0.0170	0.0143	1.0000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	18.4982	18.4982	3.5000e-004	3.4000e-004	18.6082
NaturalGas Unmitigated	1.8700e-003	0.0170	0.0143	1.0000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	18.4982	18.4982	3.5000e-004	3.4000e-004	18.6082

5.2 Energy by Land Use - NaturalGas

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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					
Day-Care Center	268464	1.4500e-003	0.0132	0.0111	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	14.3263	14.3263	2.7000e-004	2.6000e-004	14.4114
General Light Industry	68796	3.7000e-004	3.3700e-003	2.8300e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.6712	3.6712	7.0000e-005	7.0000e-005	3.6930
Unrefrigerated Warehouse-No	9384	5.0000e-005	4.6000e-004	3.9000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.5008	0.5008	1.0000e-005	1.0000e-005	0.5037
Total		**1.8700e-003**	**0.0170**	**0.0143**	**1.0000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**18.4983**	**18.4983**	**3.5000e-004**	**3.4000e-004**	**18.6082**

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					
Day-Care Center	268464	1.4500e-003	0.0132	0.0111	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	14.3263	14.3263	2.7000e-004	2.6000e-004	14.4114
General Light Industry	68796	3.7000e-004	3.3700e-003	2.8300e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.6712	3.6712	7.0000e-005	7.0000e-005	3.6930
Unrefrigerated Warehouse-No	9384	5.0000e-005	4.6000e-004	3.9000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.5008	0.5008	1.0000e-005	1.0000e-005	0.5037
Total		**1.8700e-003**	**0.0170**	**0.0143**	**1.0000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**18.4983**	**18.4983**	**3.5000e-004**	**3.4000e-004**	**18.6082**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	71886.5	0.0000	0.0000	0.0000	0.0000
General Light Industry	20804	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	25568	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	71886.5	0.0000	0.0000	0.0000	0.0000
General Light Industry	20804	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	25568	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	tons/yr										MT/yr					
Mitigated	0.1153	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Unmitigated	0.1153	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0136					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1017					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Total	**0.1153**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.7000e-004**	**4.7000e-004**	**0.0000**	**0.0000**	**5.0000e-004**

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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	0.0136					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1017					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Total	**0.1153**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.7000e-004**	**4.7000e-004**	**0.0000**	**0.0000**	**5.0000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.9281	0.0953	2.2500e-003	3.9821

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated	0.9281	0.0953	2.2500e-003	3.9821

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.705533 / 1.81423	0.2238	0.0230	5.4000e-004	0.9603
General Light Industry	0.6475 / 0	0.2054	0.0211	5.0000e-004	0.8814
Unrefrigerated Warehouse-No Rail	1.5725 / 0	0.4989	0.0512	1.2100e-003	2.1404
Total		**0.9281**	**0.0953**	**2.2500e-003**	**3.9821**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.705533 / 1.81423	0.2238	0.0230	5.4000e-004	0.9603
General Light Industry	0.6475 / 0	0.2054	0.0211	5.0000e-004	0.8814

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unrefrigerated Warehouse-No Rail	1.5725 / 0	0.4989	0.0512	1.2100e-003	2.1404
Total		**0.9281**	**0.0953**	**2.2500e-003**	**3.9821**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.3435	0.3749	0.0000	15.7157
Unmitigated	6.3435	0.3749	0.0000	15.7157

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	21.39	4.3420	0.2566	0.0000	10.7571

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

General Light Industry	3.47	0.7044	0.0416	0.0000	1.7451
Unrefrigerated Warehouse-No	6.39	1.2971	0.0767	0.0000	3.2135
Total		**6.3435**	**0.3749**	**0.0000**	**15.7157**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	21.39	4.3420	0.2566	0.0000	10.7571
General Light Industry	3.47	0.7044	0.0416	0.0000	1.7451
Unrefrigerated Warehouse-No	6.39	1.2971	0.0767	0.0000	3.2135
Total		**6.3435**	**0.3749**	**0.0000**	**15.7157**

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 3: EMFAC2021 Emissions and CARB SAFE Off-Model Adjustment Factors

Summary of Construction Traffic Emissions (EMFAC2021)

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
					Tons							*Metric Tons*		
Criteria Pollutants														
2022	0.0690	1.0011	1.0140	0.0058	0.2085	0.0469	0.2554	0.0314	0.0199	0.0513	575.7908	0.0662	0.0744	599.6129
2023	0.0679	0.9671	1.0722	0.0063	0.2320	0.0513	0.2832	0.0349	0.0215	0.0564	630.2571	0.0720	0.0813	656.2950
2024+2025	0.0670	0.9756	1.0882	0.0066	0.2466	0.0540	0.3006	0.0371	0.0224	0.0595	657.8009	0.0736	0.0848	684.9152
Toxic Air Contaminants (1.0 Mile Trip Length)														
2022	0.0501	0.2117	0.3090	0.0006	0.0188	0.0040	0.0228	0.0028	0.0018	0.0046	63.7225	0.0114	0.0092	66.7378
2023	0.0518	0.2214	0.3297	0.0007	0.0209	0.0044	0.0253	0.0031	0.0019	0.0051	69.5899	0.0126	0.0100	72.8752
2024+2025	0.0515	0.2293	0.3339	0.0007	0.0222	0.0046	0.0268	0.0033	0.0020	0.0053	72.6727	0.0129	0.0104	76.0872

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	15	0	300	0	546	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3240	0	10920
Below Grade Garage Excavation	15	0	975	0	15125	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	10530	0	302500
Below Grade Foundations	5	0	250	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	2700	0	0
Garage Concrete	234	105	20358	9135	8080	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	219866.4	66685.5	161600
Phase 1 - Building Construction North	234	105	42120	18900	380	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	454896	137970	7600
Phase 1 - Site	20	0	1600	0	26	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	17280	0	520
Phase 2 - Building Construction South	234	105	46800	21000	590	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	505440	153300	11800
Phase 2 - Site	20	0	1600	0	24	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	17280	0	480

Number of Days Per Year					
2022	2022/02/07	12/31/22	328	235	
2023	1/1/23	12/31/23	365	261	
2024 + 2025	1/1/24	2025/01/22	388	278	
			1081	**773**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	2022/02/07	2022/03/04	5	20
Below Grade Garage Excavation	2022/03/08	2022/06/06	5	65
Below Grade Foundations	2022/05/24	2022/08/01	5	50
Garage Concrete	2022/06/23	2022/10/21	5	87
Phase 1 - Building Construction North	2022/10/28	2023/07/06	5	180
Phase 1 - Site	2023/07/24	2023/11/10	5	80
Phase 2 - Building Construction South	2023/12/15	2024/09/19	5	200
Phase 2 - Site	2024/10/03	2025/01/22	5	80

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: San Mateo
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM10_RUI	PM10_IDLE	PM10_STR	PM10_PM	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOA	TOG_RUNLO	TOG_DIURN	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
San Mateo	2022	HHDT	Aggregate	Aggregate	Gasoline	4.26179	607.5295	607.5295	0	85.26989	4.217209	0	0.00281	0.00146	0	0.000935	0.005	0.031258	0.001588	0	0.001017	0.02	0.089308	2276.876	0	54.98009	0.116906	0	0.000119	0.151563	0	0.000135	0.60109	0	0.000644	0.048478	0.400153	3.469663	0.877108	0	0.000705	0.048478	0.400153	3.469663	0.045	33.53367	0	6.080621	0.022509	0	0.000544
San Mateo	2022	HHDT	Aggregate	Aggregate	Diesel	1289.917	118758.5	118758.5	0	13886.59	3.367467	50.13908	2.567805	0.026697	0.041054	0	0.008861	0.031515	0.027904	0.04291	0	0.03444	0.090042	1868.7	8522.619	0	0.001942	0.155104	0	0.294414	1.342742	0	0.041821	3.339355	0	0	0	0	0.04761	3.801601	0	0	0	0	0.186789	0.159005	43.82276	0	0.017695	0.080704	0
San Mateo	2022	HHDT	Aggregate	Natural Ga		144.1612	9768.638	9768.638	0	950.7524	1.845139	10.30429	0	0.002051	0.011217	0	0.009	0.058943	0.00223	0.012199	0	0.036	0.168408	1557.751	8370.006	0	3.666383	25.60841	0	0.317558	1.706281	0	0.087249	0.429393	0	0	0	0	3.781534	26.2076	0	0	0	0	0.734123	18.35301	67.58246	0	0	0	0
San Mateo	2022	LDA	Aggregate	Aggregate	Gasoline	240666.4	7995565	7995565	0	1130997	0.047702	0	0.275282	0.001241	0	0.002105	0.002	0.002347	0.00135	0	0.002289	0.008	0.006707	282.9533	0	72.26541	0.002546	0	0.077367	0.004869	0	0.033486	0.010142	0	0.368004	0.090257	0.23026	1.365279	0.014797	0	0.402916	0.090257	0.23026	1.365279	0.034582	0.726065	0	3.617602	0.002797	0	0.000714
San Mateo	2022	LDA	Aggregate	Aggregate	Diesel	888.5395	22501.88	22501.88	0	3790.786	0.240012	0	0	0.015881	0	0	0.002	0.002391	0.016599	0	0	0.008	0.006831	236.6875	0	0	0.001267	0	0	0.03729	0	0	0.02727	0	0	0	0	0	0.031045	0	0	0	0	0.0031	0.330004	0	0	0.002243	0	0
San Mateo	2022	LDA	Aggregate	Electricity		14591.4	568258.7	0	568258.7	72996.66	0	0	0	0	0	0	0.002	0.001529	0	0	0	0.008	0.004368	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2022	LDA	Aggregate	Aggregate	Plug-in Hyb	6271.758	249381.9	127562.4	121819.5	25933.72	0.003286	0	0.117199	0.000663	0	0.002168	0.002	0.001311	0.000722	0	0.002358	0.008	0.003747	137.9916	0	66.6249	0.00043	0	0.042806	0.00058	0	0.020671	0.001381	0	0.176635	0.036142	0.032302	0.39726	0.002015	0	0.193393	0.036142	0.032302	0.39726	0.020013	0.205923	0	1.37819	0.001364	0	0.000659
San Mateo	2022	LDT1	Aggregate	Aggregate	Gasoline	24136.47	736196.1	736196.1	0	109571	0.134919	0	0.395074	0.001791	0	0.002798	0.002	0.002838	0.001948	0	0.003043	0.008	0.008107	332.0233	0	88.05436	0.00631	0	0.109218	0.009543	0	0.038745	0.028415	0	0.569782	0.157522	0.456069	2.467901	0.034599	1.368916	0	5.624448	0.003282	0	0.000871
San Mateo	2022	LDT1	Aggregate	Aggregate	Diesel	8.510916	119.4982	119.4982	0	25.11455	1.690269	0	0	0.241464	0	0	0.002	0.00334	0.252382	0	0	0.008	0.009543	418.5155	0	0	0.014886	0	0	0.065937	0	0	0.320488	0	0	0	0	0	0.364855	0	0	0	0	0.0031	1.709562	0	0	0.003966	0	0
San Mateo	2022	LDT1	Aggregate	Aggregate	Electricity	61.93893	2054.9	0	2054.9	294.187	0	0	0	0	0	0	0.002	0.001538	0	0	0	0.008	0.004394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2022	LDT1	Aggregate	Aggregate	Plug-in Hyb	19.40692	849.1339	406.2744	442.8594	80.24761	0.003074	0	0.117199	0.000413	0	0.001456	0.002	0.001322	0.000449	0	0.001583	0.008	0.003777	129.0739	0	73.49717	0.000404	0	0.042967	0.000546	0	0.020882	0.001292	0	0.176635	0.024905	0.022892	0.287748	0.001885	0	0.193393	0.024905	0.022892	0.287748	0.020095	0.192615	0	1.37819	0.001276	0	0.000727
San Mateo	2022	LDT2	Aggregate	Aggregate	Gasoline	128775.8	4489208	4489208	0	617258.5	0.062575	0	0.324659	0.001272	0	0.002033	0.002	0.002716	0.001384	0	0.002212	0.008	0.007761	346.2249	0	88.33688	0.002639	0	0.081429	0.005428	0	0.036476	0.010335	0	0.378106	0.068121	0.172205	1.07279	0.015078	0	0.413978	0.068121	0.172205	1.07279	0.03686	0.748119	0	3.725451	0.003423	0	0.000873
San Mateo	2022	LDT2	Aggregate	Aggregate	Diesel	498.9179	17455.1	17455.1	0	2406.111	0.047726	0	0	0.005147	0	0	0.002	0.002738	0.00538	0	0	0.008	0.007822	319.776	0	0	0.000624	0	0	0.050381	0	0	0.013436	0	0	0	0	0	0.015295	0	0	0	0	0.0031	0.124515	0	0	0.00303	0	0
San Mateo	2022	LDT2	Aggregate	Aggregate	Electricity	502.691	16536.35	0	16536.35	2591.33	0	0	0	0	0	0	0.002	0.001523	0	0	0	0.008	0.004353	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2022	LDT2	Aggregate	Aggregate	Plug-in Hyb	938.5352	39780.13	19647.25	20132.88	3880.843	0.003173	0	0.117199	0.000533	0	0.001824	0.002	0.001316	0.00058	0	0.001984	0.008	0.003761	133.2387	0	79.72461	0.000417	0	0.042967	0.000564	0	0.02082	0.001334	0	0.176635	0.026237	0.024762	0.312901	0.001946	0	0.193393	0.026237	0.024762	0.312901	0.020712	0.19883	0	1.37819	0.001317	0	0.000788
San Mateo	2022	LHDT1	Aggregate	Aggregate	Gasoline	10003.64	379521.5	379521.5	0	149039.3	0.147855	0.036625	0.627998	0.001475	0	0.00028	0.002	0.0273	0.001604	0	0.000304	0.008	0.078	873.9961	119.3318	27.2104	0.00734	0.115266	0.0324	0.008388	0.003078	0.051835	0.036131	0.419759	0.159081	0.039876	0.21247	2.143205	0.052722	0.612512	0.174174	0.039876	0.21247	2.143205	0.044922	1.060707	3.758503	3.2802	0.00864	0.00118	0.000269
San Mateo	2022	LHDT1	Aggregate	Diesel		4125.911	163656.9	163656.9	0	51898.77	1.504213	1.931831	0	0.031512	0.027157	0	0.003	0.0273	0.032937	0.028385	0	0.012	0.078	637.8215	131.7515	0	0.007485	0.005098	0	0.100489	0.020757	0	0.161141	0.10976	0	0	0	0	0.183448	0.124954	0	0	0	0	0.175401	0.431298	0.909745	0	0.006044	0.001248	0
San Mateo	2022	LHDT2	Aggregate	Aggregate	Gasoline	1166.848	41928.69	41928.69	0	17384.3	0.172444	0.036335	0.63879	0.001438	0	0.000256	0.002	0.03185	0.001563	0	0.000279	0.008	0.091	987.4952	138.4793	25.88997	0.006917	0.113246	0.032524	0.010039	0.002938	0.050567	0.032554	0.416435	0.161154	0.042451	0.223651	2.256912	0.047503	0.60766	0.176444	0.042451	0.223651	2.256912	0.044984	0.96909	3.758162	3.27211	0.009762	0.001369	0.000256
San Mateo	2022	LHDT2	Aggregate	Aggregate	Diesel	1718.365	70077.77	70077.77	0	21614.87	1.063364	1.845339	0	0.026451	0.026962	0	0.003	0.03185	0.027647	0.028181	0	0.012	0.091	760.4369	209.0317	0	0.0066	0.005098	0	0.119807	0.032933	0	0.142091	0.10976	0	0	0	0	0.161761	0.124954	0	0	0	0	0.190222	0.33983	0.909745	0	0.007206	0.001981	0
San Mateo	2022	MCY	Aggregate	Aggregate	Gasoline	11775.11	70029.62	70029.62	0	23550.22	0.563376	0	0.148145	0.00188	0	0.003836	0.001	0.0042	0.002007	0	0.00407	0.004	0.012	188.692	0	50.07102	0.159449	0	0.191389	0.038859	0	0.008671	1.054922	0	1.43267	3.559039	3.722371	3.591267	1.259821	0	1.557156	3.559039	3.722371	3.591267	0.008767	12.33015	0	7.963377	0.001865	0	0.000495
San Mateo	2022	MDV	Aggregate	Aggregate	Gasoline	72399.54	2561532	2561532	0	344969.9	0.082284	0	0.405736	0.001302	0	0.002201	0.002	0.002736	0.001416	0	0.002394	0.008	0.007817	417.1287	0	107.0056	0.003285	0	0.097944	0.006421	0	0.03969	0.013708	0	0.489899	0.078175	0.208676	1.264413	0.019977	0	0.536373	0.078175	0.208676	1.264413	0.037279	0.822259	0	4.057961	0.004124	0	0.001058
San Mateo	2022	MDV	Aggregate	Aggregate	Diesel	1048.144	37479.46	37479.46	0	5036.896	0.047538	0	0	0.004777	0	0	0.002	0.002777	0.004993	0	0	0.008	0.007934	415.9683	0	0	0.000486	0	0	0.065536	0	0	0.010456	0	0	0	0	0	0.011904	0	0	0	0	0.0031	0.180998	0	0	0.003942	0	0
San Mateo	2022	MDV	Aggregate	Electricity		497.8274	16375.41	0	16375.41	2565.598	0	0	0	0	0	0	0.002	0.001523	0	0	0	0.008	0.004351	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2022	MDV	Aggregate	Aggregate	Plug-in Hyb	517.8537	21966.08	11106.12	10859.96	2141.325	0.003248	0	0.117199	0.000662	0	0.002216	0.002	0.001313	0.00072	0	0.00241	0.008	0.003752	136.3969	0	99.02064	0.000428	0	0.043094	0.000581	0	0.020938	0.001365	0	0.176635	0.028658	0.027868	0.344841	0.001992	0	0.193393	0.028658	0.027868	0.344841	0.021235	0.203543	0	1.37819	0.001348	0	0.000979
San Mateo	2022	MH	Aggregate	Aggregate	Gasoline	751.6488	7043.926	7043.926	0	75.19494	0.465552	0	0.403779	0.001863	0	0.00047	0.003	0.015756	0.002026	0	0.000512	0.012	0.045017	1948.174	0	32.24518	0.017921	0	0.039048	0.027477	0	0.041219	0.080748	0	0.17064	12.70927	0.296989	4.339134	0.117828	0	0.186829	12.70927	0.296989	4.339134	0.044744	2.072946	0	3.847624	0.01926	0	0.000319
San Mateo	2022	MH	Aggregate	Aggregate	Diesel	300.3894	3250.689	3250.689	0	30.03894	3.401996	0	0	0.063019	0	0	0.004	0.015675	0.063868	0	0	0.016	0.044785	1084.767	0	0	0.00458	0	0	0.170906	0	0	0.09861	0	0	0	0	0	0.112261	0	0	0	0	0.179676	0.315592	0	0	0.010279	0	0
San Mateo	2022	MHDT	Aggregate	Aggregate	Gasoline	756.5401	44483.7	44483.7	0	15136.85	0.604094	0.088245	0.46581	0.00141	0	0.000575	0.003	0.015756	0.001534	0	0.000625	0.012	0.045017	1795.462	537.4412	47.64422	0.019663	0.256996	0.051354	0.028235	0.007106	0.034029	0.098372	1.009116	0.288081	0.038151	0.314095	2.937981	0.143545	1.4725	0.315413	0.038151	0.314095	2.937981	0.044954	2.080066	15.07471	6.396341	0.01775	0.005313	0.000471
San Mateo	2022	MHDT	Aggregate	Diesel		4156.051	174304	174304	0	49995.69	1.853334	15.89701	1.436117	0.023182	0.047988	0	0.003	0.015983	0.02423	0.050158	0	0.012	0.045666	1163.775	2327.752	0	0.002813	0.013999	0	0.183353	0.366738	0	0.060556	0.301404	0	0	0	0	0.068939	0.343126	0	0	0	0	0.193605	0.190383	7.265304	0	0.01102	0.022042	0
San Mateo	2022	MHDT	Aggregate	Natural Ga		40.6324	1873.257	1873.257	0	381.7521	0.153851	6.514328	0	0.001104	0.016957	0	0.003	0.016076	0.001201	0.018442	0	0.012	0.045932	1016.708	5323.016	0	0.747144	17.79445	0	0.207263	1.085132	0	0.010675	0.254248	0	0	0	0	0.762515	18.16055	0	0	0	0	1.06	3.046292	32.12184	0	0	0	0
San Mateo	2022	OBUS	Aggregate	Aggregate	Gasoline	256.1924	15869.04	15869.04	0	5125.898	0.334451	0.065049	0.372974	0.000967	0	0.000281	0.003	0.01568	0.001052	0	0.000306	0.012	0.044799	1762.688	376.5742	30.5752	0.010394	0.20597	0.033776	0.01844	0.005899	0.032179	0.045248	0.746076	0.166832	0.02655	0.111811	1.875172	0.071862	1.088672	0.18266	0.02655	0.111811	1.875172	0.044917	1.079968	5.773479	3.517583	0.017426	0.003723	0.000302
San Mateo	2022	OBUS	Aggregate	Aggregate	Diesel	1024.18	74221.67	74221.67	0	10035.19	1.072703	6.342591	1.429669	0.010592	0.00365	0	0.003	0.01742	0.011071	0.003815	0	0.012	0.04977	1257.365	1266.668	0	0.001405	0.014292	0	0.198098	0.199564	0	0.030244	0.307698	0	0	0	0	0.03443	0.350291	0	0	0	0	0.210134	0.116655	5.413261	0	0.011906	0.011995	0
San Mateo	2022	OBUS	Aggregate	Aggregate	Natural Ga	11.96887	654.3713	654.3713	0	106.5229	0.293719	1.58105	0	0.000566	0.002858	0	0.003	0.016148	0.000615	0.003109	0	0.012	0.046137	1069.812	1202.184	0	0.733013	4.775652	0	0.218088	0.245073	0	0.010473	0.068235	0	0	0	0	0.748094	4.873903	0	0	0	0	1.06	3.101343	5.006328	0	0	0	0
San Mateo	2022	SBUS	Aggregate	Aggregate	Gasoline	57.57285	3267.931	3267.931	0	230.2914	0.981493	0.921357	0.655387	0.001299	0	0.000777	0.002	0.015721	0.001412	0	0.000845	0.008	0.044917	807.8108	2570.697	63.52492	0.024786	2.43655	0.092559	0.045477	0.081943	0.056213	0.121107	10.56494	0.538292	0.15493	0.449507	2.231691	0.17672	15.41634	0.589362	0.15493	0.449507	2.231691	0.045	3.134679	81.77802	13.70908	0.007986	0.025414	0.000628
San Mateo	2022	SBUS	Aggregate	Diesel		168.1521	3799.171	3799.171	0	2434.843	5.308039	24.50088	0.415745	0.025509	0.027927	0	0.003	0.015721	0.026662	0.02919	0	0.012	0.044917	1155.182	2256.975	0	0.003351	0.008427	0	0.181999	0.355587	0	0.072141	0.18143	0	0	0	0	0.082127	0.206545	0	0	0	0	0.128799	0.214547	4.164591	0	0.010939	0.021372	0
San Mateo	2022	SBUS	Aggregate	Natural Ga		5.747464	147.755	147.755	0	83.22328	0.580038	5.278861	0	0.003378	0.011167	0	0.003	0.015721	0.003674	0.012145	0	0.012	0.044917	1270.028	4071.06	0	3.473989	15.35501	0	0.258904	0.829912	0	0.049636	0.219393	0	0	0	0	3.545461	15.67091	0	0	0	0	1.06	11.82462	20.31851	0	0	0	0
San Mateo	2022	UBUS	Aggregate	Aggregate	Gasoline	61.08139	4153.342	4153.342	0	244.3256	0.052732	0	0.593554	0.000924	0	0.000101	0.002073	0.032333	0.001005	0	0.000011	0.00829	0.092379	1026.004	0	41.36564	0.002283	0	0.05585	0.006009	0	0.07764	0.006738	0	0.216361	0.059157	0.09606	0.592841	0.009832	0	0.236888	0.059157	0.09606	0.592841	0.045	0.562776	0	5.939286	0.010143	0	0.000409
San Mateo	2022	UBUS	Aggregate	Diesel		341.0475	28477.87	28477.87	0	1364.19	2.903167	0	0	0.007622	0	0	0.007913	0.0385	0.007966	0	0	0.031652	0.11	1452.079	0	0	0.00732	0	0	0.228776	0	0	0.157595	0	0	0	0	0	0.179409	0	0	0	0	0.12243	0.193248	0	0	0.013759	0	0
San Mateo	2022	UBUS	Aggregate	Electricity		2.018703	15.3193	0	15.3193	8.074811	0	0	0	0	0	0	0.009	0.01925	0	0	0	0.036	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2022	UBUS	Aggregate	Natural Ga		34.62042	1174.257	1174.257	0	138.4817	0.063543	0	0	0.000296	0	0	0.008807	0.0385	0.00031	0	0	0.035229	0.11	1350.881	0	0	4.451808	0	0	0.275386	0	0	0.063608	0	0	0	0	0	4.543397	0	0	0	0	0.97	52.64109	0	0	0	0	0

