Appendix A – Air Quality and Greenhouse Gas Assessment

99 SOUTHGATE AVENUE AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Daly City, California

December 10, 2021
Revised January 25, 2022

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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 mixed-use project located at 99 Southgate Avenue in Daly City, California. The air quality impacts and GHG emissions would be associated with the demolition of the existing land uses, construction of the new building and infrastructure, and operation of the project. Air pollutant and GHG emissions associated with the construction and operation of the project were estimated using appropriate computer models. In addition, the potential project health risk impact (including construction and operation) and the impacts of existing toxic air contaminant (TAC) sources affecting the nearby existing receptors were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The 1.98-acre site is currently occupied by a vacant Burlington retail store that is approximately 55,000 square feet (sf). The project proposes to demolish the existing use to construct a seven-story building containing 10,800-sf of retail space on the bottom two floors and 214 dwelling units on floors three through seven. Interior parking spaces would be provided for 321 vehicles. Construction would begin in January of 2023 and be completed by March of 2025.

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 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

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

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

TACs are a broad class of compounds known to cause morbidity or mortality. 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 project site are in the multi-family residences surrounding the project site to the east, south, and southwest. There are also students at the nearby Benjamin Franklin Intermediate School to the south. This project would introduce new sensitive receptors (i.e., residents) to the area.

[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 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 nitrogen oxides, or NO_X, and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified diesel particulate matter 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 PM 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

[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.

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 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 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 in the future.

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

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

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 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.

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.

Daly City 2030 General Plan

The following air resources policies and implementing tasks contained in the Resource Management Element of the Daly City 2030 General Plan[8] are applicable to the proposed project:

> *Policy RME-5:* Assess projected air emissions from new development and associated construction and demolition activities in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, and relative to state and federal standards.

[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)
[8] Daly City, 2013. *Daly City 2030 General Plan*. Adopted March 25, 2013.

- Task RME-5.1: Amend the Planning Division's development review procedures to include a formal step that would help identify how a development project can incorporate design or functional changes that will minimize air quality impacts.

- Task RME-5.2: Incorporate air quality significance thresholds into the Local Thresholds of Significance document identified in Program RME-1.

- Task RME-5.3: Consider cumulative air quality impacts consistent with the region's Clean Air Plan and State law.

- Task RME-5.4: Require the preparation of a Transportation Systems Management plan for new development that has been determined to contribute to a reduction in location air quality. Daly City 2030 General Plan | Resource Management Element 193

- Task RME-5.5: Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments. type, size and operations of the facility.

Policy RME-6: Assess projected air emissions from new development and associated construction and demolition activities in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, and relative to state and federal standards.

- Task RME-6.1: For new, expanded, or modified development proposals (including tenant improvements) that are potential sources of objectionable smoke and odor, require an analysis of possible smoke and odor impacts and the provision of smoke and odor minimization and control measures as mitigation. The requirements for such shall be codified within the Daly City Municipal Code.

- Task RME-6.2: Require new residential development projects and projects categorized as sensitive receptors to be located an adequate distance from facilities that are existing and potential sources of odor. An adequate separate distance will be determined based upon the type, size and operations of the facility.

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 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	None	
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.

*BAAQMD does not have a recommended post-2020 GHG threshold.

Source: Bay Area Air Quality Management District, 2017

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.

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

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

emissions. The project land use types, size, and anticipated construction schedule were input to 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 Use Inputs

The proposed 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 (sf)	Acreage
Apartments Mid Rise	214	Dwelling Unit	252,100	1.98
Regional Shopping Center	10.8	1,000-sf	10,800	
Enclosed Parking with Elevator	300	Parking Spaces	107,303	
Parking Lot	21	Parking Spaces	8,400	

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 provided by the applicant.

The construction equipment worksheet approved by the applicant 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 was provided. 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 2023, project construction would be five-days a week, and the project would be built out over a period of approximately 27 months, or 577 construction workdays. The earliest year of full operation was assumed to be 2026.