CalEEMod EMFAC2021 Emission Factors Input

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.005843	0.003613	0.014892	0.260799534	0.008159	0	0	0.08628	0
A	CH4_RUNEX	0.002319	0.006287	0.002602	0.003201	0.007384	0.006718	0.012528	0.279686949	0.008252	0.161010459	0.159449	0.085895	0.013708
A	CH4_STREX	0.071825	0.108853	0.080541	0.095514	0.024032	0.014498	0.011865	6.77534E-07	0.01134	0.007774918	0.191389	0.007998	0.027902
A	CO_IDLEX	0	0	0	0	0.205796	0.152528	0.654892	4.440944093	0.463936	0	0	2.073163	0
A	CO_RUNEX	0.663679	1.363814	0.738234	0.802887	0.87107	0.575388	0.595575	1.692340791	0.306637	2.059527265	12.33015	1.812081	1.518033
A	CO_STREX	3.345366	5.605019	3.681168	3.95481	2.432982	1.458578	1.477853	0.034745524	1.180982	0.826814725	7.963377	1.184587	2.749322
A	CO2_NBIO_IDLEX	0	0	0	0	8.646179	13.35354	157.1739	817.5579223	92.23189	0	0	206.7122	0
A	CO2_NBIO_RUNEX	260.5462	330.8812	343.0122	412.1841	802.8379	845.4343	1289.87	1847.097548	1344.381	1395.583774	188.692	1021.106	1675.54
A	CO2_NBIO_STREX	67.64899	87.78807	87.57845	104.6639	20.18243	11.54073	11.00803	0.314163972	10.26522	5.758558013	50.07102	5.489121	23.04082
A	NOX_IDLEX	0	0	0	0	0.04149	0.082396	1.013523	4.433588742	0.427804	0	0	1.577129	0
A	NOX_RUNEX	0.04387	0.134644	0.061774	0.080621	0.556519	0.729856	1.587068	3.256305124	0.937984	2.453214755	0.563376	3.319508	1.392781
A	NOX_STREX	0.254825	0.393724	0.320782	0.395298	0.465797	0.284748	1.203563	2.389547531	1.064922	0.082629307	0.148145	0.436452	0.288521
A	PM10_IDLEX	0	0	0	0	0.000583	0.001242	0.003193	0.00382705	0.000258	0	0	0.001868	0
A	PM10_PMBW	0.006473	0.008092	0.007714	0.007763	0.078	0.091	0.045537	0.095966343	0.048875	0.108503795	0.012	0.045856	0.044944
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009205	0.010503	0.012	0.034489957	0.012	0.029362212	0.004	0.010401	0.013263
A	PM10_RUNEX	0.001284	0.001981	0.001387	0.001452	0.011044	0.017883	0.019459	0.025838358	0.009244	0.006841902	0.002007	0.015063	0.022185
A	PM10_STREX	0.002148	0.003033	0.002192	0.002343	0.000226	0.000124	0.000144	5.80933E-06	0.000103	1.53331E-05	0.00407	7.3E-05	0.000366
A	PM25_IDLEX	0	0	0	0	0.000558	0.001188	0.003055	0.0036571	0.000247	0	0	0.001786	0
A	PM25_PMBW	0.002266	0.002832	0.0027	0.002717	0.0273	0.03185	0.015938	0.03358822	0.017106	0.037976328	0.0042	0.01605	0.01573
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002301	0.002626	0.003	0.008622489	0.003	0.007340553	0.001	0.0026	0.003316
A	PM25_RUNEX	0.001182	0.001823	0.001276	0.001338	0.010525	0.017087	0.018606	0.024714035	0.008837	0.006541322	0.00188	0.014384	0.021174
A	PM25_STREX	0.001975	0.002789	0.002016	0.002154	0.000208	0.000114	0.000133	5.34147E-06	9.43E-05	1.40982E-05	0.003836	6.72E-05	0.000336
A	ROG_DIURN	0.26835	0.541709	0.221107	0.258579	0.106699	0.067526	0.033927	0.000990911	0.031466	0.020632524	3.591267	0.04821	30.99292
A	ROG_HTSK	0.083501	0.156968	0.067318	0.076201	0.029577	0.018923	0.008815	0.000277007	0.008914	0.008235262	3.559039	0.013387	9.081418
A	ROG_IDLEX	0	0	0	0	0.023151	0.017296	0.030931	0.292803386	0.033214	0	0	0.240147	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.009286	0.028352	0.010231	0.013474	0.073796	0.101087	0.067756	0.047888834	0.033424	0.1357341	1.054922	0.095821	0.086389
A	ROG_RUNLS	0.211767	0.454429	0.169917	0.203112	0.157593	0.099695	0.072571	0.00228653	0.037539	0.013372663	3.722371	0.038841	0.212214
A	ROG_STREX	0.341077	0.56784	0.37384	0.477508	0.117993	0.071836	0.06656	3.67766E-06	0.056012	0.030119815	1.43267	0.046513	0.121931
A	SO2_IDLEX	0	0	0	0	8.44E-05	0.000128	0.00146	0.006976097	0.000867	0	0	0.001897	0
A	SO2_RUNEX	0.002576	0.003271	0.003391	0.004072	0.007858	0.008163	0.012283	0.016379507	0.012786	0.012831163	0.001865	0.009573	0.016424
A	SO2_STREX	0.000669	0.000868	0.000866	0.001035	0.0002	0.000114	0.000109	3.10583E-06	0.000101	5.69292E-05	0.000495	5.43E-05	0.000228
A	TOG_DIURN	0.26835	0.541709	0.221107	0.258579	0.106699	0.067526	0.033927	0.000990911	0.031466	0.020632524	0.079785	0.04821	30.99292
A	TOG_HTSK	0.083501	0.156968	0.067318	0.076201	0.029577	0.018923	0.008815	0.000277007	0.008914	0.008235262	3.559039	0.013387	9.081418
A	TOG_IDLEX	0	0	0	0	0.033059	0.023687	0.050034	0.581792813	0.045587	0	0	0.379854	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.013526	0.041328	0.014909	0.019588	0.092109	0.11899	0.089867	0.333972521	0.046122	0.310020775	1.259821	0.199994	0.11607
A	TOG_RUNLS	0.211767	0.454429	0.169917	0.203112	0.157593	0.099695	0.072571	0.00228653	0.037539	0.013372663	3.722371	0.038841	0.212214
A	TOG_STREX	0.373434	0.621711	0.409307	0.522807	0.129188	0.078652	0.072875	4.02657E-06	0.061326	0.032977406	1.557156	0.050926	0.133499
A	N2O_IDLEX	0	0	0	0	0.000579	0.001539	0.02402	0.13255086	0.013678	0	0	0.025995	0
A	N2O_RUNEX	0.004517	0.009516	0.005538	0.007173	0.036138	0.078716	0.152285	0.295493031	0.166825	0.202933551	0.038859	0.124283	0.072767
A	N2O_STREX	0.031132	0.03862	0.036088	0.038726	0.038447	0.022541	0.007862	7.71952E-07	0.010804	0.010808291	0.008671	0.004857	0.029453

CalEEMod EMFAC2021 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.491086	0.041086	0.253609	0.146583	0.03019	0.006225	0.012264	0.007177	0.005044	0.00188	0.003892	0.000393	0.000572

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: San Mateo
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMBW	PM2.5_PMTW	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMBW	PM10_PMTW	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_DIURN	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
San Mateo	2023	HHDT	Aggregate	Aggregate	Gasoline	4.303891	593.3265	593.3265	0	86.11225	4.056089	0	0.0028	0.00142	0	0.000834	0.005	0.031149	0.001544	0	0.000907	0.02	0.088996	2258.184	0	54.48492	0.114491	0	0.000118	0.150249	0	0.000135	0.581376	0	0.000638	0.041838	0.335524	2.939257	0.848342	0	0.000699	0.041838	0.335524	2.939257	0.845	33.28789	0	6.069294	0.022324	0	0.000539
San Mateo	2023	HHDT	Aggregate	Aggregate	Diesel	1295.72	119079.6	119079.6	0	14027.66	2.889862	47.02809	2.876808	0.025432	0.037858	0	0.008609	0.030943	0.026582	0.03957	0	0.034434	0.08841	1843.774	8291.615	0	0.001322	0.156217	0	0.290487	1.306347	0	0.028463	3.363316	0	0	0	0	0.032403	3.828879	0	0	0	0	0	0.032403	46.58006	0	0.017459	0.078517	0	0
San Mateo	2023	HHDT	Aggregate	Aggregate	Electricity	0.738781	40.81187	0	40.81187	9.636589	0	0	0	0	0	0	0	0	0	0	0	0.034663	0.039372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2023	HHDT	Aggregate	Aggregate	Natural Ga	157.5655	10602.72	10602.72	0	1067.368	1.650268	10.1232	0	0.001897	0.012167	0	0	0.009	0.058575	0.002063	0.013232	0	0.036	0.167357	1522.593	8490.533	0	3.343054	25.56751	0	0.310391	1.730851	0	0.076973	0.418135	0	0	0	0	3.445109	26.1537	0	0	0	0	0	0.73711	17.41229	66.41256	0	0	0	0	0
San Mateo	2023	LDA	Aggregate	Aggregate	Gasoline	240378.8	7727537	7727537	0	1128355	0.042338	0	0.260506	0.001198	0	0.002031	0.002	0.002348	0.001303	0	0.002208	0.008	0.006708	278.3785	0	70.81713	0.002267	0	0.072534	0.004517	0	0.032351	0.008874	0	0.341649	0.087062	0.222247	1.324707	0.012948	0	0.374061	0.087062	0.222247	1.324707	0.035408	0.677749	0	3.395649	0.002752	0	0.0007
San Mateo	2023	LDA	Aggregate	Aggregate	Diesel	833.7612	19906.52	19906.52	0	3528.191	0.213764	0	0	0.014362	0	0	0.002	0.002398	0.015012	0	0	0.008	0.006851	234.8149	0	0	0.001164	0	0	0.036995	0	0	0.02507	0	0	0	0	0	0.02854	0	0	0	0	0	0	0.0031	0.317118	0	0	0.002225	0	0
San Mateo	2023	LDA	Aggregate	Aggregate	Electricity	16299	630419.6	0	630419.6	81240.99	0	0	0	0	0	0	0.002	0.001529	0	0	0	0.008	0.00437	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2023	LDA	Aggregate	Aggregate	Plug-in Hyb	6930.414	264587.6	131767.9	132819.8	28657.26	0.003199	0	0.117199	0.000615	0	0.002065	0.002	0.001318	0.000669	0	0.002246	0.008	0.003766	134.3501	0	65.86248	0.000415	0	0.042451	0.000556	0	0.020334	0.001345	0	0.176635	0.03705	0.032896	0.392427	0.001962	0	0.193393	0.03705	0.032896	0.392427	0.019696	0.200492	0	1.37819	0.001328	0	0.000651
San Mateo	2023	LDT1	Aggregate	Aggregate	Gasoline	24557.61	732297.8	732297.8	0	111855.3	0.11638	0	0.364578	0.001649	0	0.002601	0.002	0.002829	0.001794	0	0.002828	0.008	0.008082	326.1114	0	85.73673	0.005448	0	0.099842	0.008499	0	0.037022	0.024289	0	0.513929	0.14557	0.416379	2.294434	0.035435	0	0.562687	0.14557	0.416379	2.294434	0.037022	1.217988	0	5.093009	0.003224	0	0.000848
San Mateo	2023	LDT1	Aggregate	Aggregate	Diesel	7.655601	101.9185	101.9185	0	22.20173	1.676086	0	0	0.239368	0	0	0.002	0.003332	0.250191	0	0	0.008	0.00952	418.3389	0	0	0.014739	0	0	0.065909	0	0	0.317327	0	0	0	0	0	0.361255	0	0	0	0	0	0	0.0031	1.688168	0	0	0.003964	0	0
San Mateo	2023	LDT1	Aggregate	Aggregate	Electricity	74.62331	2574.77	0	2574.77	357.9526	0	0	0	0	0	0	0.002	0.001535	0	0	0	0.008	0.004386	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2023	LDT1	Aggregate	Aggregate	Plug-in Hyb	34.67073	1451.31	668.3078	783.0024	143.3635	0.002958	0	0.117199	0.000383	0	0.001401	0.002	0.001331	0.000416	0	0.001524	0.008	0.003802	124.2265	0	72.42832	0.000385	0	0.042531	0.000515	0	0.020414	0.001243	0	0.176635	0.024383	0.02158	0.274849	0.001814	0	0.193393	0.024383	0.02158	0.274849	0.01934	0.185385	0	1.37819	0.001228	0	0.000716
San Mateo	2023	LDT2	Aggregate	Aggregate	Gasoline	139222.3	4716888	4716888	0	668266.1	0.05408	0	0.29713	0.001207	0	0.001949	0.002	0.002716	0.001313	0	0.002119	0.008	0.007759	339.1094	0	86.14007	0.00237	0	0.075845	0.004959	0	0.034716	0.009113	0	0.347984	0.063629	0.160781	1.007437	0.013297	0	0.380999	0.063629	0.160781	1.007437	0.037748	0.693563	0	3.480515	0.003352	0	0.000852
San Mateo	2023	LDT2	Aggregate	Aggregate	Diesel	541.6894	18280.98	18280.98	0	2609.031	0.042759	0	0	0.004694	0	0	0.002	0.002739	0.004906	0	0	0.008	0.007825	314.2391	0	0	0.000594	0	0	0.049508	0	0	0.012791	0	0	0	0	0	0.014562	0	0	0	0	0	0	0.0031	0.121058	0	0	0.002978	0	0
San Mateo	2023	LDT2	Aggregate	Aggregate	Electricity	855.0521	26877.43	0	26877.43	4389.934	0	0	0	0	0	0	0.002	0.001524	0	0	0	0.008	0.004355	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2023	LDT2	Aggregate	Aggregate	Plug-in Hyb	1293.229	52235.96	24959.1	27276.86	5347.502	0.00307	0	0.117199	0.000478	0	0.001688	0.002	0.001325	0.00052	0	0.001836	0.008	0.003785	128.9014	0	78.74622	0.000399	0	0.042537	0.000535	0	0.02042	0.00129	0	0.176635	0.025663	0.02377	0.299211	0.001883	0	0.193393	0.025663	0.02377	0.299211	0.020047	0.192361	0	1.37819	0.001274	0	0.000778
San Mateo	2023	LHDT1	Aggregate	Aggregate	Gasoline	10572.08	392533.1	392533.1	0	157508.2	0.12528	0.035112	0.59784	0.00142	0	0.000253	0.002	0.0273	0.001545	0	0.000275	0.008	0.078	853.4932	117.883	26.97693	0.006321	0.111177	0.030421	0.00715	0.002997	0.050012	0.03091	0.4025	0.148384	0.036924	0.198922	2.014404	0.045104	0.587327	0.162462	0.036924	0.198922	2.014404	0.044937	0.986439	3.761565	3.318076	0.008438	0.001165	0.000267
San Mateo	2023	LHDT1	Aggregate	Aggregate	Diesel	4577.109	179686.5	179686.5	0	57574.27	1.224717	1.76206	0	0.0273	0.026942	0	0.003	0.0273	0.028534	0.02816	0	0.012	0.078	630.6192	129.0392	0	0.006697	0.005098	0	0.099354	0.02033	0	0.144187	0.10976	0	0	0	0	0.164147	0.124954	0	0	0	0	0	0.184546	0.371953	0.909745	0	0.005975	0.001223	0	0
San Mateo	2023	LHDT2	Aggregate	Aggregate	Gasoline	1231.236	43549.94	43549.94	0	18343.59	0.144	0.03443	0.605262	0.001368	0	0.000226	0.002	0.03185	0.001487	0	0.000246	0.008	0.091	963.6905	136.6851	25.60031	0.005686	0.108022	0.030291	0.008533	0.002829	0.048554	0.026382	0.394722	0.148891	0.038757	0.204501	2.085419	0.038496	0.575977	0.163017	0.038757	0.204501	2.085419	0.044989	0.878989	3.762499	3.300689	0.009527	0.001351	0.000253
San Mateo	2023	LHDT2	Aggregate	Aggregate	Diesel	1952.709	77798.97	77798.97	0	24562.62	0.883685	1.679482	0	0.023677	0.026872	0	0.003	0.03185	0.024747	0.028087	0	0.012	0.091	747.9998	204.9987	0	0.006098	0.005098	0	0.117848	0.032298	0	0.131288	0.10976	0	0	0	0	0.149463	0.124954	0	0	0	0	0	0.196309	0.303972	0.909745	0	0.007088	0.001942	0	0
San Mateo	2023	MCY	Aggregate	Aggregate	Gasoline	12536.77	73820.04	73820.04	0	2507.354	0.537143	0	0.136291	0.001883	0	0.003663	0.001	0.0042	0.002012	0	0.003894	0.004	0.012	187.6396	0	47.90752	0.151085	0	0.181429	0.037735	0	0.008068	0.98245	0	1.347169	3.555217	3.717102	3.435381	1.181139	0	1.464498	3.555217	3.717102	3.435381	0.008844	11.57445	0	7.838613	0.001855	0	0.000474
San Mateo	2023	MDV	Aggregate	Aggregate	Gasoline	78398.02	2704273	2704273	0	374408	0.068743	0	0.362909	0.001222	0	0.002069	0.002	0.002734	0.001329	0	0.002251	0.008	0.00781	408.872	0	104.3819	0.002844	0	0.089064	0.005703	0	0.037349	0.01161	0	0.437746	0.072395	0.194625	1.190411	0.016926	0	0.479274	0.072395	0.194625	1.190411	0.038092	0.747341	0	3.739188	0.004042	0	0.001032
San Mateo	2023	MDV	Aggregate	Aggregate	Diesel	1107.903	37908.13	37908.13	0	5305.818	0.04176	0	0	0.004328	0	0	0.002	0.002738	0.004524	0	0	0.008	0.007965	410.1053	0	0	0.000449	0	0	0.064612	0	0	0.009665	0	0	0	0	0	0.011002	0	0	0	0	0	0	0.0031	0.175602	0	0	0.003886	0	0
San Mateo	2023	MDV	Aggregate	Aggregate	Electricity	906.5115	28548.82	0	28548.82	4657.021	0	0	0	0	0	0	0.002	0.001524	0	0	0	0.008	0.004354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2023	MDV	Aggregate	Aggregate	Plug-in Hyb	678.1174	27547.88	13448.47	14099.41	2804.015	0.003136	0	0.117199	0.000578	0	0.002002	0.002	0.001322	0.000628	0	0.002177	0.008	0.003776	131.6991	0	97.50736	0.000409	0	0.04268	0.00055	0	0.020553	0.001318	0	0.176635	0.027976	0.026258	0.325091	0.001923	0	0.193393	0.027976	0.026258	0.325091	0.020504	0.196536	0	1.37819	0.001302	0	0.000964
San Mateo	2023	MH	Aggregate	Aggregate	Gasoline	774.8115	7442.976	7442.976	0	77.51215	0.375927	0	0.404893	0.001719	0	0.000436	0.003	0.015756	0.001869	0	0.000474	0.012	0.045017	1947.17	0	31.89355	0.01417	0	0.038105	0.023764	0	0.042528	0.661382	0	0.16244	11.11371	0.261936	3.902966	0.089569	0	0.177852	11.11371	0.261936	3.902966	0.044861	1.492455	0	3.64337	0.01925	0	0.000315
San Mateo	2023	MH	Aggregate	Aggregate	Diesel	328.5822	3487.262	3487.262	0	32.85822	3.229197	0	0	0.055455	0	0	0.004	0.015675	0.057962	0	0	0.016	0.044785	1085.349	0	0	0.004377	0	0	0.170997	0	0	0.094242	0	0	0	0	0	0.107288	0	0	0	0	0	0	0.185977	0.297993	0	0	0.010284	0	0
San Mateo	2023	MHDT	Aggregate	Aggregate	Gasoline	780.1924	45998.29	45998.29	0	15610.09	0.48063	0.088485	0.45368	0.001377	0	0.000542	0.003	0.015756	0.001498	0	0.00059	0.012	0.045017	1763.945	530.3326	46.39494	0.015519	0.261469	0.049092	0.023565	0.00737	0.034436	0.076573	1.012695	0.270574	0.033571	0.274671	2.598982	0.111736	1.477722	0.296245	0.033571	0.274671	2.598982	0.044979	1.599932	15.11623	5.97113	0.017438	0.005243	0.000459
San Mateo	2023	MHDT	Aggregate	Aggregate	Diesel	4189.443	175901.2	175901.2	0	50462.49	1.42648	14.09475	1.586053	0.018782	0.040011	0	0.003	0.015983	0.019631	0.041821	0	0.012	0.045665	1155.919	2264.351	0	0.002009	0.012779	0	0.182115	0.356749	0	0.043248	0.275121	0	0	0	0	0.049234	0.313205	0	0	0	0	0	0.206918	0.148734	7.579195	0	0.010946	0.021442	0	0
San Mateo	2023	MHDT	Aggregate	Aggregate	Electricity	2.059294	44.11104	0	44.11104	25.56596	0	0	0	0	0	0	0.003	0.007991	0	0	0	0.012	0.022833	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2023	MHDT	Aggregate	Aggregate	Natural Ga	38.13508	1832.77	1832.77	0	342.2075	0.132951	6.609544	0	0.001228	0.018659	0	0	0.003	0.016094	0.001336	0.020293	0	0.012	0.045982	1008.408	5458.884	0	0.769477	17.52611	0	0.20557	1.112829	0	0.010994	0.250414	0	0	0	0	0.785307	17.88668	0	0	0	0	0	1.06	3.064735	35.81803	0	0	0	0	0
San Mateo	2023	OBUS	Aggregate	Aggregate	Gasoline	256.5607	15177.04	15177.04	0	5133.267	0.308106	0.065063	0.369453	0.001	0	0.000287	0.003	0.01568	0.001088	0	0.000312	0.012	0.044799	1742.276	373.6354	30.27704	0.009595	0.205564	0.033157	0.017281	0.005903	0.031894	0.045405	0.746279	0.163878	0.026481	0.113352	1.902307	0.066255	1.088969	0.179425	0.026481	0.113352	1.902307	0.044919	0.985887	5.774707	3.460301	0.017224	0.003694	0.000299
San Mateo	2023	OBUS	Aggregate	Aggregate	Diesel	1051.799	74746.95	74746.95	0	10288.18	0.843686	5.779548	1.508936	0.009565	0.003378	0	0.003	0.017376	0.009998	0.003531	0	0.012	0.049647	1250.895	1225.784	0	0.000947	0.013995	0	0.197079	0.119123	0	0.020398	0.301313	0	0	0	0	0.023222	0.343022	0	0	0	0	0	0.217631	0.094166	5.629794	0	0.011845	0.011607	0	0
San Mateo	2023	OBUS	Aggregate	Aggregate	Natural Ga	6.660994	415.1452	415.1452	0	59.28285	0.232948	1.556882	0	0.000856	0.003435	0	0	0.003	0.016148	0.000931	0.003736	0	0.012	0.046137	1029.36	1194.248	0	0.766347	4.477255	0	0.209842	0.243455	0	0.01095	0.063971	0	0	0	0	0.782113	4.569367	0	0	0	0	0	1.06	3.19115	6.306096	0	0	0	0	0
San Mateo	2023	SBUS	Aggregate	Aggregate	Gasoline	62.11288	3411.923	3411.923	0	248.4515	0.897656	0.923288	0.643317	0.001164	0	0.000721	0.002	0.015721	0.001266	0	0.000784	0.008	0.044917	797.3184	2541.99	62.30631	0.021738	2.445799	0.089765	0.041731	0.084017	0.05658	0.106456	10.59413	0.521132	0.139121	0.406864	2.094566	0.15534	15.45893	0.570574	0.139121	0.406864	2.094566	0.045	2.707181	81.95312	13.2835	0.007882	0.02513	0.000616
San Mateo	2023	SBUS	Aggregate	Aggregate	Diesel	168.8118	3793.041	3793.041	0	2444.395	5.00314	23.87172	0.437587	0.023953	0.025817	0	0.003	0.015721	0.025036	0.026985	0	0.012	0.044917	1149.738	2246.853	0	0.003233	0.008312	0	0.181142	0.353993	0	0.069615	0.178964	0	0	0	0	0.079252	0.203737	0	0	0	0	0	0.134019	0.208594	4.289616	0	0.010887	0.021276	0	0
San Mateo	2023	SBUS	Aggregate	Aggregate	Electricity	0.041475	0.481131	0	0.481131	0.600564	0	0	0	0	0	0	0	0.003	0.00786	0	0	0	0.012	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2023	SBUS	Aggregate	Aggregate	Natural Ga	6.023036	153.4041	153.4041	0	87.21356	0.556332	5.264261	0	0.003378	0.011516	0	0	0.003	0.015721	0.003674	0.012524	0	0.012	0.044917	1258.036	4080.42	0	3.408583	15.17474	0	0.256459	0.83182	0	0.048702	0.216817	0	0	0	0	3.478709	15.48694	0	0	0	0	0	1.06	11.51682	21.10371	0	0	0	0	0
San Mateo	2023	UBUS	Aggregate	Aggregate	Gasoline	61.26278	4165.676	4165.676	0	245.0511	0.037017	0	0.578233	0.000989	0	0.000127	0.002	0.002073	0.032333	0.001076	0	0.000139	0.00829	0.092379	1025.682	0	41.23868	0.002259	0	0.053565	0.004956	0	0.077039	0.006631	0	0.206281	0.070589	0.114555	0.693653	0.009677	0	0.225852	0.070589	0.114555	0.693653	0.045	0.556154	0	5.887541	0.01014	0	0.000408
San Mateo	2023	UBUS	Aggregate	Aggregate	Diesel	341.8463	28540.62	28540.62	0	1367.385	2.897593	0	0	0.007619	0	0	0.002	0.007913	0.0385	0.007964	0	0	0.031652	0.11	1451.453	0	0	0.007311	0	0	0.228677	0	0	0.157395	0	0	0	0	0.179182	0	0	0	0	0	0	0.122644	0.192989	0	0	0.013753	0	0
San Mateo	2023	UBUS	Aggregate	Aggregate	Electricity	2.018703	15.3193	0	15.3193	8.074811	0	0	0	0	0	0	0	0.009	0.01925	0	0	0	0.036	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2023	UBUS	Aggregate	Aggregate	Natural Ga	34.94319	1199.611	1199.611	0	139.7728	0.063405	0	0	0.000296	0	0	0.008789	0.0385	0.000309	0	0	0.035157	0.11	1349.38	0	0	4.445831	0	0	0.27508	0	0	0.063522	0	0	0	0	0	0	4.537297	0	0	0	0	0	0	0.97	52.53671	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: San Mateo
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_DM	PM2.5_PM	PM10_RUI	PM10_IDLE	PM10_STR	PM10_PM	TOG_RUNEX	TOG_IDLEX	TOG_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
San Mateo	2024	HHDT	Aggregate	Aggregate	Gasoline	4.38411	570.1519	570.1519	0	87.71727	4.048188	0	0.002195	0.001412	0	0.000781	0.005	0.031087	0.001536	0	0.000849	0.02	0.08882	2242.616	0	52.51813	0.114927	0	9.83E-05	0.151409	0	0.000106	0.580011	0	0.000534	0.038164	0.298441	2.621146	0.84635	0	0.000584	0.038164	0.298441	2.621146	0.0445	33.76595	0	5.064106	0.022171	0	0.000519
San Mateo	2024	HHDT	Aggregate	Aggregate	Diesel	1314.625	119489.1	119489.1	0	14359.46	2.758523	46.67792	2.948259	0.025016	0.035273	0	0.008607	0.030666	0.026147	0.036868	0	0.034429	0.087616	1815.874	8218.84	0	0.001264	0.157243	0	9.83E-05	0.151409	0	0.286092	1.294882	0	0.027205	3.385404	0	0	0	0	0.030971	3.854024	0	0	0.19939	0.118425	47.19978	0	0.017195	0.077828	0
San Mateo	2024	HHDT	Aggregate	Aggregate	Electricity	4.22305	364.2879	0	364.2879	41.8342	0	0	0	0	0	0	0.008582	0.016829	0	0	0	0.034329	0.048082	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	HHDT	Aggregate	Aggregate	Natural Ga	168.5495	11187.83	11187.83	0	1132.175	1.492552	9.520927	0	0.001788	0.012243	0	0.009	0.059336	0.001944	0.013315	0	0.036	0.169533	1498.953	8407.645	0	3.081874	24.13874	0	0.305571	1.713953	0	0.069062	0.389544	0	0	0	0	1.173794	24.68622	0	0	0	0	0.729125	16.65962	64.84398	0	0	0	0
San Mateo	2024	LDA	Aggregate	Aggregate	Gasoline	239419.7	7454000	7454000	0	1124271	0.038087	0	0.247841	0.001162	0	0.001964	0.002	0.002348	0.001263	0	0.002136	0.008	0.006709	273.8201	0	69.41898	0.002038	0	0.068169	0.004236	0	0.031309	0.007847	0	0.318313	0.083377	0.213338	1.277502	0.01145	0	0.348512	0.083377	0.213338	1.277502	0.036176	0.637735	0	3.199778	0.002707	0	0.000686
San Mateo	2024	LDA	Aggregate	Aggregate	Diesel	770.443	17557.03	17557.03	0	3247.138	0.188593	0	0	0.01271	0	0	0.002	0.002404	0.013285	0	0	0.008	0.006869	232.7779	0	0	0.001054	0	0	0.036674	0	0	0.022696	0	0	0	0	0	0.025838	0	0	0	0	0.0031	0.304144	0	0	0.002206	0	0	0
San Mateo	2024	LDA	Aggregate	Aggregate	Electricity	17934.86	689392.1	0	689392.1	89072.05	0	0	0	0	0	0	0.002	0.00153	0	0	0	0.008	0.004371	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	LDA	Aggregate	Aggregate	Plug-in Hyb	7500.936	275231.1	133857.4	141373.7	31016.37	0.003125	0	0.117199	0.000577	0	0.001988	0.002	0.001324	0.000628	0	0.002162	0.008	0.003783	131.2036	0	65.11921	0.000402	0	0.042117	0.000534	0	0.020029	0.001313	0	0.176635	0.037635	0.03379	0.393665	0.001916	0	0.193393	0.037635	0.03379	0.393665	0.0194	0.1958	0	1.37819	0.001297	0	0.000644
San Mateo	2024	LDT1	Aggregate	Aggregate	Gasoline	25010.05	728708.6	728708.6	0	1142830.1	0.101175	0	0.337766	0.001531	0	0.002433	0.002	0.002823	0.001665	0	0.002647	0.008	0.008066	320.3175	0	83.57506	0.004741	0	0.091509	0.007635	0	0.035447	0.020943	0	0.464929	0.13393	0.378571	2.119435	0.030557	0	0.509038	0.13393	0.378571	2.119435	0.03751	1.088083	0	4.642443	0.003167	0	0.000826
San Mateo	2024	LDT1	Aggregate	Aggregate	Diesel	6.907674	87.50597	87.50597	0	19.69868	1.656035	0	0	0.236493	0	0	0.002	0.003323	0.247186	0	0	0.008	0.009495	417.763	0	0	0.014564	0	0	0.065819	0	0	0.313559	0	0	0	0	0	0.356966	0	0	0	0	0.0031	1.668132	0	0	0.003959	0	0	0
San Mateo	2024	LDT1	Aggregate	Aggregate	Electricity	91.59654	3278.131	0	3278.131	443.5442	0	0	0	0	0	0	0.002	0.001533	0	0	0	0.008	0.004381	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	LDT1	Aggregate	Aggregate	Plug-in Hyb	54.25069	2174.893	971.2907	1203.602	224.3266	0.002869	0	0.117199	0.000364	0	0.001376	0.002	0.001338	0.000396	0	0.001496	0.008	0.003823	120.4792	0	71.41059	0.00037	0	0.042142	0.000491	0	0.020052	0.001206	0	0.176635	0.024003	0.020809	0.269408	0.00176	0	0.193393	0.024003	0.020809	0.269408	0.018757	0.179795	0	1.37819	0.001191	0	0.000706
San Mateo	2024	LDT2	Aggregate	Aggregate	Gasoline	149536	4914901	4914901	0	718035.6	0.047837	0	0.275637	0.001155	0	0.001881	0.002	0.002719	0.001256	0	0.002046	0.008	0.007768	332.6183	0	84.15109	0.002154	0	0.070859	0.004613	0	0.03323	0.008159	0	0.321903	0.059457	0.151098	0.950815	0.011906	0	0.352443	0.059457	0.151098	0.950815	0.038479	0.65082	0	3.265171	0.003288	0	0.000832
San Mateo	2024	LDT2	Aggregate	Aggregate	Diesel	582.1748	18954.02	18954.02	0	2798.233	0.039602	0	0	0.004525	0	0	0.002	0.002742	0.00473	0	0	0.008	0.007835	308.9591	0	0	0.000583	0	0	0.048677	0	0	0.012549	0	0	0	0	0	0.014287	0	0	0	0	0.0031	0.119356	0	0	0.002928	0	0	0
San Mateo	2024	LDT2	Aggregate	Aggregate	Electricity	1250.957	37598.89	0	37598.89	6394.245	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004358	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	LDT2	Aggregate	Aggregate	Plug-in Hyb	1631.391	62724.85	29203.5	33521.35	6745.803	0.002991	0	0.117199	0.000445	0	0.001613	0.002	0.001331	0.000484	0	0.001754	0.008	0.003803	125.6019	0	77.89253	0.000385	0	0.042141	0.000512	0	0.020051	0.001257	0	0.176635	0.025289	0.023061	0.291714	0.001834	0	0.193393	0.025289	0.023061	0.291714	0.019538	0.18744	0	1.37819	0.001242	0	0.00077
San Mateo	2024	LHDT1	Aggregate	Aggregate	Gasoline	11110.29	401258.4	401258.4	0	165526.8	0.108054	0.033789	0.571117	0.001381	0	0.000231	0.002	0.0273	0.001502	0	0.000252	0.008	0.078	836.8766	116.5649	26.73629	0.005557	0.107506	0.028745	0.006197	0.00292	0.048292	0.02703	0.387394	0.139437	0.033968	0.18488	1.873078	0.039443	0.565284	0.152666	0.033968	0.18488	1.873078	0.044949	0.932434	3.763967	3.345475	0.008273	0.001152	0.000264
San Mateo	2024	LHDT1	Aggregate	Aggregate	Diesel	4996.692	191551.4	191551.4	0	62852.09	1.027551	1.628055	0	0.024469	0.026784	0	0.003	0.0273	0.025575	0.027995	0	0.012	0.078	625.1858	126.8159	0	0.006142	0.005098	0	0.098498	0.01998	0	0.132227	0.10976	0	0	0	0	0.150532	0.124954	0	0	0	0	0.191039	0.331515	0.909745	0	0.005924	0.001202	0
San Mateo	2024	LHDT1	Aggregate	Aggregate	Electricity	56.88552	3530.642	0	3530.642	794.6546	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	LHDT2	Aggregate	Aggregate	Gasoline	1289.385	44551.76	44551.76	0	19209.92	0.122228	0.032802	0.574333	0.001317	0	0.000203	0.002	0.03185	0.001432	0	0.00022	0.008	0.091	944.5417	135.0667	25.31696	0.004775	0.10351	0.028373	0.007371	0.002735	0.046606	0.02185	0.376166	0.138457	0.035403	0.189345	1.948594	0.031883	0.5489	0.151593	0.035403	0.189345	1.948594	0.04499	0.81417	3.766002	3.313222	0.009338	0.001335	0.00025
San Mateo	2024	LHDT2	Aggregate	Aggregate	Diesel	2173.662	83732.44	83732.44	0	27341.93	0.758817	1.552593	0	0.021905	0.026813	0	0.003	0.03185	0.022896	0.028026	0	0.012	0.091	738.893	201.7788	0	0.00575	0.005098	0	0.116413	0.03179	0	0.123794	0.10976	0	0	0	0	0.140931	0.124954	0	0	0	0	0.200587	0.280863	0.909745	0	0.007001	0.001912	0
San Mateo	2024	LHDT2	Aggregate	Aggregate	Electricity	14.72375	865.8383	0	865.8383	194.8979	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	MCY	Aggregate	Aggregate	Gasoline	13263.89	76675.37	76675.37	0	26527.78	0.518793	0	0.126152	0.001881	0	0.003482	0.001	0.0042	0.002012	0	0.003708	0.004	0.012	186.9256	0	46.09461	0.145168	0	0.173078	0.036969	0	0.007549	0.930365	0	1.275208	3.551353	3.70872	3.28364	1.125127	0	1.386524	3.551353	3.70872	3.28364	0.008901	11.0461	0	7.750076	0.001848	0	0.000456