Construction Truck 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.

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

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 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 (demolition material export and soil import/export). Since CalEEMod does not address cement trucks, these were treated as vendor travel distances. 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 2023 - 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
	Total Worker[1]	Total Vendor[1]	Total Haul[2]	
Vehicle mix[1]	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0	CalEEMod default distance with 5-min truck idle time.
Demolition	700	-	390	85,759-sf demolition. CalEEMod default worker trips.
Site Preparation	112	-	-	CalEEMod default worker trips.
Grading	315	-	1,191	9,528-cy soil export. CalEEMod default worker trips.
Trenching	150	-	-	CalEEMod default worker trips.
Building Construction	75,190	16.060	6,000	3,000 cement round trips. CalEEMod default worker and vendor trips.
Architectural Coating	9,840	-	-	CalEEMod default worker trips.
Paving	585	-	1,000	500 asphalt round trips. CalEEMod default worker trips.

Notes: [1] Based on 2023-2025 EMFAC2021 light-duty vehicle fleet mix for San Mateo County.
[2] Includes grading trips estimated by CalEEMod based on amount of material to be removed.

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active workdays during that year. Table 4 shows 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 construction period emissions would not exceed the BAAQMD significance thresholds.

Table 4. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2023	0.10	0.84	0.04	0.03
2024 & 2025	1.99	1.13	0.06	0.04
Average Daily Construction Emissions Per Year (pounds/day)				
2023 (260 construction workdays)	0.74	6.48	0.34	0.21
2024 & 2025 (317 construction workdays)	12.58	7.14	0.38	0.25
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 residents and shoppers. Evaporative ROG emissions from architectural coatings and maintenance products (classified as consumer products) are associated with these types of projects. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

CalEEMod Inputs

Land Uses

The project land uses were input to 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 year of full operation

would be 2026 if construction begins in 2023. Emissions associated with build-out later than 2026 would be lower.

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 an increase of 1,185 daily trips when taking into account the *Internal Capture* and *Retail Pass-by Reductions*. This increase was split evenly between the *Apartments Mid Rise* and *Regional Shopping Center* land uses when entered into CalEEMod. The trip generation was provided in units of population which needed to be converted into units of square feet to match the CalEEMod land use types. Therefore, the daily trip generation was calculated by converting the units from population to the known project's square footages and then adjusting the trip generation 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 Santa Clara 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

CalEEMod defaults for energy use were used, which include the 2019 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The electricity produced emission rate was modified in CalEEMod. CalEEMod has a default emission factor of 0 pounds of CO_2 per megawatt of electricity produced, which is based on Peninsula Clean Energy's 2019 emissions rate.

Other Inputs

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to

[11] Kimley Horn and Associates, Inc., *Westlake South Development - Traffic Evaluation*, August 9, 2021.
[12] See CARB 2021: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac

represent wastewater treatment plant conditions. Further, it was assumed that no hearths or fireplaces would be installed as part of the project per BAAQMD Regulation 6, Rule 3, which requires that new building construction not install a wood-burning device (effective as of November 1, 2016). Since Daly City has passed a reach code banning natural gas in new residential buildings,[13] all Title 24 and Non-Title 24 natural gas intensity was added into the Title 24 and Non-Title 24 electricity intensity. The natural gas usage for the retail portion of the proposed building has been left at the CalEEMod default values.

Existing Uses

The existing land uses on the project site include a 55,000-sf vacant Burlington retail store. However, since the building is vacant and refurbishment of the building would not be feasible, a CalEEMod run was not developed to compute emissions from the use of the existing land[14].