San Mateo	2024	MDV	Aggregate	Aggregate	Gasoline	84173.19	2823183	2823183	0	402441.6	0.058434	0	0.328591	0.001156	0	0.001958	0.002	0.002737	0.001258	0	0.002129	0.008	0.007819	401.2877	0	101.9843	0.002492	0	0.08141	0.005161	0	0.035386	0.009941	0	0.393656	0.066904	0.180975	1.115277	0.014501	0	0.431003	0.066904	0.180975	1.115277	0.038746	0.686178	0	3.45873	0.003967	0	0.001008
San Mateo	2024	MDV	Aggregate	Aggregate	Diesel	1163.667	38157.5	38157.5	0	5552.1	0.037261	0	0	0.004001	0	0	0.002	0.002798	0.004182	0	0	0.008	0.007995	404.1827	0	0	0.000421	0	0	0.063679	0	0	0.009074	0	0	0	0	0	0.01033	0	0	0	0	0.0031	0.171126	0	0	0.003883	0	0	0
San Mateo	2024	MDV	Aggregate	Aggregate	Electricity	1347.217	40547.66	0	40547.66	6889.415	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004357	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	MDV	Aggregate	Aggregate	Plug-in Hyb	894.3672	35015.17	16467.11	18548.06	3698.208	0.003021	0	0.117199	0.000509	0	0.001829	0.002	0.00133	0.000553	0	0.001989	0.008	0.0038	126.8709	0	95.82464	0.000391	0	0.042289	0.000521	0	0.020188	0.00127	0	0.176635	0.028115	0.024943	0.310017	0.001853	0	0.193393	0.028115	0.024943	0.310017	0.019752	0.189334	0	1.37819	0.001254	0	0.000947
San Mateo	2024	MH	Aggregate	Aggregate	Gasoline	801.8479	7786.339	7786.339	0	80.21686	0.31412	0	0.403344	0.001626	0	0.000414	0.003	0.015756	0.001768	0	0.00045	0.012	0.045017	1946.554	0	31.59379	0.011734	0	0.037106	0.021154	0	0.043344	0.049091	0	0.154768	9.691274	0.229932	3.473479	0.071633	0	0.169451	9.691274	0.229932	3.473479	0.044918	1.137792	0	3.470688	0.019244	0	0.000312
San Mateo	2024	MH	Aggregate	Aggregate	Diesel	356.6509	3693.518	3693.518	0	35.66509	3.096233	0	0	0.049578	0	0	0.004	0.015675	0.05182	0	0	0.016	0.044785	1085.795	0	0	0.004225	0	0	0.171067	0	0	0.090961	0	0	0	0	0	0.103553	0	0	0	0	0.190835	0.284597	0	0	0.010288	0	0	0
San Mateo	2024	MHDT	Aggregate	Aggregate	Gasoline	803.5707	46997.14	46997.14	0	16077.84	0.392706	0.088662	0.440106	0.001362	0	0.000524	0.003	0.015756	0.001481	0	0.00057	0.012	0.045017	1738.217	524.0271	45.30167	0.012668	0.264735	0.046933	0.020191	0.007577	0.034475	0.061766	1.015329	0.254725	0.030087	0.246862	2.353612	0.090129	1.481566	0.278892	0.030087	0.246862	2.353612	0.044986	1.274083	15.14683	5.603458	0.017184	0.005181	0.000448
San Mateo	2024	MHDT	Aggregate	Aggregate	Diesel	4233.233	177028	177028	0	51051.04	1.307284	13.59602	1.607655	0.016259	0.033511	0	0.003	0.015983	0.016994	0.035026	0	0.012	0.045664	1151.344	2248.491	0	0.001748	0.011985	0	0.181395	0.354251	0	0.037635	0.258043	0	0	0	0	0.042845	0.293763	0	0	0	0	0.208724	0.13444	7.547588	0	0.010903	0.021292	0
San Mateo	2024	MHDT	Aggregate	Aggregate	Electricity	14.28233	871.0875	0	871.0875	206.3119	0	0	0	0	0	0	0.003	0.007951	0	0	0	0.012	0.022718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	MHDT	Aggregate	Aggregate	Natural Ga	40.94682	1935.863	1935.863	0	369.2827	0.126627	6.578363	0	0.00126	0.019031	0	0.003	0.016095	0.001371	0.020698	0	0.012	0.045986	1003.333	5452.112	0	0.773152	17.27614	0	0.204536	1.111449	0	0.011047	0.246842	0	0	0	0	0.789058	17.63157	0	0	0	0	1.06	3.066853	36.67055	0	0	0	0
San Mateo	2024	OBUS	Aggregate	Aggregate	Gasoline	254.1967	14438.68	14438.68	0	5085.967	0.276687	0.065109	0.370674	0.00102	0	0.000283	0.003	0.01568	0.00111	0	0.000308	0.012	0.044799	1723.101	370.7574	29.97676	0.008478	0.205512	0.032818	0.016007	0.005919	0.031879	0.039535	0.746984	0.162428	0.025788	0.11331	1.92621	0.05769	1.089998	0.177838	0.025788	0.11331	1.92621	0.044947	0.847792	5.778931	3.396221	0.017035	0.003665	0.000296
San Mateo	2024	OBUS	Aggregate	Aggregate	Diesel	1077.493	75002.36	75002.36	0	10539.7	0.835238	5.759378	1.510482	0.009497	0.003284	0	0.003	0.017376	0.009927	0.003413	0	0.012	0.049647	1241.911	1216.11	0	0.000936	0.013985	0	0.195664	0.191599	0	0.020157	0.301093	0	0	0	0	0.022947	0.342772	0	0	0	0	0.217754	0.093918	5.633167	0	0.01176	0.011516	0
San Mateo	2024	OBUS	Aggregate	Aggregate	Electricity	0.873406	79.58076	0	79.58076	17.47512	0	0	0	0	0	0	0.003	0.00794	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	OBUS	Aggregate	Aggregate	Natural Ga	7.797528	492.5585	492.5585	0	69.398	0.196374	1.542446	0	0.001031	0.003779	0	0.003	0.016148	0.001121	0.00411	0	0.012	0.046137	1012.331	1198.177	0	0.786409	4.299019	0	0.20637	0.244256	0	0.011236	0.061424	0	0	0	0	0.802588	4.387464	0	0	0	0	1.06	3.2452	7.082462	0	0	0	0
San Mateo	2024	SBUS	Aggregate	Aggregate	Gasoline	66.88141	3561.549	3561.549	0	267.5256	0.835223	0.92382	0.639831	0.001152	0	0.000724	0.002	0.015721	0.001252	0	0.000787	0.008	0.044917	789.442	2519.886	61.00487	0.01963	2.446302	0.087874	0.039135	0.085207	0.056875	0.09611	10.60191	0.509805	0.133122	0.399591	2.076885	0.140243	15.47029	0.558173	0.133122	0.399591	2.076885	0.045	2.460202	82.00038	12.72081	0.007804	0.024912	0.000603
San Mateo	2024	SBUS	Aggregate	Aggregate	Diesel	168.96	3777.202	3777.202	0	2446.541	4.696712	23.22062	0.459253	0.022409	0.023726	0	0.003	0.015721	0.023422	0.024798	0	0.012	0.044917	1144.311	2236.593	0	0.003112	0.008208	0	0.180287	0.352376	0	0.067	0.176716	0	0	0	0	0.076275	0.201177	0	0	0	0	0.139187	0.202372	4.417573	0	0.010836	0.021179	0
San Mateo	2024	SBUS	Aggregate	Aggregate	Electricity	0.90883	36.62057	0	36.62057	8.140217	0	0	0	0	0	0	0.003	0.00786	0	0	0	0.009214	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	SBUS	Aggregate	Aggregate	Natural Ga	6.288614	158.6097	158.6097	0	91.05913	0.535215	5.251389	0	0.003378	0.011823	0	0.003	0.015721	0.003674	0.012858	0	0.012	0.044917	1247.354	4088.672	0	3.35032	15.01581	0	0.254281	0.833502	0	0.047869	0.214546	0	0	0	0	3.419247	15.32474	0	0	0	0	1.06	11.24264	21.79598	0	0	0	0
San Mateo	2024	UBUS	Aggregate	Aggregate	Gasoline	61.44418	4178.01	4178.01	0	245.7767	0.036235	0	0.500251	0.001083	0	0.000148	0.002	0.002073	0.032333	0.001178	0	0.000161	0.00829	0.092379	1002.317	0	40.2745	0.00211	0	0.046538	0.004853	0	0.069658	0.006117	0	0.175043	0.050072	0.096281	0.505947	0.008925	0	0.19165	0.050072	0.096281	0.505947	0.045	0.556675	0	6.169996	0.009909	0	0.000398
San Mateo	2024	UBUS	Aggregate	Aggregate	Diesel	277.5893	21477.78	21477.78	0	1110.357	0.375565	0	0	0.006827	0	0	0.002	0.008097	0.0385	0.007136	0	0	0.032388	0.11	1223.727	0	0.003145	0	0	0.192799	0	0	0.067719	0	0	0	0	0	0.077093	0	0	0	0	0.22	0.077195	0	0	0.011595	0	0	0
San Mateo	2024	UBUS	Aggregate	Aggregate	Electricity	37.0794	3851.303	0	3851.303	148.3176	0	0	0	0	0	0	0.002	0.007366	0.01925	0	0	0	0.029466	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2024	UBUS	Aggregate	Aggregate	Natural Ga	65.26114	4514.573	4514.573	0	261.0446	0.055424	0	0	0.000272	0	0	0.007741	0.0385	0.000285	0	0	0.030963	0.11	1262.656	0	0	4.100531	0	0	0.257401	0	0	0.058588	0	0	0	0	0	4.184893	0	0	0	0	0.97	46.50633	0	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: San Mateo
Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLE	PM10_STR	PM10_PM	PM10_PM	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
San Mateo	2026	HHDT	Aggregate	Aggregate	Gasoline	4.283898	504.3899	504.3899	0	85.71223	3.767128	0	0.001928	0.001363	0	0.000634	0.005	0.031039	0.001482	0	0.00069	0.02	0.088682	2206.809	0	51.03869	0.109196	0	9.88E-05	0.147264	0	0.0001	0.53602	0	0.000536	0.029322	0.212948	1.905434	0.782159	0	0.000587	0.029322	0.212948	1.905434	0.045	33.33714	0	4.679779	0.021817	0	0.000505
San Mateo	2026	HHDT	Aggregate	Aggregate	Diesel	1339.121	1195911.7	1195911.7	0	14836.49	2.513316	46.04181	3.042683	0.024334	0.030988	0	0.008607	0.030272	0.025434	0.032389	0	0.034426	0.086492	1752.991	8044.886	0	0.00116	0.158921	0	0.276185	1.267475	0	0.024964	3.421536	0	0	0	0	0.02842	3.895158	0	0	0	0	0.202556	0.108407	48.25142	0	0.0166	0.07618	0
San Mateo	2026	HHDT	Aggregate	Aggregate	Electricity	17.24092	1568.579	0	1568.579	167.6097	0	0	0	0	0	0	0.008499	0.017277	0	0	0	0.033994	0.049364	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	HHDT	Aggregate	Aggregate	Natural Ga	190.6077	12388.44	12388.44	0	1253.654	1.199642	8.304539	0	0.001614	0.012208	0	0.009	0.06089	0.001755	0.013277	0	0.036	0.17397	1452.495	8216.396	0	2.557538	21.22587	0	0.296101	1.674966	0	0.054701	0.334996	0	0	0	0	2.630844	21.69869	0	0	0	0	0.713158	15.13386	61.6539	0	0	0	0
San Mateo	2026	LDA	Aggregate	Aggregate	Gasoline	238617.8	6969047	6969047	0	1116592	0.031815	0	0.225592	0.00108	0	0.001846	0.002	0.002349	0.000174	0	0.002007	0.008	0.00671	264.3788	0	66.66342	0.001674	0	0.060063	0.003806	0	0.029206	0.006262	0	0.277135	0.077036	0.201162	1.205717	0.099138	0	0.303428	0.077036	0.201162	1.205717	0.037625	0.572674	0	2.857953	0.002614	0	0.000659
San Mateo	2026	LDA	Aggregate	Aggregate	Diesel	645.0664	13511.27	13511.27	0	2704.797	0.144803	0	0	0.010068	0	0	0.002	0.002414	0.010523	0	0	0.008	0.006897	228.1946	0	0	0.000882	0	0	0.035952	0	0	0.01898	0	0	0	0	0	0.021607	0	0	0	0	0.0031	0.280265	0	0	0.002162	0	0
San Mateo	2026	LDA	Aggregate	Aggregate	Electricity	20627.64	751657.4	0	751657.4	101606	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	LDA	Aggregate	Aggregate	Plug-in Hyb	8434.471	284060.2	132539.9	151520.3	34876.54	0.002998	0	0.117199	0.00051	0	0.001839	0.002	0.001334	0.000555	0	0.002	0.008	0.003813	125.8756	0	63.67241	0.00038	0	0.041451	0.000497	0	0.019409	0.00126	0	0.176635	0.037598	0.034095	0.388535	0.001838	0	0.193393	0.037598	0.034095	0.388535	0.018859	0.187853	0	1.37819	0.001244	0	0.000629
San Mateo	2026	LDT1	Aggregate	Aggregate	Gasoline	25945.79	717326.6	717326.6	0	118989.9	0.078016	0	0.293254	0.001334	0	0.002155	0.002	0.002818	0.001451	0	0.002344	0.008	0.008052	309.0343	0	79.57832	0.003639	0	0.077166	0.006309	0	0.032586	0.015756	0	0.382671	0.113653	0.314838	1.794906	0.022991	0	0.418976	0.113653	0.314838	1.794906	0.038437	0.911226	0	3.898361	0.003055	0	0.000787
San Mateo	2026	LDT1	Aggregate	Aggregate	Diesel	5.731399	66.09906	66.09906	0	15.81841	1.607443	0	0	0.22953	0	0	0.002	0.003303	0.239908	0	0	0.008	0.009438	416.0554	0	0	0.01414	0	0	0.06555	0	0	0.304424	0	0	0	0	0	0.346566	0	0	0	0	0.0031	1.619672	0	0	0.003942	0	0
San Mateo	2026	LDT1	Aggregate	Aggregate	Electricity	141.9822	5160.147	0	5160.147	697.0716	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	LDT1	Aggregate	Aggregate	Plug-in Hyb	104.7443	3837.146	1635.987	2201.159	433.1175	0.002739	0	0.117199	0.00033	0	0.001308	0.002	0.001349	0.000359	0	0.001423	0.008	0.003854	115.021	0	69.49428	0.000347	0	0.041425	0.000453	0	0.019385	0.001151	0	0.176635	0.02329	0.019927	0.265458	0.00168	0	0.193393	0.02329	0.019927	0.265458	0.017907	0.171654	0	1.37819	0.001137	0	0.000687
San Mateo	2026	LDT2	Aggregate	Aggregate	Gasoline	169697.7	5206694	5206694	0	813724.2	0.039564	0	0.246415	0.001061	0	0.001756	0.002	0.002732	0.001154	0	0.001909	0.008	0.007806	320.9048	0	80.65979	0.001836	0	0.062615	0.004145	0	0.031058	0.006772	0	0.280198	0.053684	0.140038	0.877766	0.009881	0	0.306782	0.053684	0.140038	0.877766	0.039596	0.591205	0	2.920622	0.003172	0	0.000797
San Mateo	2026	LDT2	Aggregate	Aggregate	Diesel	655.1696	19853.42	19853.42	0	3139.478	0.033548	0	0	0.004079	0	0	0.002	0.002751	0.004264	0	0	0.008	0.00786	298.5166	0	0	0.000555	0	0	0.047031	0	0	0.011952	0	0	0	0	0	0.013607	0	0	0	0	0.0031	0.11634	0	0	0.002829	0	0
San Mateo	2026	LDT2	Aggregate	Aggregate	Electricity	2139.962	58794.02	58794.02	0	58794.02	10836.18	0	0	0	0	0	0.002	0.001528	0	0	0	0.008	0.004364	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	LDT2	Aggregate	Aggregate	Plug-in Hyb	2330.737	81093.05	36145.09	44947.96	9637.596	0.002864	0	0.117199	0.000395	0	0.001497	0.002	0.002342	0.000443	0	0.001628	0.008	0.003835	120.2461	0	76.22509	0.000362	0	0.041388	0.000473	0	0.01935	0.001204	0	0.176635	0.024917	0.022518	0.286085	0.001756	0	0.193393	0.024917	0.022518	0.286085	0.018711	0.179452	0	1.37819	0.001189	0	0.000754
San Mateo	2026	LHDT1	Aggregate	Aggregate	Gasoline	12091.27	409379.7	409379.7	0	180141.9	0.082078	0.031581	0.525207	0.001324	0	0.000197	0.002	0.0273	0.00144	0	0.000214	0.008	0.078	811.9901	114.3649	26.27179	0.004327	0.101211	0.026073	0.004771	0.00278	0.045144	0.020676	0.362188	0.125413	0.029477	0.164217	1.658906	0.03017	0.528503	0.137311	0.029477	0.164217	1.658906	0.044975	0.843514	3.767862	3.376982	0.008027	0.001131	0.00026
San Mateo	2026	LHDT1	Aggregate	Aggregate	Diesel	5774.561	207453.3	207453.3	0	72636.71	0.759826	1.425846	0	0.020834	0.026593	0	0.003	0.0273	0.021776	0.027795	0	0.012	0.078	618.0427	123.4649	0	0.005378	0.005098	0	0.097373	0.019452	0	0.11579	0.10976	0	0	0	0	0.131819	0.124954	0	0	0	0	0.199971	0.278839	0.909745	0	0.005856	0.00117	0
San Mateo	2026	LHDT1	Aggregate	Aggregate	Electricity	302.9677	15691.66	0	15691.66	4239.881	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	LHDT2	Aggregate	Aggregate	Gasoline	1390.219	45322.23	45322.23	0	20712.2	0.089949	0.030134	0.521013	0.001251	0	0.000168	0.002	0.03185	0.001361	0	0.000183	0.008	0.091	916.2773	132.4121	24.82523	0.00347	0.095994	0.025248	0.005641	0.002576	0.043086	0.015364	0.345713	0.121706	0.030304	0.166922	1.734893	0.02242	0.504463	0.133253	0.030304	0.166922	1.734893	0.044997	0.721895	3.771186	3.317909	0.009058	0.001309	0.000245
San Mateo	2026	LHDT2	Aggregate	Aggregate	Diesel	2589.799	92139.39	92139.39	0	32576.42	0.594292	1.367929	0	0.019861	0.026777	0	0.003	0.03185	0.020759	0.027987	0	0.012	0.091	726.711	197.0583	0	0.00529	0.005098	0	0.114494	0.031047	0	0.113884	0.10976	0	0	0	0	0.129649	0.124954	0	0	0	0	0.206359	0.253765	0.909745	0	0.006886	0.001867	0
San Mateo	2026	LHDT2	Aggregate	Aggregate	Electricity	77.23784	3810.55	0	3810.55	1024.59	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	MCY	Aggregate	Aggregate	Gasoline	14692.86	80438.96	80438.96	0	29385.71	0.495123	0	0.110033	0.001908	0	0.003479	0.001	0.0042	0.002043	0	0.003711	0.004	0.012	186.0574	0	43.36877	0.137447	0	0.160662	0.036006	0	0.006719	0.86185	0	1.169727	3.545629	3.697544	3.067415	1.052189	0	1.272239	3.545629	3.697544	3.067415	0.008894	10.37381	0	7.649946	0.001839	0	0.000429
San Mateo	2026	MDV	Aggregate	Aggregate	Gasoline	95415.04	2995462	2995462	0	456021.9	0.045043	0	0.280293	0.001049	0	0.001787	0.002	0.002752	0.001141	0	0.001943	0.008	0.007862	387.4402	0	97.80051	0.002014	0	0.069417	0.004439	0	0.032516	0.007733	0	0.326682	0.058677	0.159655	0.988966	0.011284	0	0.357675	0.058677	0.159655	0.988966	0.039732	0.608979	0	3.043816	0.00383	0	0.000967
San Mateo	2026	MDV	Aggregate	Aggregate	Diesel	1264.364	38163.09	38163.09	0	5993.722	0.029639	0	0	0.00336	0	0	0.002	0.002815	0.003512	0	0	0.008	0.008044	391.9984	0	0	0.000371	0	0	0.06176	0	0	0.007978	0	0	0	0	0	0.009083	0	0	0	0	0.0031	0.162819	0	0	0.003714	0	0
San Mateo	2026	MDV	Aggregate	Aggregate	Electricity	2288.176	62843.93	0	62843.93	11585.67	0	0	0	0	0	0	0.002	0.001528	0	0	0	0.008	0.004365	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	MDV	Aggregate	Aggregate	Plug-in Hyb	1352.288	48514.48	21600.3	26914.18	5591.711	0.00286	0	0.117199	0.000424	0	0.001613	0.002	0.001343	0.000461	0	0.001754	0.008	0.003836	120.1141	0	93.09493	0.000363	0	0.041542	0.000476	0	0.019493	0.001202	0	0.176635	0.027524	0.02439	0.302424	0.001754	0	0.193393	0.027524	0.02439	0.302424	0.0187	0.179255	0	1.37819	0.001187	0	0.00092
San Mateo	2026	MH	Aggregate	Aggregate	Gasoline	860.1629	8288.685	8288.685	0	86.0507	0.23256	0	0.397384	0.001512	0	0.000384	0.003	0.015756	0.001645	0	0.000418	0.012	0.045017	1945.826	0	31.10578	0.008668	0	0.035239	0.017644	0	0.044254	0.033949	0	0.14164	7.387206	0.177323	2.704624	0.049538	0	0.155079	7.387206	0.177323	2.704624	0.044967	0.720477	0	3.190918	0.019236	0	0.000308
San Mateo	2026	MH	Aggregate	Aggregate	Diesel	411.7686	4016.353	4016.353	0	41.17686	2.902322	0	0	0.040701	0	0	0.004	0.015675	0.042542	0	0	0.016	0.044785	1086.443	0	0	0.004006	0	0	0.17117	0	0	0.086257	0	0	0	0	0	0.098197	0	0	0	0	0.198004	0.264984	0	0	0.010295	0	0
San Mateo	2026	MHDT	Aggregate	Aggregate	Gasoline	848.5573	48169.43	48169.43	0	16977.94	0.269412	0.081996	0.401399	0.001349	0	0.000495	0.003	0.015756	0.001467	0	0.000539	0.012	0.045017	1697.118	512.7637	43.45365	0.008779	0.269455	0.043465	0.015276	0.007246	0.033229	0.041527	1.019578	0.229834	0.024222	0.200008	1.911848	0.060596	1.487766	0.251639	0.024222	0.200008	1.911848	0.044997	0.830138	15.19618	5.005077	0.016778	0.005069	0.00043
San Mateo	2026	MHDT	Aggregate	Aggregate	Diesel	4345.03	177809.3	177809.3	0	52490.37	1.079543	12.71716	1.615228	0.011982	0.022721	0	0.003	0.015982	0.012524	0.023749	0	0.012	0.045664	1138.556	2209.16	0	0.001294	0.010675	0	0.17938	0.348054	0	0.027853	0.229832	0	0	0	0	0.031709	0.261646	0	0	0	0	0.211826	0.108771	7.505293	0	0.010781	0.020919	0
San Mateo	2026	MHDT	Aggregate	Aggregate	Electricity	76.01194	4276.512	0	4276.512	1058.544	0	0	0	0	0	0	0.003	0.007951	0	0	0	0.012	0.022717	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	MHDT	Aggregate	Aggregate	Natural Ga	48.05658	2179.843	2179.843	0	442.254	0.112977	6.480284	0	0.001327	0.019663	0	0.003	0.016091	0.001443	0.021385	0	0.012	0.045974	991.4871	5407.178	0	0.778786	16.68583	0	0.202121	1.102289	0	0.011127	0.238408	0	0	0	0	0.794808	17.02911	0	0	0	0	1.06	3.063718	38.15558	0	0	0	0
San Mateo	2026	OBUS	Aggregate	Aggregate	Gasoline	250.2122	13078.36	13078.36	0	5006.245	0.228578	0.061817	0.359747	0.001067	0	0.000285	0.003	0.01568	0.00116	0	0.00031	0.012	0.044799	1687.446	365.3109	29.42229	0.006927	0.20465	0.03203	0.013867	0.005591	0.030955	0.031574	0.747709	0.159032	0.025716	0.122353	2.090543	0.046073	1.091056	0.17412	0.025716	0.122353	2.090543	0.044974	0.662703	5.783272	3.284676	0.016682	0.003611	0.000291
San Mateo	2026	OBUS	Aggregate	Aggregate	Diesel	1145.492	75611.47	75611.47	0	11233.17	0.7922	5.412165	1.482498	0.00906	0.003089	0	0.003	0.017403	0.00947	0.003228	0	0.012	0.049724	1214.431	1202.439	0	0.000896	0.014277	0	0.191334	0.189445	0	0.019283	0.307371	0	0	0	0	0.021953	0.349919	0	0	0	0	0.21794	0.09136	5.733335	0	0.0115	0.011386	0
San Mateo	2026	OBUS	Aggregate	Aggregate	Electricity	3.59381	297.3898	0	297.3898	71.90495	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	OBUS	Aggregate	Aggregate	Natural Ga	10.41211	669.454	669.454	0	92.66776	0.14486	1.520375	0	0.001277	0.004306	0	0.003	0.016148	0.001389	0.004683	0	0.012	0.046137	977.2919	1192.33	0	0.814665	4.026517	0	0.199227	0.243064	0	0.01164	0.057531	0	0	0	0	0.831426	4.109356	0	0	0	0	1.06	3.321327	8.269436	0	0	0	0
San Mateo	2026	SBUS	Aggregate	Aggregate	Gasoline	75.66977	3792.283	3792.283	0	302.6791	0.689408	0.850076	0.614008	0.001104	0	0.000723	0.002	0.015721	0.001201	0	0.000787	0.008	0.044917	775.7798	2481.854	58.67483	0.015917	2.447247	0.082067	0.033238	0.080267	0.056021	0.077973	10.62297	0.474628	0.118813	0.369995	1.975658	0.113778	15.50102	0.519658	0.118813	0.369995	1.975658	0.045	1.98957	82.12826	11.72979	0.007669	0.024536	0.00058
San Mateo	2026	SBUS	Aggregate	Aggregate	Diesel	168.4764	3737.054	3737.054	0	2439.538	4.092097	21.8241	0.494851	0.019631	0.01977	0	0.003	0.015721	0.020519	0.020664	0	0.012	0.044917	1133.73	2214.261	0	0.002862	0.008051	0	0.17862	0.348858	0	0.06162	0.173331	0	0	0	0	0.07015	0.197325	0	0	0	0	0.149335	0.189386	4.685291	0	0.010736	0.020968	0
San Mateo	2026	SBUS	Aggregate	Aggregate	Electricity	3.281397	127.7057	0	127.7057	29.50964	0	0	0	0	0	0	0.002326	0.00786	0	0	0	0.009303	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	SBUS	Aggregate	Aggregate	Natural Ga	6.807777	168.2676	168.2676	0	98.5766	0.49789	5.22911	0	0.003378	0.012354	0	0.003	0.015721	0.003674	0.013436	0	0.012	0.044917	1228.474	4102.954	0	3.247338	14.74074	0	0.250432	0.836414	0	0.046398	0.210616	0	0	0	0	3.314147	15.044	0	0	0	0	1.06	10.75802	22.99417	0	0	0	0
San Mateo	2026	UBUS	Aggregate	Aggregate	Gasoline	61.80696	4202.678	4202.678	0	247.2278	0.033837	0	0.38239	0.001186	0	0.000163	0.002	0.002073	0.032333	0.00129	0	0.000177	0.00829	0.092379	954.5156	0	39.0065	0.001796	0	0.036113	0.004527	0	0.057552	0.005058	0	0.130834	0.029473	0.090867	0.345962	0.007381	0	0.143246	0.029473	0.090867	0.345962	0.045	0.558823	0	6.549286	0.009436	0	0.000386
San Mateo	2026	UBUS	Aggregate	Aggregate	Diesel	278.8478	21575.87	21575.87	0	1115.391	0.37554	0	0	0.006827	0	0	0.008	0.0385	0.007135	0	0	0.032386	0.11	1223.487	0	0	0.035145	0	0	0.192761	0	0	0.067715	0	0	0	0	0	0.077089	0	0	0	0	0.22	0.07719	0	0	0.011593	0	0
San Mateo	2026	UBUS	Aggregate	Aggregate	Electricity	37.55556	3889.774	0	3889.774	150.2222	0	0	0	0	0	0	0.007	0.01925	0	0	0	0.029483	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2026	UBUS	Aggregate	Aggregate	Natural Ga	65.76966	4554.21	4554.21	0	263.0787	0.055441	0	0	0.000272	0	0	0.007743	0.0385	0.000285	0	0	0.030972	0.11	1262.837	0	0	4.101249	0	0	0.257438	0	0	0.058599	0	0	0	0	0	4.185626	0	0	0	0	0.97	46.51887	0	0	0	0	0

CalEEMod EMFAC2021 Emission Factors Input

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004876	0.002752	0.015174	0.260570765	0.006674	0	0	0.099951	0
A	CH4_RUNEX	0.00147	0.003596	0.001789	0.001929	0.004565	0.004563	0.010113	0.237798538	0.007849	0.547982794	0.137447	0.078908	0.007147
A	CH4_STREX	0.05457	0.076579	0.061326	0.066545	0.018274	0.009813	0.010398	5.18139E-07	0.009775	0.005027297	0.160662	0.008654	0.023834
A	CO_IDLEX	0	0	0	0	0.197696	0.142598	0.667039	4.672583456	0.493821	0	0	2.494693	0
A	CO_RUNEX	0.504864	0.900911	0.576749	0.584767	0.637388	0.397103	0.283977	1.62073339	0.198517	6.307852368	10.37381	1.285953	0.571804
A	CO_STREX	2.580125	3.866142	2.854122	2.912716	2.366896	1.289604	1.197364	0.024542796	1.002433	0.911733484	7.649946	1.236929	2.158186
A	CO2_NBIO_IDLEX	0	0	0	0	8.154171	13.03136	145.0466	754.991996	90.29537	0	0	205.1295	0
A	CO2_NBIO_RUNEX	234.6275	305.8239	314.274	375.6298	728.2361	767.925	1231.984	1706.416765	1277.632	1056.629394	186.0574	943.7962	1665.324
A	CO2_NBIO_STREX	61.05638	79.06975	79.26249	94.15775	18.41366	9.649058	10.39541	0.267669097	8.979233	5.430139432	43.36877	6.187375	21.03848
A	NOX_IDLEX	0	0	0	0	0.033521	0.067267	0.783967	3.869342809	0.37984	0	0	1.315808	0
A	NOX_RUNEX	0.028002	0.077203	0.038553	0.043306	0.302327	0.416461	0.882726	2.36722241	0.702522	0.248295515	0.495123	2.299027	1.103968
A	NOX_STREX	0.203894	0.290879	0.240815	0.268107	0.368113	0.202507	1.290686	2.76213714	1.124979	0.053232937	0.110033	0.485334	0.268772
A	PM10_IDLEX	0	0	0	0	0.000624	0.00136	0.001468	0.002808654	0.000228	0	0	0.001245	0
A	PM10_PMBW	0.006389	0.008003	0.007709	0.007732	0.077033	0.089773	0.045111	0.094149874	0.048888	0.142309149	0.012	0.044551	0.044942
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009312	0.010609	0.012	0.034512562	0.012	0.050739122	0.004	0.010018	0.013306
A	PM10_RUNEX	0.001058	0.001457	0.001142	0.001137	0.008074	0.013976	0.009898	0.022857949	0.008166	0.004694812	0.002043	0.01046	0.014993
A	PM10_STREX	0.001841	0.002327	0.001874	0.00187	0.00015	7.11E-05	0.000129	3.61771E-06	9.46E-05	2.46942E-05	0.003711	8.29E-05	0.000283
A	PM25_IDLEX	0	0	0	0	0.000597	0.001301	0.001404	0.00268138	0.000218	0	0	0.00119	0
A	PM25_PMBW	0.002236	0.002801	0.002698	0.002706	0.026961	0.03142	0.015789	0.032952456	0.017111	0.049808202	0.0042	0.015593	0.01573
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002328	0.002652	0.003	0.008628141	0.003	0.01268478	0.001	0.002504	0.003326
A	PM25_RUNEX	0.000974	0.00134	0.001051	0.001047	0.00769	0.013355	0.009458	0.021862868	0.007806	0.004485812	0.001908	0.009983	0.014303
A	PM25_STREX	0.001692	0.002139	0.001723	0.001719	0.000138	6.54E-05	0.000118	3.32635E-06	8.69E-05	2.27054E-05	0.003479	7.63E-05	0.00026
A	ROG_DIURN	0.231163	0.387878	0.178687	0.197772	0.078042	0.045261	0.022859	0.000499446	0.031887	0.012040456	3.067415	0.052084	18.28548
A	ROG_HTSK	0.069559	0.112653	0.052457	0.056161	0.02066	0.011779	0.005795	0.000153777	0.007848	0.004102948	3.545629	0.012529	4.996356
A	ROG_IDLEX	0	0	0	0	0.019505	0.014353	0.026424	0.284254533	0.032905	0	0	0.290727	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.005519	0.015593	0.006632	0.007481	0.051358	0.079206	0.030018	0.029343314	0.020955	0.051110999	0.86185	0.068212	0.051022
A	ROG_RUNLS	0.179864	0.311906	0.136348	0.152219	0.115098	0.064879	0.047848	0.001116795	0.03734	0.012649682	3.697544	0.039017	0.119933
A	ROG_STREX	0.251385	0.379657	0.27433	0.312946	0.087901	0.047305	0.054983	2.80939E-06	0.048534	0.018213489	1.169727	0.05005	0.095799
A	SO2_IDLEX	0	0	0	0	7.95E-05	0.000125	0.001341	0.00624192	0.00085	0	0	0.001878	0
A	SO2_RUNEX	0.002319	0.003023	0.003106	0.003712	0.007116	0.007397	0.011725	0.014891114	0.012132	0.008467826	0.001839	0.008844	0.016318
A	SO2_STREX	0.000604	0.000782	0.000784	0.000931	0.000182	9.54E-05	0.000103	2.64618E-06	8.88E-05	5.36825E-05	0.000429	6.12E-05	0.000208
A	TOG_DIURN	0.231163	0.387878	0.178687	0.197772	0.078042	0.045261	0.022859	0.000499446	0.031887	0.012040456	0.073065	0.052084	18.28548
A	TOG_HTSK	0.069559	0.112653	0.052457	0.056161	0.02066	0.011779	0.005795	0.000153777	0.007848	0.004102948	3.545629	0.012529	4.996356
A	TOG_IDLEX	0	0	0	0	0.027671	0.019233	0.045339	0.572218149	0.043685	0	0	0.455917	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.008044	0.022744	0.009664	0.010885	0.06276	0.091751	0.044268	0.271424917	0.031443	0.606515491	1.052189	0.159904	0.06542
A	TOG_RUNLS	0.179864	0.311906	0.136348	0.152219	0.115098	0.064879	0.047848	0.001116795	0.03734	0.012649682	3.697544	0.039017	0.119933
A	TOG_STREX	0.275235	0.415677	0.300356	0.342637	0.09624	0.051793	0.0602	3.07593E-06	0.053139	0.019941478	1.272239	0.054799	0.104888
A	N2O_IDLEX	0	0	0	0	0.000568	0.001576	0.022142	0.12338657	0.013469	0	0	0.024577	0
A	N2O_RUNEX	0.003386	0.006238	0.004203	0.004985	0.035024	0.076484	0.142284	0.274308294	0.164871	0.156342404	0.036006	0.106794	0.067755
A	N2O_STREX	0.026514	0.032345	0.030405	0.031171	0.031641	0.016747	0.007949	5.2547E-07	0.009447	0.008011873	0.006719	0.005908	0.029931

CalEEMod EMFAC2021 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.430608	0.03901	0.288195	0.168896	0.033969	0.007587	0.012483	0.007199	0.004815	0.001838	0.00432	0.00042	0.000661

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: San Mateo
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_DIA	PM2.5_PMT	PM2.5_PMP	PM10_RUI	PM10_IDLE	PM10_STR	PM10_PMT	PM10_PMP	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
San Mateo	2030	HHDT	Aggregate	Aggregate	Gasoline	3.582613	348.8502	348.8502	0	71.68092	3.309536	0	0.000636	0.001281	0	0.000408	0.005	0.031258	0.001393	0	0.000444	0.02	0.08931	2124.112	0	48.3003	0.102341	0	7.44E-05	0.139473	0	4.21E-05	0.479172	0	0.000403	0.0158	0.095238	1.146877	0.699207	0	0.000441	0.0158	0.095238	1.146877	0.045	32.18037	0	4.037713	0.020999	0	0.000477
San Mateo	2030	HHDT	Aggregate	Aggregate	Diesel	1338.439	117080	117080	0	15181.71	2.116368	45.39119	3.044846	0.023283	0.023862	0	0.008615	0.030087	0.024335	0.024941	0	0.03446	0.085963	1627.718	7731.446	0	0.000972	0.162527	0	0.256448	1.218092	0	0.020928	3.499162	0	0	0	0	0.023825	3.98353	0	0	0	0	0.207747	0.090912	50.23689	0	0.015414	0.073212	0
San Mateo	2030	HHDT	Aggregate	Aggregate	Electricity	84.88807	7748.726	0	7748.726	800.5398	0	0	0	0	0	0	0.00845	0.017769	0	0	0	0	0.033801	0.050769	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	HHDT	Aggregate	Aggregate	Natural Ga	216.9868	13750.35	13750.35	0	1391.47	0.831786	6.734329	0	0.001446	0.012428	0	0.009	0.062879	0.001573	0.013516	0	0.036	0.179654	1389.59	7977.287	0	1.838591	17.41083	0	0.283277	1.626222	0	0.037223	0.267421	0	0	0	0	1.888896	17.79029	0	0	0	0	0.693529	12.98287	57.90215	0	0	0	0
San Mateo	2030	LDA	Aggregate	Aggregate	Gasoline	237797.8	6358120	6358120	0	1114767	0.025015	0	0.198441	0.00084	0	0.0015	0.002	0.002348	0.000914	0	0.001631	0.008	0.006709	250.3795	0	62.47074	0.001264	0	0.048749	0.003327	0	0.026593	0.004452	0	0.219797	0.064961	0.182842	1.100035	0.406497	0	0.24065	0.064961	0.182842	1.100035	0.039859	0.49519	0	2.387223	0.002475	0	0.000618
San Mateo	2030	LDA	Aggregate	Aggregate	Diesel	401.2092	8094.892	8094.892	0	1723.63	0.081629	0	0	0.005614	0	0	0.002	0.002417	0.005867	0	0	0.008	0.006907	217.7249	0	0	0.000572	0	0	0.034303	0	0	0.012309	0	0	0	0	0	0.014013	0	0	0	0	0	0.0031	0.228322	0	0	0.002063	0	0
San Mateo	2030	LDA	Aggregate	Aggregate	Electricity	25244.08	809588.1	0	809588.1	122638.4	0	0	0	0	0	0	0.002	0.001533	0	0	0	0.008	0.004381	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	LDA	Aggregate	Aggregate	Plug-in Hyb	9770.495	287561.1	127243.4	160317.7	40401	0.002843	0	0.117199	0.000375	0	0.001465	0.002	0.001348	0.000407	0	0.001593	0.008	0.00385	119.3761	0	61.72963	0.000352	0	0.040464	0.000449	0	0.018494	0.001195	0	0.176635	0.03873	0.045962	0.467089	0.001743	0	0.193393	0.03873	0.045962	0.467089	0.018225	0.17816	0	1.37819	0.00118	0	0.00061
San Mateo	2030	LDT1	Aggregate	Aggregate	Gasoline	27717.91	705667.7	705667.7	0	127669.4	0.047693	0	0.23518	0.000977	0	0.001648	0.002	0.002822	0.001063	0	0.001793	0.008	0.008064	291.8441	0	73.503	0.00227	0	0.057547	0.004614	0	0.028888	0.009274	0	0.271146	0.085215	0.246386	1.458315	0.013533	0	0.29687	0.085215	0.246386	1.458315	0.038865	0.675828	0	2.884818	0.002885	0	0.000727
San Mateo	2030	LDT1	Aggregate	Aggregate	Diesel	0.204115	6.131891	6.131891	0	1.004394	0.025448	0	0	0.003365	0	0	0.002	0.002682	0.003517	0	0	0.008	0.007662	360.704	0	0	0.000511	0	0	0.056829	0	0	0.011001	0	0	0	0	0	0.012524	0	0	0	0	0	0.0031	0.101404	0	0	0.003418	0	0
San Mateo	2030	LDT1	Aggregate	Aggregate	Electricity	315.4332	10759.94	0	10759.94	1561.79	0	0	0	0	0	0	0.002	0.00153	0	0	0	0.008	0.004372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	LDT1	Aggregate	Aggregate	Plug-in Hyb	248.8694	7950.15	3286.476	4663.674	1029.075	0.002656	0	0.117199	0.000235	0	0.000982	0.002	0.001357	0.000256	0	0.001068	0.008	0.003878	111.5238	0	67.77418	0.000329	0	0.040538	0.000421	0	0.018562	0.001116	0	0.176635	0.022993	0.019942	0.267154	0.001629	0	0.193393	0.022993	0.019942	0.267154	0.017362	0.166441	0	1.37819	0.001103	0	0.00067
San Mateo	2030	LDT2	Aggregate	Aggregate	Gasoline	206077.5	5643289	5643289	0	980667.9	0.031039	0	0.220236	0.000827	0	0.001417	0.002	0.002768	0.000899	0	0.001541	0.008	0.007907	305.2696	0	76.05021	0.001503	0	0.052526	0.003653	0	0.029181	0.005296	0	0.229711	0.045237	0.123667	0.765395	0.007728	0	0.251505	0.045237	0.123667	0.765395	0.040897	0.539909	0	2.545867	0.003018	0	0.000752
San Mateo	2030	LDT2	Aggregate	Aggregate	Diesel	779.569	21227.36	21227.36	0	3709.708	0.028723	0	0	0.003778	0	0	0.002	0.002772	0.003949	0	0	0.008	0.00792	283.3526	0	0	0.000535	0	0	0.044642	0	0	0.011525	0	0	0	0	0	0.013121	0	0	0	0	0	0.0031	0.115181	0	0	0.002685	0	0
San Mateo	2030	LDT2	Aggregate	Aggregate	Electricity	4330.718	103349.1	0	103349.1	21553.59	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	LDT2	Aggregate	Aggregate	Plug-in Hyb	3821.263	114216.7	48686.66	65530.03	15800.92	0.002739	0	0.117199	0.000291	0	0.001179	0.002	0.001354	0.000317	0	0.001283	0.008	0.003869	114.9986	0	74.21213	0.000338	0	0.040354	0.00043	0	0.018393	0.001151	0	0.176635	0.026073	0.02498	0.30357	0.001668	0	0.193393	0.026073	0.02498	0.30357	0.017899	0.171627	0	1.37819	0.001137	0	0.000734
San Mateo	2030	LHDT1	Aggregate	Aggregate	Gasoline	13418.94	401266.7	401266.7	0	199922.2	0.04859	0.028514	0.462341	0.001251	0	0.000149	0.002	0.0273	0.001361	0	0.000162	0.008	0.078	782.2571	111.312	25.41512	0.002474	0.092233	0.022399	0.003012	0.002564	0.040565	0.010703	0.327199	0.105404	0.022577	0.12944	1.313798	0.015618	0.477448	0.115404	0.022577	0.12944	1.313798	0.045	0.67997	3.773798	3.355298	0.007733	0.0011	0.000251
San Mateo	2030	LHDT1	Aggregate	Aggregate	Diesel	6950.283	217964.5	217964.5	0	87425.82	0.484943	1.179571	0	0.017739	0.02636	0	0.003	0.0273	0.018541	0.027552	0	0.012	0.078	610.5039	119.3947	0	0.004593	0.005098	0	0.096185	0.018811	0	0.098884	0.10976	0	0	0	0	0.112573	0.124954	0	0	0	0	0.209503	0.232836	0.909745	0	0.005785	0.001131	0
San Mateo	2030	LHDT1	Aggregate	Aggregate	Electricity	1651.837	70758.49	0	70758.49	23140.54	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	LHDT2	Aggregate	Aggregate	Gasoline	1516.427	44034.41	44034.41	0	22592.5	0.0535	0.026469	0.446387	0.001188	0	0.000128	0.002	0.03185	0.001292	0	0.000139	0.008	0.091	883.1295	128.7905	24.14624	0.002097	0.08544	0.021117	0.003676	0.002338	0.038045	0.00861	0.303836	0.099505	0.023317	0.135292	1.428649	0.012564	0.443356	0.108945	0.023317	0.135292	1.428649	0.045	0.63201	3.776933	3.316614	0.008731	0.001273	0.000239
San Mateo	2030	LHDT2	Aggregate	Aggregate	Diesel	3226.044	98642.37	98642.37	0	40579.57	0.436422	1.156649	0	0.01874	0.026765	0	0.003	0.03185	0.019587	0.027975	0	0.012	0.091	713.7283	191.5832	0	0.004866	0.005098	0	0.112448	0.030184	0	0.104751	0.10976	0	0	0	0	0.119253	0.124954	0	0	0	0	0.212304	0.238694	0.909745	0	0.006763	0.001815	0
San Mateo	2030	LHDT2	Aggregate	Aggregate	Electricity	416.7471	17085.75	0	17085.75	5526.66	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	MCY	Aggregate	Aggregate	Gasoline	17265.42	85331.57	85331.57	0	34530.84	0.471636	0	0.087961	0.00193	0	0.003402	0.001	0.0042	0.002069	0	0.003639	0.004	0.012	185.2558	0	39.68002	0.129549	0	0.143907	0.035104	0	0.005584	0.790266	0	1.025021	3.535952	3.670486	2.694632	0.977152	0	1.115488	3.535952	3.670486	2.694632	0.00908	9.714966	0	7.581403	0.001831	0	0.000392
San Mateo	2030	MDV	Aggregate	Aggregate	Gasoline	115764.2	3248131	3248131	0	549832.1	0.032414	0	0.238074	0.000811	0	0.001423	0.002	0.002792	0.000882	0	0.001547	0.008	0.007976	368.7759	0	92.22249	0.00155	0	0.05581	0.003744	0	0.030164	0.005553	0	0.251972	0.048156	0.134906	0.832269	0.008103	0	0.275878	0.048156	0.134906	0.832269	0.040906	0.545181	0	2.607134	0.003646	0	0.000912
San Mateo	2030	MDV	Aggregate	Aggregate	Diesel	1415.877	38111.74	38111.74	0	6658.508	0.017624	0	0	0.002054	0	0	0.002	0.002838	0.002147	0	0	0.008	0.008109	372.2787	0	0	0.000277	0	0	0.058653	0	0	0.005968	0	0	0	0	0	0.006794	0	0	0	0	0	0.0031	0.147116	0	0	0.003528	0	0
San Mateo	2030	MDV	Aggregate	Aggregate	Electricity	4329.635	102706.8	0	102706.8	21508.26	0	0	0	0	0	0	0.002	0.001532	0	0	0	0.008	0.004377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	MDV	Aggregate	Aggregate	Plug-in Hyb	2286.849	70894.89	30074.66	40820.23	9456.121	0.002725	0	0.117199	0.000297	0	0.001215	0.002	0.001355	0.000323	0	0.001322	0.008	0.003872	114.4453	0	90.22943	0.000338	0	0.040515	0.000432	0	0.018541	0.001145	0	0.176635	0.026805	0.026275	0.314563	0.001671	0	0.193393	0.026805	0.026275	0.314563	0.017817	0.170801	0	1.37819	0.001131	0	0.000892
San Mateo	2030	MH	Aggregate	Aggregate	Gasoline	975.2695	8905.399	8905.399	0	97.56596	0.146497	0	0.389106	0.001397	0	0.00035	0.003	0.015756	0.001519	0	0.00038	0.012	0.045017	1945.035	0	30.49184	0.005338	0	0.03291	0.013993	0	0.045078	0.017368	0	0.125455	4.324204	0.104731	1.656784	0.025343	0	0.137357	4.324204	0.104731	1.656784	0.045	0.266588	0	2.838247	0.019229	0	0.000301
San Mateo	2030	MH	Aggregate	Aggregate	Diesel	518.1906	4498.521	4498.521	0	51.81906	2.677361	0	0	0.030184	0	0	0.004	0.015675	0.031549	0	0	0.016	0.044785	1087.256	0	0	0.003786	0	0	0.171298	0	0	0.081505	0	0	0	0	0	0.092788	0	0	0	0	0	0.206555	0.243761	0	0	0.010302	0	0
San Mateo	2030	MHDT	Aggregate	Aggregate	Gasoline	896.2067	46600.57	46600.57	0	17931.3	0.14535	0.071332	0.336727	0.001349	0	0.000468	0.003	0.015756	0.001468	0	0.000509	0.012	0.045017	1641.475	495.3697	40.83701	0.005139	0.272865	0.039358	0.010032	0.006541	0.029695	0.022413	1.024632	0.19997	0.016844	0.142325	1.402001	0.032705	1.49514	0.218942	0.016844	0.142325	1.402001	0.045	0.405969	15.25491	4.210824	0.016228	0.004897	0.000404
San Mateo	2030	MHDT	Aggregate	Aggregate	Diesel	4347.362	170380.4	170380.4	0	52605.86	0.755775	11.60663	1.523653	0.006958	0.010527	0	0.003	0.015983	0.007273	0.011003	0	0.012	0.045667	1112.069	2136.504	0	0.000749	0.00921	0	0.175207	0.336607	0	0.016126	0.198289	0	0	0	0	0.018358	0.225736	0	0	0	0	0.215702	0.077124	7.484208	0	0.010531	0.020231	0
San Mateo	2030	MHDT	Aggregate	Aggregate	Electricity	446.3324	23740.44	0	23740.44	6143.241	0	0	0	0	0	0	0.003	0.007953	0	0	0	0.012	0.022724	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	MHDT	Aggregate	Aggregate	Natural Ga	59.81429	2526.343	2526.343	0	572.8236	0.0963	6.310343	0	0.001402	0.020216	0	0.003	0.016078	0.001525	0.021987	0	0.012	0.049338	974.2403	5301.669	0	0.781312	15.85967	0	0.198605	1.08078	0	0.011163	0.226603	0	0	0	0	0.797386	16.18596	0	0	0	0	1.06	3.055339	39.52768	0	0	0	0
San Mateo	2030	OBUS	Aggregate	Aggregate	Gasoline	235.2431	10564.99	10564.99	0	4706.745	0.160976	0.055683	0.334188	0.001132	0	0.000289	0.003	0.01568	0.001231	0	0.000315	0.012	0.044799	1631.402	356.5246	28.55452	0.004957	0.201951	0.030859	0.010543	0.00494	0.028192	0.021402	0.748646	0.154359	0.024573	0.126962	2.196095	0.03123	1.092423	0.169003	0.024573	0.126962	2.196095	0.045	0.436972	5.788883	3.119712	0.016128	0.003525	0.000282
San Mateo	2030	OBUS	Aggregate	Aggregate	Diesel	1265.064	76747.17	76747.17	0	12416.27	0.731147	4.662626	1.324481	0.008334	0.002706	0	0.003	0.017521	0.008711	0.002828	0	0.012	0.050059	1157.144	1158.301	0	0.000821	0.014331	0	0.182309	0.182491	0	0.017683	0.308549	0	0	0	0	0.020131	0.351259	0	0	0	0	0.218276	0.087625	5.772448	0	0.010957	0.010968	0
San Mateo	2030	OBUS	Aggregate	Aggregate	Electricity	18.67716	1366.971	0	1366.971	373.6926	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	OBUS	Aggregate	Aggregate	Natural Ga	14.94448	957.8955	957.8955	0	133.0059	0.101418	1.499098	0	0.001484	0.004813	0	0.003	0.016148	0.001614	0.005235	0	0.012	0.046137	931.1349	1169.497	0	0.838494	3.763815	0	0.189818	0.23841	0	0.01198	0.053777	0	0	0	0	0.855745	3.84125	0	0	0	0	1.06	3.385525	9.413723	0	0	0	0
San Mateo	2030	SBUS	Aggregate	Aggregate	Gasoline	87.98822	4038.39	4038.39	0	351.9529	0.489617	0.750616	0.559502	0.001063	0	0.000722	0.002	0.015721	0.001156	0	0.000786	0.008	0.044917	757.0149	2429.667	55.27111	0.010391	2.44431	0.075405	0.024791	0.073975	0.052746	0.050694	10.64152	0.434086	0.098112	0.31801	1.752705	0.073972	15.52808	0.47527	0.098112	0.31801	1.752705	0.045	1.308566	82.24088	10.22191	0.007484	0.02402	0.000546
San Mateo	2030	SBUS	Aggregate	Aggregate	Diesel	160.7253	3531.519	3531.519	0	2327.302	2.868955	18.37325	0.553036	0.014701	0.012669	0	0.003	0.015721	0.015365	0.013242	0	0.012	0.044917	1113.173	2158.09	0	0.002281	0.007956	0	0.175381	0.340008	0	0.049109	0.1713	0	0	0	0	0.055907	0.195012	0	0	0	0	0.169646	0.15856	5.305748	0	0.010541	0.020436	0
San Mateo	2030	SBUS	Aggregate	Aggregate	Electricity	17.84997	651.998	0	651.998	163.1263	0	0	0	0	0	0	0.003	0.00236	0.00786	0	0	0	0.009438	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	SBUS	Aggregate	Aggregate	Natural Ga	7.671522	180.9535	180.9535	0	111.0836	0.443878	5.198476	0	0.003378	0.013085	0	0.003	0.015721	0.003674	0.014231	0	0.012	0.044917	1201.138	4122.528	0	3.098317	14.36251	0	0.24486	0.840404	0	0.044269	0.205212	0	0	0	0	3.16206	14.658	0	0	0	0	1.06	10.05674	24.64166	0	0	0	0
San Mateo	2030	UBUS	Aggregate	Aggregate	Gasoline	62.5174	4249.774	4249.774	0	250.0696	0.035638	0	0.310547	0.001201	0	0.000164	0.002	0.002072	0.032329	0.001307	0	0.000179	0.008288	0.09237	932.2834	0	37.52663	0.001497	0	0.032416	0.004454	0	0.04913	0.004138	0	0.115554	0.024606	0.097267	0.356985	0.006038	0	0.126517	0.024606	0.097267	0.356985	0.045	0.559001	0	5.953718	0.009217	0	0.000371
San Mateo	2030	UBUS	Aggregate	Aggregate	Diesel	238.4518	18140.33	18140.33	0	953.8071	0.376197	0	0	0.006839	0	0	0.002	0.008109	0.0385	0.007148	0	0	0.032436	0.11	1228.547	0	0	0.003149	0	0	0.193558	0	0	0.067807	0	0	0	0	0.077193	0	0	0	0	0	0.22	0.077324	0	0	0.011641	0	0
San Mateo	2030	UBUS	Aggregate	Aggregate	Electricity	72.67394	6853.165	0	6853.165	290.6957	0	0	0	0	0	0	0.002	0.007651	0.01925	0	0	0	0.030604	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Mateo	2030	UBUS	Aggregate	Aggregate	Natural Ga	75.54888	5381.015	5381.015	0	302.1955	0.055771	0	0	0.000273	0	0	0.002	0.007786	0.0385	0.000286	0	0	0.031145	0.11	1266.418	0	0	4.115508	0	0	0.258168	0	0	0.058802	0	0	0	0	4.200177	0	0	0	0	0	0.97	46.76788	0	0	0	0	0