Summary of Computed Operational Period Emissions

Annual emissions were predicted using CalEEMod. The daily emissions were estimated assuming 365 days of operation. Table 5 shows average daily 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 Project Operational Emissions (*tons/year*)	1.81	0.36	0.90	0.23
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Thresholds?	No	No	No	No
2026 Project Operational Emissions (*lbs./day*)[1]	9.91	1.98	4.91	1.28
BAAQMD Thresholds (lbs./day)	*54 lbs.*	*54 lbs.*	*82 lbs.*	*54 lbs.*
Exceed Threshold?	No	No	No	No

Notes: [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., mobile sources).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would not include the installation of any stand-by generators powered by a diesel engine, which would produce TAC and air pollutant emissions.

[13] https://www.sierraclub.org/sites/www.sierraclub.org/files/sce/loma-prieta-chapter/ActivistResources/Daly%20City%20Energy%20Reach%20Code.PDF

[14] Email with Connor Tutino, Associate Project Manager, David J. Powers & Associates, Inc., 1/24/2022

The project would generate some traffic, consisting of light-duty vehicles. However, the 1,185 daily trips generated by the project are a fraction of 10,000 trips and emissions from automobile traffic generated by the project would be spread out over a broad geographical area and not localized. Therefore, project traffic was not considered a local source of substantial TACs or $PM_{2.5}$.

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 for Construction and Operation

Community TAC risk impacts were assessed 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 risks from construction and operation sources of TACs. These sources include on-site construction activity, construction truck hauling, 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,[15] 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 contributions over the 30-year period. Unlike, the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI values are not additive but based on the annual maximum values 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 existing residences to the east, south, and southwest of the site, as shown in Figure 1. Also modeled were receptors at the Benjamin Franklin Intermediate School to the south. Residential receptors are assumed to include all receptor groups (i.e., third-trimester, infants, children, and adults) with almost continuous exposure to project emissions. School receptors were assumed to be children ages 10 years and older at the school.

[15] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines.* December 2016.

Community Health Risk 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 $PM_{2.5}$.[16] 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 DPM emissions from all construction stages estimated to be 0.05 tons (100 pounds). 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. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod and EMFAC2021 to be 0.03 tons (63 pounds) for the overall construction period. The breakdown of yearly emissions is included in *Attachment 4*.

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.[17] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

[16] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.
[17] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.

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.[18] 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

AERMOD modeling used a three-year data set (2010, 2012, 2013) of hourly meteorological data from the Fort Funston prepared for use with the AERMOD model by BAAQMD. Construction emissions were modeled as occurring daily between 8:00 a.m. to 5:00 p.m., when the majority of construction activity would occur. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2023-2025 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors. 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 height of receptors on the first, second, and third floors of nearby multi-family residences. Receptor heights of 3 feet (1 meter) were used to represent the breathing height of the children at the school.[19]