CalEEMod EMFAC2021 Emission Factors Input

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.0041	0.002311	0.015963	0.229026242	0.006914	0	0	0.110559	0
A	CH4_RUNEX	0.001091	0.002215	0.001451	0.001466	0.00289	0.003582	0.009624	0.18305022	0.010248	0.641431362	0.129549	0.072674	0.004817
A	CH4_STREX	0.043749	0.056722	0.051039	0.052888	0.014423	0.007552	0.009135	3.05733E-07	0.008239	0.004511552	0.143907	0.008986	0.021494
A	CO_IDLEX	0	0	0	0	0.183464	0.137123	0.628743	4.574443284	0.49944	0	0	2.802822	0
A	CO_RUNEX	0.428969	0.660194	0.521738	0.516941	0.468992	0.321574	0.163527	1.442396346	0.162707	7.377393404	9.714966	0.912101	0.258927
A	CO_STREX	2.12334	2.838305	2.46486	2.462348	2.160461	1.186135	0.977377	0.016590448	0.832894	0.828623357	7.581403	1.218105	1.853708
A	CO2_NBIO_IDLEX	0	0	0	0	7.483418	12.87527	130.0816	692.3906648	88.86546	0	0	200.5332	0
A	CO2_NBIO_RUNEX	218.1367	285.5306	296.1322	352.6558	647.7805	684.09	1103.524	1514.609777	1192.98	954.9035774	185.2558	857.525	1657.153
A	CO2_NBIO_STREX	56.37559	72.5759	74.14137	87.76861	16.36469	8.635527	9.478708	0.198459779	7.623425	5.222861474	39.68002	6.586443	19.91475
A	NOX_IDLEX	0	0	0	0	0.027637	0.059703	0.658867	3.566245811	0.336592	0	0	1.035723	0
A	NOX_RUNEX	0.021508	0.04649	0.029936	0.03068	0.181449	0.284207	0.558221	1.874181967	0.646065	0.210138516	0.471636	1.45062	0.995886
A	NOX_STREX	0.176589	0.231426	0.213197	0.224713	0.2977	0.159643	1.115695	2.649753409	1.022028	0.043221096	0.087961	0.50246	0.254132
A	PM10_IDLEX	0	0	0	0	0.000617	0.001429	0.000636	0.00208163	0.000207	0	0	0.000758	0
A	PM10_PMBW	0.006346	0.007963	0.007767	0.007787	0.074001	0.086134	0.043306	0.093281284	0.048975	0.156110891	0.012	0.043175	0.04494
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009264	0.01047	0.012	0.034539384	0.012	0.061827696	0.004	0.009879	0.013342
A	PM10_RUNEX	0.0008	0.001038	0.000883	0.000858	0.006648	0.01245	0.005391	0.020667549	0.00762	0.003949707	0.002069	0.007092	0.011597
A	PM10_STREX	0.001471	0.001765	0.001499	0.001469	0.000104	4.97E-05	0.000118	1.82388E-06	8.4E-05	2.48573E-05	0.003639	9.36E-05	0.000248
A	PM25_IDLEX	0	0	0	0	0.00059	0.001367	0.000608	0.001985313	0.000198	0	0	0.000723	0
A	PM25_PMBW	0.002221	0.002787	0.002718	0.002725	0.0259	0.030147	0.015157	0.032648449	0.017141	0.054638812	0.0042	0.015111	0.015729
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002316	0.002617	0.003	0.008634846	0.003	0.015456924	0.001	0.00247	0.003336
A	PM25_RUNEX	0.000736	0.000955	0.000812	0.00079	0.006331	0.011898	0.005147	0.019767546	0.007285	0.003772866	0.00193	0.006762	0.011058
A	PM25_STREX	0.001353	0.001623	0.001378	0.001351	9.57E-05	4.57E-05	0.000109	1.67699E-06	7.72E-05	2.28554E-05	0.003402	8.61E-05	0.000228
A	ROG_DIURN	0.208006	0.310821	0.155511	0.165232	0.056781	0.034294	0.016264	0.000235524	0.029304	0.012421079	2.694632	0.052216	10.81642
A	ROG_HTSK	0.057819	0.083701	0.043823	0.045503	0.014537	0.008339	0.00391	6.49199E-05	0.00656	0.003424597	3.535952	0.011692	2.824213
A	ROG_IDLEX	0	0	0	0	0.016598	0.012899	0.023221	0.271787437	0.032176	0	0	0.326882	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.003852	0.009047	0.005145	0.005303	0.037462	0.06705	0.015705	0.022524009	0.017791	0.045171786	0.790266	0.045956	0.038893
A	ROG_RUNLS	0.160749	0.241641	0.119083	0.126689	0.083346	0.048385	0.033035	0.000391321	0.033896	0.013537374	3.670486	0.037896	0.068402
A	ROG_STREX	0.197071	0.267146	0.223211	0.238678	0.067869	0.035586	0.046415	1.65627E-06	0.04121	0.01608249	1.025021	0.051728	0.081937
A	SO2_IDLEX	0	0	0	0	7.29E-05	0.000123	0.001195	0.005616953	0.000834	0	0	0.001828	0
A	SO2_RUNEX	0.002156	0.002823	0.002927	0.003485	0.006325	0.006582	0.010485	0.013042303	0.011283	0.007230239	0.001831	0.008027	0.016233
A	SO2_STREX	0.000557	0.000717	0.000733	0.000868	0.000162	8.54E-05	9.37E-05	1.96198E-06	7.54E-05	5.16333E-05	0.000392	6.51E-05	0.000197
A	TOG_DIURN	0.208006	0.310821	0.155511	0.165232	0.056781	0.034294	0.016264	0.000235524	0.029304	0.012421079	0.066855	0.052216	10.81642
A	TOG_HTSK	0.057819	0.083701	0.043823	0.045503	0.014537	0.008339	0.00391	6.49199E-05	0.00656	0.003424597	3.535952	0.011692	2.824213
A	TOG_IDLEX	0	0	0	0	0.023432	0.017024	0.04258	0.526899253	0.043038	0	0	0.511291	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.005617	0.013201	0.007494	0.007717	0.044644	0.077093	0.027406	0.208786723	0.030062	0.693940204	0.977152	0.127141	0.047979
A	TOG_RUNLS	0.160749	0.241641	0.119083	0.126689	0.083346	0.048385	0.033035	0.000391321	0.033896	0.013537374	3.670486	0.037896	0.068402
A	TOG_STREX	0.215768	0.292491	0.244388	0.261323	0.074308	0.038963	0.050819	1.8134E-06	0.04512	0.017608302	1.115488	0.056636	0.08971
A	N2O_IDLEX	0	0	0	0	0.000532	0.001598	0.019855	0.113681015	0.013363	0	0	0.02289	0
A	N2O_RUNEX	0.002889	0.0045	0.003674	0.00417	0.032136	0.070442	0.126706	0.244505965	0.159364	0.142077729	0.035104	0.090896	0.066786
A	N2O_STREX	0.023753	0.02846	0.028293	0.028531	0.02612	0.013606	0.006893	1.7284E-07	0.007527	0.006837798	0.005584	0.006286	0.029442

CalEEMod EMFAC2021 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.392953	0.03814	0.309697	0.182164	0.036329	0.008412	0.012807	0.007315	0.004719	0.001823	0.004493	0.000442	0.000706

Attachment 4: Project Construction and Operation Dispersion Modeling Inputs and Risk Calculations

803-851 Old County Road, San Carlos, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2022	Construction	0.0469	CON_DPM	93.9	0.02857	3.60E-03	14,088	2.56E-07
2023	Construction	0.0330	CON_DPM	66.0	0.02008	2.53E-03	14,088	1.80E-07
2024+2025	Construction	0.0361	CON_DPM	72.3	0.02199	2.77E-03	14,088	1.97E-07
Total		***0.1160***		***232.1***	***0.0706***	***0.0089***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

803-851 Old County Road, San Carlos, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2022	Construction	CON_FUG	0.0196	39.3	0.01195	1.51E-03	14,088	1.07E-07
2023	Construction	CON_FUG	0.0031	6.3	0.00191	2.41E-04	14,088	1.71E-08
2024+2025	Construction	CON_FUG	0.0033	6.7	0.00204	2.56E-04	14,088	1.82E-08
Total			***0.0261***	***52.2***	***0.0159***	***0.0020***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

803-851 Old County Road, San Carlos, CA
Construction Health Impact Summary

Maximum Impacts at MEI Location - Without Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index	Maximum Annual PM2.5 Concentration
	Exhaust PM10/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Infant/Child	Adult	(-)	($\mu g/m^3$)
2022	0.0131	0.0054	2.33	0.04	0.00	0.02
2023	0.0092	0.0009	1.51	0.03	0.00	0.01
2024 + 2025	0.0101	0.0009	0.26	0.03	0.00	0.01
Total	-	-	**4.10**	**0.09**		-
Maximum	0.0131	0.0054	**-**	**-**	**0.00**	**0.02**

Maximum Impacts at Children's Place Preschool

Construction Year	Unmitigated Emissions				
	Maximum Concentrations				
	Exhaust PM10/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2022	0.0046	0.0019	0.28	0.0009	0.006
2023	0.0032	0.0003	0.20	0.0006	0.004
2024 + 2025	0.0035	0.0003	0.22	0.0007	0.004
Total	-	-	**0.70**	-	-
Maximum	0.0046	0.0019	**-**	**0.0009**	**0.006**

803-851 Old County Road, San Carlos, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 7.6 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
						Infant/Child		Modeled		Adult	Adult	Maximum		
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2022	0.0096	10	0.13	2022	0.0096	-	-			
1	1	0 - 1	2022	0.0096	10	1.57	2022	0.0096	1	0.03	0.002	0.00	0.01
2	1	1 - 2	2023	0.0067	10	1.11	2023	0.0067	1	0.02	0.001	0.00	0.01
3	1	2 - 3	2024+2025	0.0074	3	0.19	2024+2025	0.0074	1	0.02	0.001	0.00	0.01
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**3.00**				**0.07**			

* Third trimester of pregnancy

803-851 Old County Road, San Carlos, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information					Maximum	
				DPM Conc (ug/m3)	Age	Infant/Child		Modeled DPM Conc (ug/m3)	Age	Adult			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Hazard Index**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2022	0.0122	10	0.17	2022	0.0122	-	-			
1	1	0 - 1	2022	0.0122	10	2.01	2022	0.0122	1	0.04	0.002	0.005	0.02
2	1	1 - 2	2023	0.0086	10	1.41	2023	0.0086	1	0.02	0.002	0.001	0.01
3	1	2 - 3	2024+2025	0.0094	3	0.24	2024+2025	0.0094	1	0.03	0.002	0.001	0.01
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**3.82**				**0.09**			

* Third trimester of pregnancy

803-851 Old County Road, San Carlos, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
						Infant/Child		Modeled		Adult	Adult	Maximum		
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2022	0.0131	10	0.18	2022	0.0131	-	-			
1	1	0 - 1	2022	0.0131	10	2.15	2022	0.0131	1	0.04	0.00	0.005	0.02
2	1	1 - 2	2023	0.0092	10	1.51	2023	0.0092	1	0.03	0.00	0.001	0.01
3	1	2 - 3	2024+2025	0.0101	3	0.26	2024+2025	0.0101	1	0.03	0.00	0.001	0.01
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**4.10**				**0.09**			

* Third trimester of pregnancy

803-851 Old County Road, San Carlos, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Children's Place Preschool - 1 meter - Child Exposure

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
SAF = Student Adjustment Factor (unitless)
= (24 hrs/9 hrs) x (7 days/5 days) = 3.73
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	School Infant	School Child	Adult
Age -->	**0 - <2**	**2 - <16**	**16 - 30**
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	240
A =	1	1	1
EF =	250	250	250
AT =	70	70	70
SAF =	3.73	3.73	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age* Sensitivity Factor	Child Cancer Risk (per million)
1	1	2 - 3	2022	0.0046	3	0.3
2	1	3 - 4	2023	0.0032	3	0.2
3	1	4 - 5	2024 + 2025	0.0035	3	0.2
4	1			0.0000	3	0.0
5	1			0.0000	3	0.0
6	1			0.0000	3	0.0
7	1			0.0000	3	0.0
8	1			0.0000	3	0.0
9	1			0.0000	3	0.0
Total Increased Cancer Risk						**0.70**

* Children assumed to be 2 years of age or older with 3 years of Construction Exposure

Maximum		
Hazard Index	Fugitive PM2.5	Total PM2.5
0.0009	0.0019	0.006
0.0006	0.0003	0.004
0.0007	0.0003	0.004

Attachment 5: Cumulative Community Risk from Existing TAC Sources

803-851 Old County Road, San Carlos, CA

Standby Emergency Generator Impacts

Off-site Sensitive Receptors

MEI Locations = 1.5 meter receptor height

DPM Emission Rates			
	DPM Emissions per Generator		
	Max Daily	Annual	
Source Type	(lb/day)	(lb/year)	
450 & 500-kW, 600 & 670-hp Generator	0.042	15.32	
CalEEMod DPM Emissions	7.66E-03	tons/year	

Modeling Information	
Model	AERMOD
Source	Diesel Generator Engine
Source Type	Point
Meteorological Data	2011 - 2015 San Carlos Airport Meteorological Data
Point Source Stack Parameters	
Generator Engine Size (hp)	600 & 670
Stack Height (ft)	10.00
Stack Diameter (ft)**	0.60
Exhaust Gas Flowrate (CFM)*	2527.73
Stack Exit Velocity (ft/sec)**	149.00
Exhaust Temperature (˚F)**	872.00
Emissions Rate (lb/hr)	0.001749

* AERMOD default

**BAAQMD default generator parameters

803-851 Old County Road, San Carlos, CA - Cancer Risks from Project Operation
Project Emergency Generators
Impacts at Off-Site Receptors- 1.5m MEI Receptor Heights
Impact at Project MEI (27-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2022	0.0000	10	0.000				
1	1	0 - 1	2022	0.0000	10	0.000				
2	1	1 - 2	2023	0.0000	10	0.000				
3	1	2 - 3	2024	0.0000	3	0.000				
4	1	3 - 4	2025	0.0000	3	0.000				
5	1	4 - 5	2026	0.0003	3	0.008		0.00006	0.0000	0.0003
6	1	5 - 6	2027	0.0003	3	0.008		0.00006	0.0000	0.0003
7	1	6 - 7	2028	0.0003	3	0.008		0.00006	0.0000	0.0003
8	1	7 - 8	2029	0.0003	3	0.008		0.00006	0.0000	0.0003
9	1	8 - 9	2030	0.0003	3	0.008		0.00006	0.0000	0.0003
10	1	9 - 10	2031	0.0003	3	0.008		0.00006	0.0000	0.0003
11	1	10 - 11	2032	0.0003	3	0.008		0.00006	0.0000	0.0003
12	1	11 - 12	2033	0.0003	3	0.008		0.00006	0.0000	0.0003
13	1	12 - 13	2034	0.0003	3	0.008		0.00006	0.0000	0.0003
14	1	13 - 14	2035	0.0003	3	0.008		0.00006	0.0000	0.0003
15	1	14 - 15	2036	0.0003	3	0.008		0.00006	0.0000	0.0003
16	1	15 - 16	2037	0.0003	3	0.008		0.00006	0.0000	0.0003
17	1	16-17	2038	0.0003	1	0.001		0.00006	0.0000	0.0003
18	1	17-18	2039	0.0003	1	0.001		0.00006	0.0000	0.0003
19	1	18-19	2040	0.0003	1	0.001		0.00006	0.0000	0.0003
20	1	19-20	2041	0.0003	1	0.001		0.00006	0.0000	0.0003
21	1	20-21	2042	0.0003	1	0.001		0.00006	0.0000	0.0003
22	1	21-22	2043	0.0003	1	0.001		0.00006	0.0000	0.0003
23	1	22-23	2044	0.0003	1	0.001		0.00006	0.0000	0.0003
24	1	23-24	2045	0.0003	1	0.001		0.00006	0.0000	0.0003
25	1	24-25	2046	0.0003	1	0.001		0.00006	0.0000	0.0003
26	1	25-26	2047	0.0003	1	0.001		0.00006	0.0000	0.0003
27	1	26-27	2048	0.0003	1	0.001		0.00006	0.0000	0.0003
28	1	27-28	2049	0.0003	1	0.001		0.00006	0.0000	0.0003
29	1	28-29	2050	0.0003	1	0.001		0.00006	0.0000	0.0003
30	1	29-30	2051	0.0003	1	0.001		0.00006	0.0000	0.0003
Total Increased Cancer Risk						**0.11**	**Max**	**0.00006**	**0.0000**	**0.0003**

* Third trimester of pregnancy

Evaporative Cooling Tower PM Emissions

No. Cooling Tower Cells			2
Total Water Flow Rate (gpm)			4,500
Cooling Tower Circulating Water TDS (ppm)*			72
Mist Eliminator Efficiency (%)			0.005
Total Cooling Tower Drift (gpm)			0.23
Particulate Matter Emissions			
	PM	PM10	PM2.5
Fraction of PM**	1.00	0.70	0.42
Hourly (lb/hr)	0.01	0.01	0.00
Daily (lb/day)	0.19	0.14	0.08
Annual lb/yr)	71.01	49.71	29.83
Annual (ton/yr)	0.04	0.02	0.01

* Maximum TDS value provided by applicant.

** South Coast AQMD, Final-Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds, Appendix A.

803-851 Old County Road, San Carlos, CA - Project Cooling Tower - PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations - Project Cooling Tower at Childcare MEI and MAX Residential Receptors (1 m and 1.5 m receptor heights)

Emission Year	2026
Receptor Information	Childcare MEI and Max residential receptors
Number of Receptors	2
Receptor Height	1 and 1.5 meters
Receptor Distances	At Childcare MEI and Max residential locations

Meteorological Conditions	
BAQMD San Carlos Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)	
	Childcare MEI	Max Residential
2013-2017	0.00075	0.00134

```
           File Name:   Local Roadways 2022.EF
CT-EMFAC2017 Version:   1.0.2.27401
            Run Date:   2/22/2022 12:05:24 PM
                Area:   San Mateo (SF)
       Analysis Year:   2022
              Season:   Annual

======================================================================

Vehicle Category        VMT Fraction            Diesel VMT Fraction     Gas VMT Fraction
                        Across Category         Within Category         Within Category
         Truck 1             0.017                  0.472                   0.528
         Truck 2             0.014                  0.870                   0.114
       Non-Truck             0.969                  0.017                   0.964

======================================================================

              Road Type:       Major/Collector
     Silt Loading Factor:                  CARB         0.032 g/m2
Precipitation Correction:                  CARB         P = 60 days     N = 365 days

======================================================================

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

       Pollutant Name        25 mph          30 mph          35 mph
                PM2.5      0.002443        0.001982        0.001702
                  TOG      0.057463        0.045778        0.038307
            Diesel PM      0.000568        0.000522        0.000503

======================================================================

Fleet Average Running Loss Emission Factors (grams/veh-hour)

       Pollutant Name   Emission Factor
                  TOG          1.245454

======================================================================

Fleet Average Tire Wear Factors (grams/veh-mile)

       Pollutant Name   Emission Factor
                PM2.5          0.002046

======================================================================

Fleet Average Brake Wear Factors (grams/veh-mile)

       Pollutant Name   Emission Factor
                PM2.5          0.016802

======================================================================

Fleet Average Road Dust Factors (grams/veh-mile)

       Pollutant Name   Emission Factor
                PM2.5          0.014819

============================END=======================================
```

803-851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Commercial Street
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NB_COM	Commercial Street Northbound	NB	1	385.3	0.24	9.7	31.7	3.4	25	17,236
DPM_SB_COM	Commercial Street Southbound	SB	1	385.2	0.24	9.7	31.7	3.4	25	17,236
									Total	34,472

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00057			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_NB_COM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.85%	664	2.51E-05	9	6.74%	1162	4.39E-05	17	6.40%	1104	4.17E-05
2	3.18%	549	2.07E-05	10	8.25%	1421	5.37E-05	18	4.10%	706	2.67E-05
3	2.35%	404	1.53E-05	11	6.24%	1075	4.06E-05	19	2.38%	411	1.55E-05
4	1.01%	173	6.54E-06	12	7.41%	1277	4.82E-05	20	1.21%	209	7.89E-06
5	1.01%	173	6.54E-06	13	6.74%	1162	4.39E-05	21	3.05%	526	1.99E-05
6	2.18%	375	1.42E-05	14	6.57%	1133	4.28E-05	22	5.06%	873	3.30E-05
7	4.73%	815	3.08E-05	15	5.90%	1017	3.84E-05	23	3.35%	577	2.18E-05
8	3.39%	584	2.21E-05	16	4.23%	729	2.75E-05	24	0.67%	115	4.36E-06
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_COM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.85%	664	2.51E-05	9	6.74%	1162	4.39E-05	17	6.40%	1104	4.17E-05
2	3.18%	549	2.07E-05	10	8.25%	1421	5.37E-05	18	4.10%	706	2.67E-05
3	2.35%	404	1.53E-05	11	6.24%	1075	4.06E-05	19	2.38%	411	1.55E-05
4	1.01%	173	6.54E-06	12	7.41%	1277	4.82E-05	20	1.21%	209	7.89E-06
5	1.01%	173	6.54E-06	13	6.74%	1162	4.39E-05	21	3.05%	526	1.99E-05
6	2.18%	375	1.42E-05	14	6.57%	1133	4.28E-05	22	5.06%	873	3.30E-05
7	4.73%	815	3.08E-05	15	5.90%	1017	3.84E-05	23	3.35%	577	2.18E-05
8	3.39%	584	2.21E-05	16	4.23%	729	2.75E-05	24	0.67%	115	4.36E-06
								Total		17,236	

803-851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Commercial Street
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_NB_COM	Commercial Street Northbound	NB	1	385.3	0.24	9.7	32	1.3	25	17,236
PM2.5_SB_COM	Commercial Street Southbound	SB	1	385.2	0.24	9.7	32	1.3	25	17,236
									Total	34,472

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002443			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_COM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	193	3.13E-05	9	7.12%	1227	1.99E-04	17	7.43%	1281	2.08E-04
2	0.41%	71	1.16E-05	10	4.38%	755	1.23E-04	18	8.24%	1420	2.31E-04
3	0.38%	65	1.05E-05	11	4.65%	801	1.30E-04	19	5.72%	987	1.60E-04
4	0.17%	30	4.84E-06	12	5.89%	1015	1.65E-04	20	4.30%	742	1.21E-04
5	0.45%	78	1.27E-05	13	6.17%	1064	1.73E-04	21	3.26%	561	9.12E-05
6	0.85%	147	2.38E-05	14	6.05%	1042	1.69E-04	22	3.31%	571	9.27E-05
7	3.73%	644	1.05E-04	15	7.05%	1216	1.98E-04	23	2.49%	429	6.96E-05
8	7.77%	1339	2.17E-04	16	7.19%	1239	2.01E-04	24	1.87%	323	5.25E-05
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_COM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	193	3.13E-05	9	7.12%	1227	1.99E-04	17	7.43%	1281	2.08E-04
2	0.41%	71	1.16E-05	10	4.38%	755	1.23E-04	18	8.24%	1420	2.31E-04
3	0.38%	65	1.05E-05	11	4.65%	801	1.30E-04	19	5.72%	987	1.60E-04
4	0.17%	30	4.83E-06	12	5.89%	1015	1.65E-04	20	4.30%	742	1.20E-04
5	0.45%	78	1.27E-05	13	6.17%	1064	1.73E-04	21	3.26%	561	9.11E-05
6	0.85%	147	2.38E-05	14	6.05%	1042	1.69E-04	22	3.31%	571	9.27E-05
7	3.73%	644	1.05E-04	15	7.05%	1216	1.97E-04	23	2.49%	429	6.96E-05
8	7.77%	1339	2.17E-04	16	7.19%	1239	2.01E-04	24	1.87%	323	5.25E-05
								Total		17,236	

803-851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Commercial Street
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NB_COM	Commercial Street Northbound	NB	1	385.3	0.24	9.7	32	1.3	25	17,236
TEXH_SB_COM	Commercial Street Southbound	SB	1	385.2	0.24	9.7	32	1.3	25	17,236
									Total	34,472

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.05746			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_COM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	193	7.36E-04	9	7.12%	1227	4.69E-03	17	7.43%	1281	4.89E-03
2	0.41%	71	2.73E-04	10	4.38%	755	2.88E-03	18	8.24%	1420	5.43E-03
3	0.38%	65	2.47E-04	11	4.65%	801	3.06E-03	19	5.72%	987	3.77E-03
4	0.17%	30	1.14E-04	12	5.89%	1015	3.88E-03	20	4.30%	742	2.84E-03
5	0.45%	78	2.99E-04	13	6.17%	1064	4.07E-03	21	3.26%	561	2.14E-03
6	0.85%	147	5.60E-04	14	6.05%	1042	3.98E-03	22	3.31%	571	2.18E-03
7	3.73%	644	2.46E-03	15	7.05%	1216	4.65E-03	23	2.49%	429	1.64E-03
8	7.77%	1339	5.12E-03	16	7.19%	1239	4.73E-03	24	1.87%	323	1.23E-03
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_COM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	193	7.36E-04	9	7.12%	1227	4.69E-03	17	7.43%	1281	4.89E-03
2	0.41%	71	2.73E-04	10	4.38%	755	2.88E-03	18	8.24%	1420	5.42E-03
3	0.38%	65	2.47E-04	11	4.65%	801	3.06E-03	19	5.72%	987	3.77E-03
4	0.17%	30	1.14E-04	12	5.89%	1015	3.88E-03	20	4.30%	742	2.83E-03
5	0.45%	78	2.98E-04	13	6.17%	1064	4.07E-03	21	3.26%	561	2.14E-03
6	0.85%	147	5.60E-04	14	6.05%	1042	3.98E-03	22	3.31%	571	2.18E-03
7	3.73%	644	2.46E-03	15	7.05%	1216	4.65E-03	23	2.49%	429	1.64E-03
8	7.77%	1339	5.11E-03	16	7.19%	1239	4.73E-03	24	1.87%	323	1.23E-03
								Total		17,236	

803-851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Commercial Street
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NB_COM	Commercial Street Northbound	NB	1	385.3	0.24	9.7	32	1.3	25	17,236
TEVAP_SB_COM	Commercial Street Southbound	SB	1	385.2	0.24	9.7	32	1.3	25	17,236
									Total	34,472

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.24545			
Emissions per Vehicle per Mile (g/VMT)	0.04982			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_COM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	193	6.38E-04	9	7.12%	1227	4.07E-03	17	7.43%	1281	4.24E-03
2	0.41%	71	2.37E-04	10	4.38%	755	2.50E-03	18	8.24%	1420	4.70E-03
3	0.38%	65	2.14E-04	11	4.65%	801	2.65E-03	19	5.72%	987	3.27E-03
4	0.17%	30	9.86E-05	12	5.89%	1015	3.36E-03	20	4.30%	742	2.46E-03
5	0.45%	78	2.59E-04	13	6.17%	1064	3.53E-03	21	3.26%	561	1.86E-03
6	0.85%	147	4.86E-04	14	6.05%	1042	3.45E-03	22	3.31%	571	1.89E-03
7	3.73%	644	2.13E-03	15	7.05%	1216	4.03E-03	23	2.49%	429	1.42E-03
8	7.77%	1339	4.43E-03	16	7.19%	1239	4.10E-03	24	1.87%	323	1.07E-03
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_COM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	193	6.38E-04	9	7.12%	1227	4.06E-03	17	7.43%	1281	4.24E-03
2	0.41%	71	2.37E-04	10	4.38%	755	2.50E-03	18	8.24%	1420	4.70E-03
3	0.38%	65	2.14E-04	11	4.65%	801	2.65E-03	19	5.72%	987	3.27E-03
4	0.17%	30	9.86E-05	12	5.89%	1015	3.36E-03	20	4.30%	742	2.46E-03
5	0.45%	78	2.59E-04	13	6.17%	1064	3.52E-03	21	3.26%	561	1.86E-03
6	0.85%	147	4.86E-04	14	6.05%	1042	3.45E-03	22	3.31%	571	1.89E-03
7	3.73%	644	2.13E-03	15	7.05%	1216	4.03E-03	23	2.49%	429	1.42E-03
8	7.77%	1339	4.43E-03	16	7.19%	1239	4.10E-03	24	1.87%	323	1.07E-03
								Total		17,236	

803-851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Commercial Street
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = **2022**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NB_COM	Commercial Street Northbound	NB	1	385.3	0.24	9.7	32	1.3	25	17,236
FUG_SB_COM	Commercial Street Southbound	SB	1	385.2	0.24	9.7	32	1.3	25	17,236
									Total	34,472

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00205			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01680			
Road Dust - Emissions per Vehicle (g/VMT)	0.01482			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03367			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_COM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	193	4.31E-04	9	7.12%	1227	2.75E-03	17	7.43%	1281	2.87E-03
2	0.41%	71	1.60E-04	10	4.38%	755	1.69E-03	18	8.24%	1420	3.18E-03
3	0.38%	65	1.45E-04	11	4.65%	801	1.79E-03	19	5.72%	987	2.21E-03
4	0.17%	30	6.66E-05	12	5.89%	1015	2.27E-03	20	4.30%	742	1.66E-03
5	0.45%	78	1.75E-04	13	6.17%	1064	2.38E-03	21	3.26%	561	1.26E-03
6	0.85%	147	3.28E-04	14	6.05%	1042	2.33E-03	22	3.31%	571	1.28E-03
7	3.73%	644	1.44E-03	15	7.05%	1216	2.72E-03	23	2.49%	429	9.60E-04
8	7.77%	1339	3.00E-03	16	7.19%	1239	2.77E-03	24	1.87%	323	7.23E-04
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_COM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	193	4.31E-04	9	7.12%	1227	2.75E-03	17	7.43%	1281	2.87E-03
2	0.41%	71	1.60E-04	10	4.38%	755	1.69E-03	18	8.24%	1420	3.18E-03
3	0.38%	65	1.45E-04	11	4.65%	801	1.79E-03	19	5.72%	987	2.21E-03
4	0.17%	30	6.66E-05	12	5.89%	1015	2.27E-03	20	4.30%	742	1.66E-03
5	0.45%	78	1.75E-04	13	6.17%	1064	2.38E-03	21	3.26%	561	1.26E-03
6	0.85%	147	3.28E-04	14	6.05%	1042	2.33E-03	22	3.31%	571	1.28E-03
7	3.73%	644	1.44E-03	15	7.05%	1216	2.72E-03	23	2.49%	429	9.59E-04
8	7.77%	1339	3.00E-03	16	7.19%	1239	2.77E-03	24	1.87%	323	7.23E-04
								Total		17,236	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - El Camino Real
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NB_ECR	El Camino Real Northbound	NB	2	755.4	0.47	13.3	43.7	3.4	35	17,543
DPM_SB_ECR	El Camino Real Southbound	SB	3	750.5	0.47	17.0	55.7	3.4	35	17,543
									Total	35,086

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00050			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_NB_ECR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.85%	676	4.43E-05	9	6.74%	1182	7.75E-05	17	6.40%	1124	7.37E-05
2	3.18%	558	3.66E-05	10	8.25%	1447	9.49E-05	18	4.10%	719	4.72E-05
3	2.35%	411	2.70E-05	11	6.24%	1094	7.18E-05	19	2.38%	418	2.74E-05
4	1.01%	176	1.16E-05	12	7.41%	1300	8.52E-05	20	1.21%	213	1.39E-05
5	1.01%	176	1.16E-05	13	6.74%	1182	7.75E-05	21	3.05%	536	3.51E-05
6	2.18%	382	2.51E-05	14	6.57%	1153	7.56E-05	22	5.06%	888	5.83E-05
7	4.73%	830	5.44E-05	15	5.90%	1035	6.79E-05	23	3.35%	588	3.85E-05
8	3.39%	595	3.90E-05	16	4.23%	742	4.86E-05	24	0.67%	118	7.71E-06
								Total		17,543	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_ECR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.85%	676	4.40E-05	9	6.74%	1182	7.70E-05	17	6.40%	1124	7.32E-05
2	3.18%	558	3.64E-05	10	8.25%	1447	9.43E-05	18	4.10%	719	4.69E-05
3	2.35%	411	2.68E-05	11	6.24%	1094	7.13E-05	19	2.38%	418	2.73E-05
4	1.01%	176	1.15E-05	12	7.41%	1300	8.47E-05	20	1.21%	213	1.39E-05
5	1.01%	176	1.15E-05	13	6.74%	1182	7.70E-05	21	3.05%	536	3.49E-05
6	2.18%	382	2.49E-05	14	6.57%	1153	7.51E-05	22	5.06%	888	5.79E-05
7	4.73%	830	5.41E-05	15	5.90%	1035	6.75E-05	23	3.35%	588	3.83E-05
8	3.39%	595	3.87E-05	16	4.23%	742	4.83E-05	24	0.67%	118	7.66E-06
								Total		17,543	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - El Camino Real
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_NB_ECR	El Camino Real Northbound	NB	2	755.4	0.47	13.3	44	1.3	35	17,543
PM2.5_SB_ECR	El Camino Real Southbound	SB	3	750.5	0.47	17.0	56	1.3	35	17,543
									Total	35,086

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001702			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_ECR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	196	4.35E-05	9	7.12%	1249	2.77E-04	17	7.43%	1303	2.89E-04
2	0.41%	73	1.61E-05	10	4.38%	768	1.70E-04	18	8.24%	1445	3.21E-04
3	0.38%	66	1.46E-05	11	4.65%	815	1.81E-04	19	5.72%	1004	2.23E-04
4	0.17%	30	6.72E-06	12	5.89%	1033	2.29E-04	20	4.30%	755	1.68E-04
5	0.45%	80	1.76E-05	13	6.17%	1083	2.40E-04	21	3.26%	571	1.27E-04
6	0.85%	149	3.31E-05	14	6.05%	1061	2.35E-04	22	3.31%	581	1.29E-04
7	3.73%	655	1.45E-04	15	7.05%	1237	2.75E-04	23	2.49%	436	9.68E-05
8	7.77%	1362	3.02E-04	16	7.19%	1261	2.80E-04	24	1.87%	329	7.29E-05
								Total		17,543	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_ECR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	196	4.32E-05	9	7.12%	1249	2.75E-04	17	7.43%	1303	2.87E-04
2	0.41%	73	1.60E-05	10	4.38%	768	1.69E-04	18	8.24%	1445	3.19E-04
3	0.38%	66	1.45E-05	11	4.65%	815	1.80E-04	19	5.72%	1004	2.21E-04
4	0.17%	30	6.68E-06	12	5.89%	1033	2.28E-04	20	4.30%	755	1.66E-04
5	0.45%	80	1.75E-05	13	6.17%	1083	2.39E-04	21	3.26%	571	1.26E-04
6	0.85%	149	3.29E-05	14	6.05%	1061	2.34E-04	22	3.31%	581	1.28E-04
7	3.73%	655	1.44E-04	15	7.05%	1237	2.73E-04	23	2.49%	436	9.62E-05
8	7.77%	1362	3.00E-04	16	7.19%	1261	2.78E-04	24	1.87%	329	7.25E-05
								Total		17,543	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - El Camino Real
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NB_ECR	El Camino Real Northbound	NB	2	755.4	0.47	13.3	44	1.3	35	17,543
TEXH_SB_ECR	El Camino Real Southbound	SB	3	750.5	0.47	17.0	56	1.3	35	17,543
									Total	35,086

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.03831			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_ECR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	196	9.80E-04	9	7.12%	1249	6.24E-03	17	7.43%	1303	6.51E-03
2	0.41%	73	3.63E-04	10	4.38%	768	3.84E-03	18	8.24%	1445	7.22E-03
3	0.38%	66	3.29E-04	11	4.65%	815	4.07E-03	19	5.72%	1004	5.02E-03
4	0.17%	30	1.51E-04	12	5.89%	1033	5.16E-03	20	4.30%	755	3.77E-03
5	0.45%	80	3.97E-04	13	6.17%	1083	5.41E-03	21	3.26%	571	2.85E-03
6	0.85%	149	7.45E-04	14	6.05%	1061	5.30E-03	22	3.31%	581	2.90E-03
7	3.73%	655	3.27E-03	15	7.05%	1237	6.18E-03	23	2.49%	436	2.18E-03
8	7.77%	1362	6.80E-03	16	7.19%	1261	6.30E-03	24	1.87%	329	1.64E-03
								Total		17,543	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_ECR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	196	9.73E-04	9	7.12%	1249	6.20E-03	17	7.43%	1303	6.47E-03
2	0.41%	73	3.61E-04	10	4.38%	768	3.81E-03	18	8.24%	1445	7.17E-03
3	0.38%	66	3.27E-04	11	4.65%	815	4.04E-03	19	5.72%	1004	4.98E-03
4	0.17%	30	1.50E-04	12	5.89%	1033	5.13E-03	20	4.30%	755	3.75E-03
5	0.45%	80	3.95E-04	13	6.17%	1083	5.37E-03	21	3.26%	571	2.83E-03
6	0.85%	149	7.40E-04	14	6.05%	1061	5.27E-03	22	3.31%	581	2.88E-03
7	3.73%	655	3.25E-03	15	7.05%	1237	6.14E-03	23	2.49%	436	2.16E-03
8	7.77%	1362	6.76E-03	16	7.19%	1261	6.26E-03	24	1.87%	329	1.63E-03
								Total		17,543	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - El Camino Real
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NB_ECR	El Camino Real Northbound	NB	2	755.4	0.47	13.3	44	1.3	35	17,543
TEVAP_SB_ECR	El Camino Real Southbound	SB	3	750.5	0.47	17.0	56	1.3	35	17,543
									Total	35,086

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	1.24545			
Emissions per Vehicle per Mile (g/VMT)	0.03558			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_ECR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	196	9.10E-04	9	7.12%	1249	5.79E-03	17	7.43%	1303	6.05E-03
2	0.41%	73	3.37E-04	10	4.38%	768	3.56E-03	18	8.24%	1445	6.70E-03
3	0.38%	66	3.06E-04	11	4.65%	815	3.78E-03	19	5.72%	1004	4.66E-03
4	0.17%	30	1.41E-04	12	5.89%	1033	4.79E-03	20	4.30%	755	3.50E-03
5	0.45%	80	3.69E-04	13	6.17%	1083	5.02E-03	21	3.26%	571	2.65E-03
6	0.85%	149	6.92E-04	14	6.05%	1061	4.92E-03	22	3.31%	581	2.70E-03
7	3.73%	655	3.04E-03	15	7.05%	1237	5.74E-03	23	2.49%	436	2.02E-03
8	7.77%	1362	6.32E-03	16	7.19%	1261	5.85E-03	24	1.87%	329	1.52E-03
								Total		17,543	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_ECR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	196	9.04E-04	9	7.12%	1249	5.76E-03	17	7.43%	1303	6.01E-03
2	0.41%	73	3.35E-04	10	4.38%	768	3.54E-03	18	8.24%	1445	6.66E-03
3	0.38%	66	3.04E-04	11	4.65%	815	3.76E-03	19	5.72%	1004	4.63E-03
4	0.17%	30	1.40E-04	12	5.89%	1033	4.76E-03	20	4.30%	755	3.48E-03
5	0.45%	80	3.67E-04	13	6.17%	1083	4.99E-03	21	3.26%	571	2.63E-03
6	0.85%	149	6.88E-04	14	6.05%	1061	4.89E-03	22	3.31%	581	2.68E-03
7	3.73%	655	3.02E-03	15	7.05%	1237	5.70E-03	23	2.49%	436	2.01E-03
8	7.77%	1362	6.28E-03	16	7.19%	1261	5.81E-03	24	1.87%	329	1.52E-03
								Total		17,543	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - El Camino Real
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = **2022**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NB_ECR	El Camino Real Northbound	NB	2	755.4	0.47	13.3	44	1.3	35	17,543
FUG_SB_ECR	El Camino Real Southbound	SB	3	750.5	0.47	17.0	56	1.3	35	17,543
									Total	35,086

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00205			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01680			
Road Dust - Emissions per Vehicle (g/VMT)	0.01482			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03367			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_ECR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	196	8.61E-04	9	7.12%	1249	5.48E-03	17	7.43%	1303	5.72E-03
2	0.41%	73	3.19E-04	10	4.38%	768	3.37E-03	18	8.24%	1445	6.34E-03
3	0.38%	66	2.89E-04	11	4.65%	815	3.58E-03	19	5.72%	1004	4.41E-03
4	0.17%	30	1.33E-04	12	5.89%	1033	4.53E-03	20	4.30%	755	3.31E-03
5	0.45%	80	3.49E-04	13	6.17%	1083	4.75E-03	21	3.26%	571	2.51E-03
6	0.85%	149	6.55E-04	14	6.05%	1061	4.66E-03	22	3.31%	581	2.55E-03
7	3.73%	655	2.88E-03	15	7.05%	1237	5.43E-03	23	2.49%	436	1.91E-03
8	7.77%	1362	5.98E-03	16	7.19%	1261	5.54E-03	24	1.87%	329	1.44E-03
								Total		17,543	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_ECR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	196	8.55E-04	9	7.12%	1249	5.45E-03	17	7.43%	1303	5.68E-03
2	0.41%	73	3.17E-04	10	4.38%	768	3.35E-03	18	8.24%	1445	6.30E-03
3	0.38%	66	2.87E-04	11	4.65%	815	3.55E-03	19	5.72%	1004	4.38E-03
4	0.17%	30	1.32E-04	12	5.89%	1033	4.51E-03	20	4.30%	755	3.29E-03
5	0.45%	80	3.47E-04	13	6.17%	1083	4.72E-03	21	3.26%	571	2.49E-03
6	0.85%	149	6.51E-04	14	6.05%	1061	4.63E-03	22	3.31%	581	2.53E-03
7	3.73%	655	2.86E-03	15	7.05%	1237	5.40E-03	23	2.49%	436	1.90E-03
8	7.77%	1362	5.94E-03	16	7.19%	1261	5.50E-03	24	1.87%	329	1.43E-03
								Total		17,543	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Old County Road
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2022**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NB_OLD	Old Country Road Northbound	NB	1	772.2	0.48	9.7	31.7	3.4	35	17,236
DPM_SB_OLD	Old Country Road Southbound	SB	1	773.5	0.48	9.7	31.7	3.4	35	17,236
									Total	34,472

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00050			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_NB_OLD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.85%	664	4.45E-05	9	6.74%	1162	7.79E-05	17	6.40%	1104	7.40E-05
2	3.18%	549	3.68E-05	10	8.25%	1421	9.53E-05	18	4.10%	706	4.74E-05
3	2.35%	404	2.71E-05	11	6.24%	1075	7.21E-05	19	2.38%	411	2.76E-05
4	1.01%	173	1.16E-05	12	7.41%	1277	8.56E-05	20	1.21%	209	1.40E-05
5	1.01%	173	1.16E-05	13	6.74%	1162	7.79E-05	21	3.05%	526	3.53E-05
6	2.18%	375	2.52E-05	14	6.57%	1133	7.59E-05	22	5.06%	873	5.85E-05
7	4.73%	815	5.47E-05	15	5.90%	1017	6.82E-05	23	3.35%	577	3.87E-05
8	3.39%	584	3.92E-05	16	4.23%	729	4.88E-05	24	0.67%	115	7.74E-06
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_OLD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.85%	664	4.46E-05	9	6.74%	1162	7.80E-05	17	6.40%	1104	7.41E-05
2	3.18%	549	3.68E-05	10	8.25%	1421	9.55E-05	18	4.10%	706	4.74E-05
3	2.35%	404	2.71E-05	11	6.24%	1075	7.22E-05	19	2.38%	411	2.76E-05
4	1.01%	173	1.16E-05	12	7.41%	1277	8.58E-05	20	1.21%	209	1.40E-05
5	1.01%	173	1.16E-05	13	6.74%	1162	7.80E-05	21	3.05%	526	3.54E-05
6	2.18%	375	2.52E-05	14	6.57%	1133	7.61E-05	22	5.06%	873	5.86E-05
7	4.73%	815	5.47E-05	15	5.90%	1017	6.83E-05	23	3.35%	577	3.88E-05
8	3.39%	584	3.92E-05	16	4.23%	729	4.89E-05	24	0.67%	115	7.76E-06
								Total		17,236	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Old County Road
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_NB_OLD	Old Country Road Northbound	NB	1	772.2	0.48	9.7	32	1.3	35	17,236
PM2.5_SB_OLD	Old Country Road Southbound	SB	1	773.5	0.48	9.7	32	1.3	35	17,236
									Total	34,472