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

[18] 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

[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

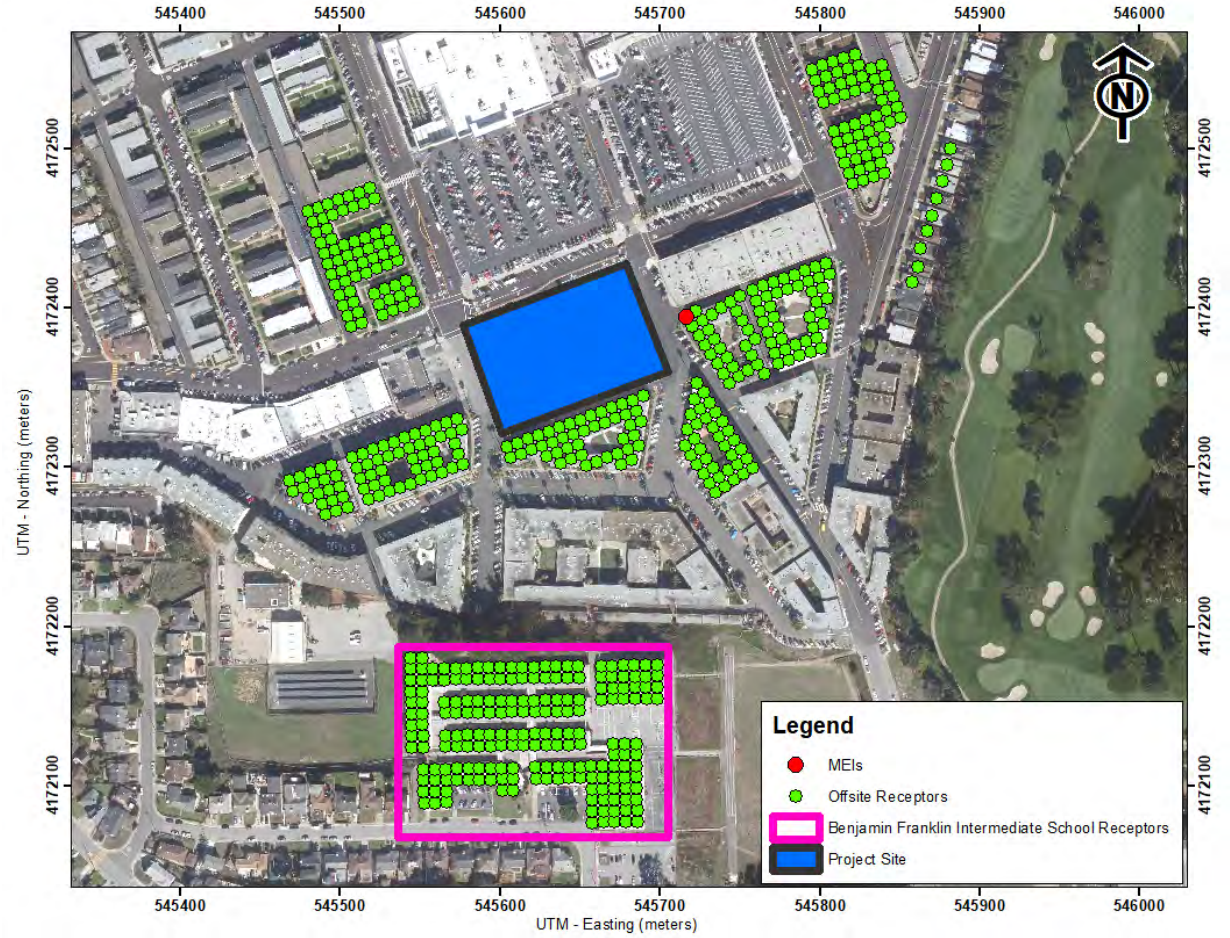
factors reflect the greater sensitivity of infants and children to cancer causing TACs. The range of infant through adult exposures were assumed to occur at all residences. Infant exposure at residences was used as a worst-case assumption, while child and adult exposures would be less.

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 reference exposure level of 5 $\mu g/m^3$.

The maximum modeled annual DPM and $PM_{2.5}$ concentrations, which include both the DPM and fugitive $PM_{2.5}$ concentrations, were identified at nearby sensitive receptors to find the MEI. Results indicated that the cancer risk MEI was located on the second floor (15 feet above ground) of the multi-family residence to the east of the project site. The annual $PM_{2.5}$ concentration MEI was located at the same receptor but on the first floor (5 feet above the ground) of the multi-family residence east of the project site. The location of the MEIs are shown in Figure 1. Table 6 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities. *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 school. The maximum increased cancer risks were adjusted using child exposure parameters. The uncontrolled cancer risk, $PM_{2.5}$ concentration, and HI at the nearby school would not exceed their respective BAAQMD single-source significance thresholds, as shown in Table 6.

Figure 1. Project Construction Site, Locations of Off-Site Sensitive Receptors, and Location of TAC Impacts



Community Risks from Project Operation – Stationary Equipment and Traffic

Operation of the project would have long-term emissions from mobile sources (i.e., traffic). Stationary equipment that could emit substantial TACs (e.g., stand-by generators) are not proposed. Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicles per day is considered a low-impact source of TACs.[20] This project would generate 1,185 daily trips dispersed on the roadway system with a majority of the trips being from light-duty vehicles (i.e., passenger automobiles), which is a fraction of 10,000 daily vehicles. Therefore, emissions from project traffic are considered negligible and not included within this analysis.