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001702			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_OLD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	193	4.37E-05	9	7.12%	1227	2.78E-04	17	7.43%	1281	2.90E-04
2	0.41%	71	1.62E-05	10	4.38%	755	1.71E-04	18	8.24%	1420	3.22E-04
3	0.38%	65	1.47E-05	11	4.65%	801	1.82E-04	19	5.72%	987	2.24E-04
4	0.17%	30	6.75E-06	12	5.89%	1015	2.30E-04	20	4.30%	742	1.68E-04
5	0.45%	78	1.77E-05	13	6.17%	1064	2.41E-04	21	3.26%	561	1.27E-04
6	0.85%	147	3.33E-05	14	6.05%	1042	2.36E-04	22	3.31%	571	1.29E-04
7	3.73%	644	1.46E-04	15	7.05%	1216	2.76E-04	23	2.49%	429	9.72E-05
8	7.77%	1339	3.04E-04	16	7.19%	1239	2.81E-04	24	1.87%	323	7.33E-05
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_OLD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	193	4.38E-05	9	7.12%	1227	2.79E-04	17	7.43%	1281	2.91E-04
2	0.41%	71	1.62E-05	10	4.38%	755	1.71E-04	18	8.24%	1420	3.23E-04
3	0.38%	65	1.47E-05	11	4.65%	801	1.82E-04	19	5.72%	987	2.24E-04
4	0.17%	30	6.76E-06	12	5.89%	1015	2.31E-04	20	4.30%	742	1.69E-04
5	0.45%	78	1.78E-05	13	6.17%	1064	2.42E-04	21	3.26%	561	1.27E-04
6	0.85%	147	3.33E-05	14	6.05%	1042	2.37E-04	22	3.31%	571	1.30E-04
7	3.73%	644	1.46E-04	15	7.05%	1216	2.76E-04	23	2.49%	429	9.74E-05
8	7.77%	1339	3.04E-04	16	7.19%	1239	2.82E-04	24	1.87%	323	7.34E-05
								Total		17,236	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Old County Road
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NB_OLD	Old Country Road Northbound	NB	1	772.2	0.48	9.7	32	1.3	35	17,236
TEXH_SB_OLD	Old Country Road Southbound	SB	1	773.5	0.48	9.7	32	1.3	35	17,236
									Total	34,472

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.03831			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_OLD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	193	9.84E-04	9	7.12%	1227	6.26E-03	17	7.43%	1281	6.54E-03
2	0.41%	71	3.65E-04	10	4.38%	755	3.85E-03	18	8.24%	1420	7.25E-03
3	0.38%	65	3.31E-04	11	4.65%	801	4.09E-03	19	5.72%	987	5.04E-03
4	0.17%	30	1.52E-04	12	5.89%	1015	5.18E-03	20	4.30%	742	3.79E-03
5	0.45%	78	3.99E-04	13	6.17%	1064	5.43E-03	21	3.26%	561	2.86E-03
6	0.85%	147	7.48E-04	14	6.05%	1042	5.32E-03	22	3.31%	571	2.91E-03
7	3.73%	644	3.29E-03	15	7.05%	1216	6.21E-03	23	2.49%	429	2.19E-03
8	7.77%	1339	6.83E-03	16	7.19%	1239	6.33E-03	24	1.87%	323	1.65E-03
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_OLD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	193	9.86E-04	9	7.12%	1227	6.28E-03	17	7.43%	1281	6.55E-03
2	0.41%	71	3.65E-04	10	4.38%	755	3.86E-03	18	8.24%	1420	7.26E-03
3	0.38%	65	3.31E-04	11	4.65%	801	4.09E-03	19	5.72%	987	5.05E-03
4	0.17%	30	1.52E-04	12	5.89%	1015	5.19E-03	20	4.30%	742	3.79E-03
5	0.45%	78	4.00E-04	13	6.17%	1064	5.44E-03	21	3.26%	561	2.87E-03
6	0.85%	147	7.50E-04	14	6.05%	1042	5.33E-03	22	3.31%	571	2.92E-03
7	3.73%	644	3.29E-03	15	7.05%	1216	6.22E-03	23	2.49%	429	2.19E-03
8	7.77%	1339	6.85E-03	16	7.19%	1239	6.34E-03	24	1.87%	323	1.65E-03
								Total		17,236	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Old County Road
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NB_OLD	Old Country Road Northbound	NB	1	772.2	0.48	9.7	32	1.3	35	17,236
TEVAP_SB_OLD	Old Country Road Southbound	SB	1	773.5	0.48	9.7	32	1.3	35	17,236
									Total	34,472

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	1.24545			
Emissions per Vehicle per Mile (g/VMT)	0.03558			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_OLD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	193	9.14E-04	9	7.12%	1227	5.82E-03	17	7.43%	1281	6.07E-03
2	0.41%	71	3.39E-04	10	4.38%	755	3.58E-03	18	8.24%	1420	6.73E-03
3	0.38%	65	3.07E-04	11	4.65%	801	3.80E-03	19	5.72%	987	4.68E-03
4	0.17%	30	1.41E-04	12	5.89%	1015	4.81E-03	20	4.30%	742	3.52E-03
5	0.45%	78	3.71E-04	13	6.17%	1064	5.05E-03	21	3.26%	561	2.66E-03
6	0.85%	147	6.95E-04	14	6.05%	1042	4.94E-03	22	3.31%	571	2.71E-03
7	3.73%	644	3.05E-03	15	7.05%	1216	5.77E-03	23	2.49%	429	2.03E-03
8	7.77%	1339	6.35E-03	16	7.19%	1239	5.88E-03	24	1.87%	323	1.53E-03
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_OLD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	193	9.16E-04	9	7.12%	1227	5.83E-03	17	7.43%	1281	6.08E-03
2	0.41%	71	3.39E-04	10	4.38%	755	3.58E-03	18	8.24%	1420	6.74E-03
3	0.38%	65	3.08E-04	11	4.65%	801	3.80E-03	19	5.72%	987	4.69E-03
4	0.17%	30	1.41E-04	12	5.89%	1015	4.82E-03	20	4.30%	742	3.52E-03
5	0.45%	78	3.71E-04	13	6.17%	1064	5.06E-03	21	3.26%	561	2.67E-03
6	0.85%	147	6.96E-04	14	6.05%	1042	4.95E-03	22	3.31%	571	2.71E-03
7	3.73%	644	3.06E-03	15	7.05%	1216	5.78E-03	23	2.49%	429	2.04E-03
8	7.77%	1339	6.36E-03	16	7.19%	1239	5.89E-03	24	1.87%	323	1.53E-03
								Total		17,236	

803 - 851 Old County Road, San Carlos, CA - Off-Site Residential
Cumulative Operation - Old County Road
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = **2022**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NB_OLD	Old Country Road Northbound	NB	1	772.2	0.48	9.7	32	1.3	35	17,236
FUG_SB_OLD	Old Country Road Southbound	SB	1	773.5	0.48	9.7	32	1.3	35	17,236
									Total	34,472

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00205			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01680			
Road Dust - Emissions per Vehicle (g/VMT)	0.01482			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03367			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_OLD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	193	8.65E-04	9	7.12%	1227	5.51E-03	17	7.43%	1281	5.75E-03
2	0.41%	71	3.21E-04	10	4.38%	755	3.39E-03	18	8.24%	1420	6.37E-03
3	0.38%	65	2.90E-04	11	4.65%	801	3.59E-03	19	5.72%	987	4.43E-03
4	0.17%	30	1.34E-04	12	5.89%	1015	4.55E-03	20	4.30%	742	3.33E-03
5	0.45%	78	3.51E-04	13	6.17%	1064	4.77E-03	21	3.26%	561	2.52E-03
6	0.85%	147	6.58E-04	14	6.05%	1042	4.68E-03	22	3.31%	571	2.56E-03
7	3.73%	644	2.89E-03	15	7.05%	1216	5.46E-03	23	2.49%	429	1.92E-03
8	7.77%	1339	6.01E-03	16	7.19%	1239	5.56E-03	24	1.87%	323	1.45E-03
								Total		17,236	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_OLD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	193	8.66E-04	9	7.12%	1227	5.52E-03	17	7.43%	1281	5.76E-03
2	0.41%	71	3.21E-04	10	4.38%	755	3.39E-03	18	8.24%	1420	6.38E-03
3	0.38%	65	2.91E-04	11	4.65%	801	3.60E-03	19	5.72%	987	4.43E-03
4	0.17%	30	1.34E-04	12	5.89%	1015	4.56E-03	20	4.30%	742	3.33E-03
5	0.45%	78	3.51E-04	13	6.17%	1064	4.78E-03	21	3.26%	561	2.52E-03
6	0.85%	147	6.59E-04	14	6.05%	1042	4.69E-03	22	3.31%	571	2.57E-03
7	3.73%	644	2.89E-03	15	7.05%	1216	5.46E-03	23	2.49%	429	1.93E-03
8	7.77%	1339	6.02E-03	16	7.19%	1239	5.57E-03	24	1.87%	323	1.45E-03
								Total		17,236	

803-851 Old County Road, San Carlos, CA - El Camino Real Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Residential MEI Receptor (1.5 meter receptor height)

Emission Year	2022
Receptor Information	Construction Residential MEI receptor
Number of Receptors	1
Receptor Height	4.5 meters
Receptor Distances	At Construction Residential MEI location

Meteorological Conditions

BAAQMD San Carlos Airport Met Data	2011 - 2015
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction Residential MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0041	0.3032	0.2815

Construction Residential MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.2799	0.2665	0.0135

803-851 Old County Road, San Carlos, CA - El Camino Real Traffic Cancer Risk
Impacts at Construction Residential MEI - 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2022	10	0.0041	0.3032	0.2815	0.056	0.024	0.0013	0.08
1	1	0 - 1	2022	10	0.0041	0.3032	0.2815	0.677	0.284	0.0156	0.98
2	1	1 - 2	2023	10	0.0041	0.3032	0.2815	0.677	0.284	0.0156	0.98
3	1	2 - 3	2024	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
4	1	3 - 4	2025	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
5	1	4 - 5	2026	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
6	1	5 - 6	2027	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
7	1	6 - 7	2028	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
8	1	7 - 8	2029	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
9	1	8 - 9	2030	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
10	1	9 - 10	2031	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
11	1	10 - 11	2032	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
12	1	11 - 12	2033	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
13	1	12 - 13	2034	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
14	1	13 - 14	2035	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
15	1	14 - 15	2036	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
16	1	15 - 16	2037	3	0.0041	0.3032	0.2815	0.107	0.045	0.0024	0.15
17	1	16-17	2038	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
18	1	17-18	2039	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
19	1	18-19	2040	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
20	1	19-20	2041	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
21	1	20-21	2042	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
22	1	21-22	2043	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
23	1	22-23	2044	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
24	1	23-24	2045	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
25	1	24-25	2046	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
26	1	25-26	2047	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
27	1	26-27	2048	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
28	1	27-28	2049	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
29	1	28-29	2050	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
30	1	29-30	2051	1	0.0041	0.3032	0.2815	0.012	0.005	0.0003	0.02
Total Increased Cancer Risk								3.07	1.288	0.070	**4.43**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00082	0.27	0.28

* Third trimester of pregnancy

803-851 Old County Road, San Carlos, CA - Old County Road Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Residential MEI Receptor (1.5 meter receptor height)

Emission Year	2022
Receptor Information	Construction Residential MEI receptor
Number of Receptors	1
Receptor Height	1.5 meters
Receptor Distances	At Construction Residential MEI location

Meteorological Conditions

BAAQMD San Carlos Airport Met Data	2011 - 2015
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction School MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0020	0.1399	0.1300

Construction School MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.1292	0.1230	0.0062

803-851 Old County Road, San Carlos, CA - Old County Road Traffic Cancer Risk
Impacts at Construction Residential MEI - 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
SAF = Student Adjustment Factor (unitless)
= (24 hrs/9 hrs) x (7 days/5 days) = 3.73
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
8-Hr BR* =	361	1200	520	240
A =	1	1	1	1
EF =	250	250	250	250
AT =	70	70	70	70
FAH =	1.00	1.00	3.73	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	1	-0.25 - 0*	2022	10	0.0020	0.1399	0.1300	0.077	0.031	0.0017	0.11
1	1	0 - 1	2022	10	0.0020	0.1399	0.1300	0.256	0.103	0.0056	0.36
2	1	1 - 2	2023	10	0.0020	0.1399	0.1300	0.256	0.103	0.0056	0.36
3	1	2 - 3	2024	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
4	1	3 - 4	2025	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
5	1	4 - 5	2026	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
6	1	5 - 6	2027	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
7	1	6 - 7	2028	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
8	1	7 - 8	2029	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
9	1	8 - 9	2030	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
10	1	9 - 10	2031	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
11	1	10 - 11	2032	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
12	1	11 - 12	2033	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
13	1	12 - 13	2034	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
14	1	13 - 14	2035	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
15	1	14 - 15	2036	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
16	1	15 - 16	2037	3	0.0020	0.1399	0.1300	0.124	0.050	0.0027	0.18
17	1	16-17	2038	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
18	1	17-18	2039	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
19	1	18-19	2040	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
20	1	19-20	2041	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
21	1	20-21	2042	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
22	1	21-22	2043	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
23	1	22-23	2044	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
24	1	23-24	2045	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
25	1	24-25	2046	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
26	1	25-26	2047	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
27	1	26-27	2048	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
28	1	27-28	2049	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
29	1	28-29	2050	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
30	1	29-30	2051	1	0.0020	0.1399	0.1300	0.005	0.002	0.0001	0.01
Total Increased Cancer Risk								2.396	0.967	0.053	**3.42**

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0004	0.12	0.13

* Third trimester of pregnancy

803-851 Old County Road, San Carlos, CA - Commercial Street Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Residential MEI Receptor (1.5 meter receptor height)

Emission Year	2022
Receptor Information	Construction Residential MEI receptor
Number of Receptors	1
Receptor Height	1.5 meters
Receptor Distances	At Construction Residential MEI location

Meteorological Conditions

BAAQMD San Carlos Airport Met Data	2011 - 2015
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction School MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0007	0.0644	0.0559

Construction School MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0406	0.0378	0.0028

803-851 Old County Road, San Carlos, CA - Commercial Street Traffic Cancer Risk
Impacts at Construction Residential MEI - 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
SAF = Student Adjustment Factor (unitless)
= (24 hrs/9 hrs) x (7 days/5 days) = 3.73
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
8-Hr BR* =	361	1200	520	240
A =	1	1	1	1
EF =	250	250	250	250
AT =	70	70	70	70
FAH =	1.00	1.00	3.73	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	1	-0.25 - 0*	2022	10	0.0007	0.0644	0.0559	0.027	0.014	0.0007	0.04
1	1	0 - 1	2022	10	0.0007	0.0644	0.0559	0.090	0.047	0.0024	0.14
2	1	1 - 2	2023	10	0.0007	0.0644	0.0559	0.090	0.047	0.0024	0.14
3	1	2 - 3	2024	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
4	1	3 - 4	2025	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
5	1	4 - 5	2026	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
6	1	5 - 6	2027	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
7	1	6 - 7	2028	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
8	1	7 - 8	2029	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
9	1	8 - 9	2030	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
10	1	9 - 10	2031	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
11	1	10 - 11	2032	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
12	1	11 - 12	2033	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
13	1	12 - 13	2034	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
14	1	13 - 14	2035	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
15	1	14 - 15	2036	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
16	1	15 - 16	2037	3	0.0007	0.0644	0.0559	0.044	0.023	0.0012	0.07
17	1	16-17	2038	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
18	1	17-18	2039	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
19	1	18-19	2040	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
20	1	19-20	2041	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
21	1	20-21	2042	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
22	1	21-22	2043	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
23	1	22-23	2044	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
24	1	23-24	2045	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
25	1	24-25	2046	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
26	1	25-26	2047	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
27	1	26-27	2048	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
28	1	27-28	2049	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
29	1	28-29	2050	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
30	1	29-30	2051	1	0.0007	0.0644	0.0559	0.002	0.001	0.0000	0.00
Total Increased Cancer Risk								0.847	0.445	0.023	**1.31**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0001	0.04	0.04

* Third trimester of pregnancy

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**12/1/2021**
Contact Name	Zachary Palm
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x117
Email	zpalm@illingworthrodkin.com
Project Name	803-851 Old County Road
Address	803-851 Old County Road
City	San Carlos
County	San Mateo
Type (residential, commercial, mixed use, industrial, etc.)	Office/R&D
Project Size (# of units or building square feet)	339.933 ksf
Comments:	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in Table A ncomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/,** and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google E[illegible] search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in Table B [illegible]lue section only.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	Plant No.	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	Construction MEI: Distance Adjustment Multiplier	Construction MEI: Adjusted Cancer Risk Estimate	Construction MEI: Adjusted Hazard Risk	Construction MEI: Adjusted PM2.5
1000+	2939	CEMEX Construction Materials Pacific, LLC	1026 Bransten Road	2.72	0.08	64.41		Ready-Mix Concrete Manufacturing		2018 Dataset	0.13	0.36	0.011	8.50
1000+	10925	Royalite Manufacturing Inc	1055 Terminal Way	0.00	0.00	0.00		(1) Metal Coating Operation		2018 Dataset	0.13	0.00	0.000	0.00
1000+	20582	Nxedge San Carlos	1000 Commercial Street	0.75	0.00	0.06		(1) Generator, (2) Boilers, (2) Colvent Cleaning operations		2018 Dataset	0.13	0.10	0.000	0.01
1000+	24886	Grove Construction	1007 Bransten Road	0.16	0.00			(1) Sub-slab Vapor Mitigation System		2018 Dataset	0.13	0.02	0.000	0.00
950	23758	Plantation Coffee Roastery	784 Laurel Street	0.02	0.00	0.01		(1) Coffee Roaster		2018 Dataset	0.15	0.00	0.000	0.00
220	103155	Nielsen Automotive Inc	888 El Camino Real	11.12	0.05			Gas Dispensing Facility		2018 Dataset	0.17	1.93	0.009	0.00
1000+	108501	City of San Carlos - Corporation Yard	1000 Bransten Rd	9.42	0.00	0.01		Gas Dispensing Facility		2018 Dataset	0.02	0.14	0.000	0.00

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

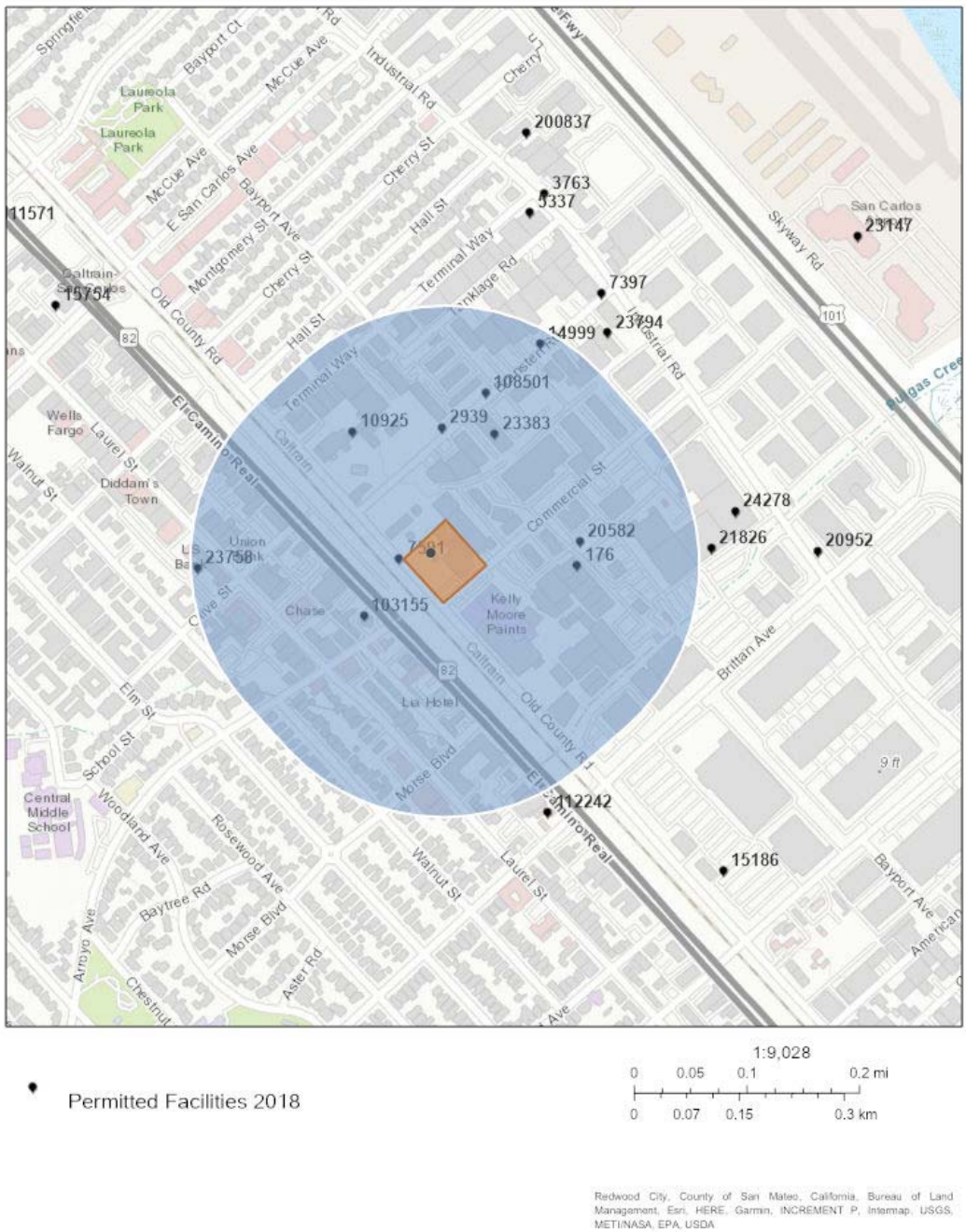
Date last updated:
03/13/2018

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 4,309,929.35 ft²

Dec 1 2021 7:38:12 Eastern Standard Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Facilities 2018	10	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	176	Kelly-Moore Paint Co, Inc	1015 Commercial Street	San Carlos	CA
2	2939	CEMEX Construction Materials Pacific, LLC	1026 Bransten Road	San Carlos	CA
3	7591	Garden Supply	803 Old County Road	San Carlos	CA
4	10925	Royalite Manufacturing Inc	1055 Terminal Way	San Carlos	CA
5	14999	Superior Body Shop	956 Bransten Rd	San Carlos	CA
6	20582	Nxedge San Carlos	1000 Commercial Street	San Carlos	CA
7	23383	Greenmarc, LLC	1007 Bransten Road	San Carlos	CA
8	23758	Plantation Coffee Roastery	784 Laurel Street	San Carlos	CA
9	103155	Nielsen Automotive Inc	888 El Camino Real	San Carlos	CA
10	108501	City of San Carlos - Corporation Yard	1000 Bransten Rd	San Carlos	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	94070	San Mateo	0.000	0.000	0.000	Contact BAAQMD	1
2	94070	San Mateo	2.720	0.080	64.410	Contact BAAQMD	1
3	94070	San Mateo	0.000	0.000	0.150	Contact BAAQMD	1
4	94070	San Mateo	0.000	0.000	0.000	Contact BAAQMD	1
5	94070	San Mateo	0.000	0.000	0.000	Contact BAAQMD	1
6	94070	San Mateo	0.750	0.000	0.060	Contact BAAQMD	1
7	94070	San Mateo	0.160	0.000	0.000	Contact BAAQMD	1
8	94070	San Mateo	0.020	0.000	0.010	Contact BAAQMD	1
9	94070	San Mateo	11.120	0.050	0.000	Gas Dispensing Facility	1
10	94070	San Mateo	9.420	0.000	0.010	Gas Dispensing Facility	1

Note: The estimated risk and hazard impacts from these sources would be expected to be substantially lower when site specific Health Risk Screening Assessments are conducted.

The screening level map is not recommended for evaluating sensitive land uses such as schools, senior centers, day cares, and health facilities.