[20] 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

Summary of Project-Related Community Risks at the Offs-Site Project MEIs

For this project, the sensitive receptors identified in Figure 1 as the construction MEIs are also the project MEIs. At this location, the MEIs would be exposed to two years of construction and 28 years of project operation. As shown in Table 6, the unmitigated maximum cancer risks from construction activities at the project MEI locations would exceed the BAAQMD single-source significance threshold. However, with the incorporation of the *Mitigation Measure AQ-1 and AQ-2*, the mitigated risk would no longer exceed the BAAQMD single-source significance thresholds. The unmitigated $PM_{2.5}$ concentration and HI at the MEIs do not exceed their respective BAAQMD single-source significance thresholds.

Table 6. Project Health Risk Impacts at the Off-Site Project MEIs

Source		Cancer Risk* (per million)	Annual $PM_{2.5}$* ($\mu g/m^3$)	Hazard Index
Project Impact				
Project Construction	Unmitigated	**32.42 (infant)**	0.25	0.02
	Mitigated**	5.87 (infant)	0.10	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated**	*No*	*No*	*No*
Most Affected Nearby School – Benjamin Franklin Intermediate School				
Project Construction	Unmitigated	0.25 (child)	<0.01	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*

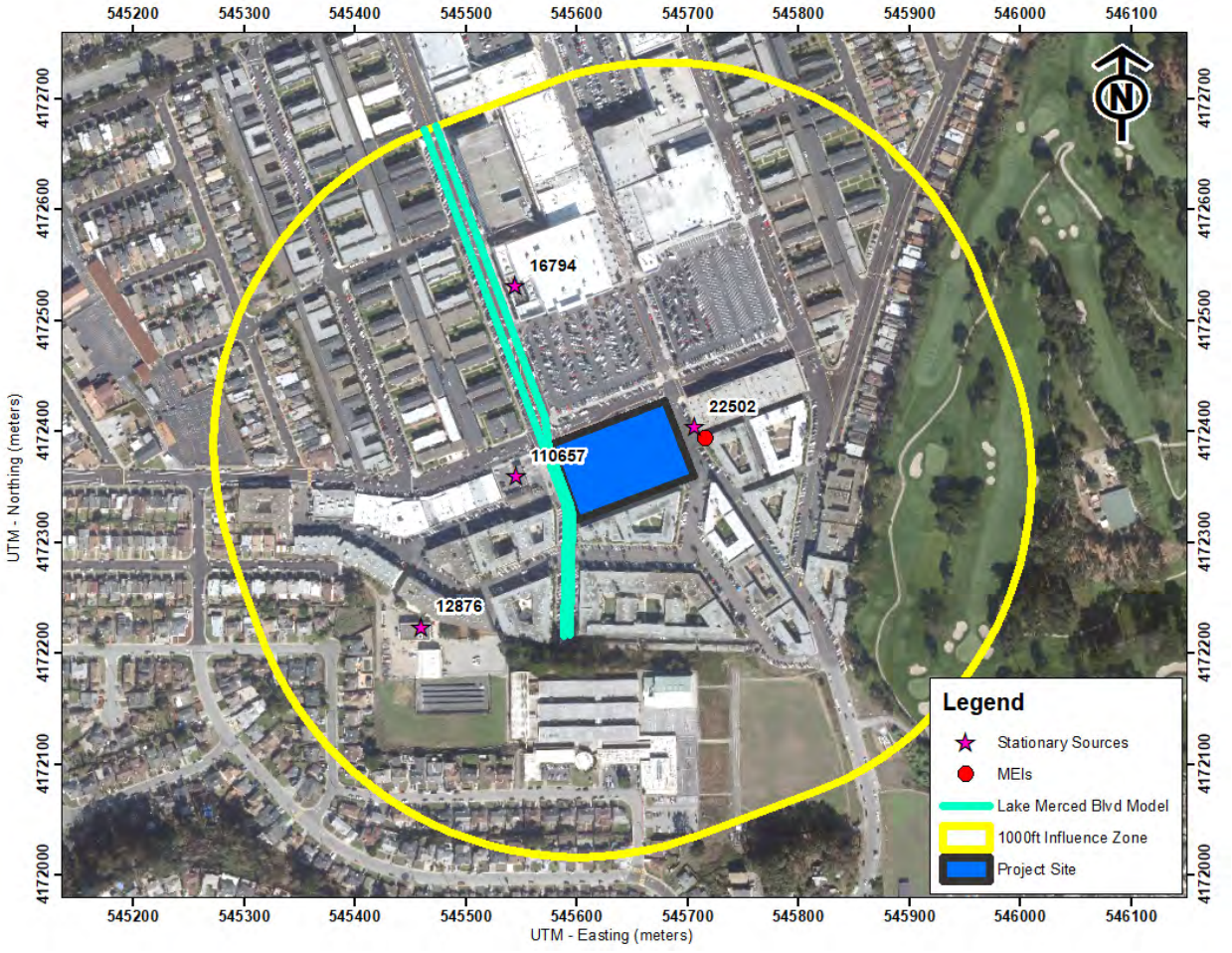
Notes: *MEI locations are on different floors at same receptor.
**Construction equipment with Tier 4 engines and Best Management Practices as Mitigation.

Cumulative Community Risks of all TAC Sources at the Off-site Project MEIs

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 railroads, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area and based on provided traffic information indicates that one roadway within the influence area that have an average daily traffic (ADT) of over 10,000 vehicles. A review of BAAQMD's stationary source map website identified four stationary sources with the potential to affect the project MEIs. Figure 2 shows the location of the sources affecting the MEIs. Community risk impacts from these sources upon the MEIs are reported in Tables 7. Details of the modeling and community risk calculations are included in *Attachment 5*.

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



Local Roadways – Lake Merced Boulevard

A refined analysis of potential health impacts from vehicle traffic on Lake Merced Boulevard 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 were 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 Lake Merced Boulevard using the Caltrans version of the CARB 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 (TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. $PM_{2.5}$ 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 the emissions estimate. DPM emissions are projected to decrease in the future as 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),[21] traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (2023 – construction start year), and season (annual).

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 MEIs and project site, the CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2023 (project 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 2023 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 Lake Merced Boulevard was calculated based on traffic data provided by the traffic consultant.[22] The estimated ADT on Lake Merced Boulevard was 10,705 vehicles. Average hourly traffic distributions for San Mateo County roadways were developed using the EMFAC model,[23] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for the roadway. An average travel speed of 25 miles per hour (mph) on Lake Merced Boulevard was used for all hours of the day based on posted speed limit signs on the roadway.

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[21] 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

[22] Kimley Horn and Associates, Inc., *Westlake South Development - Traffic Evaluation*, August 9, 2021.

[23] 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.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the EPA AERMOD air quality dispersion model, which is recommended by the BAAQMD for this type of analysis.[24] TAC and $PM_{2.5}$ emissions from traffic on Lake Merced Boulevard within 1,000 feet of the project site were evaluated. Vehicle traffic on the roadways was modeled using a series of adjacent volume sources along a line (line volume sources); with line segments used for each travel direction on the roadway. The same meteorological data and off-site sensitive receptors used in the previous dispersion modeling were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations. Annual TAC and $PM_{2.5}$ concentrations for 2023 from traffic on the roadway was calculated using the model. Concentrations were calculated at the project MEIs with receptor heights of 5 feet (1.5 meters) and 15 feet (4.5 meters) to represent the breathing heights on the first and second floors of residents in the multi-family units.

Figure 2 shows the roadway segments modeled and residential receptor locations used in the modeling. Table 7 lists the risks and hazards from the roadway. The emission rates and roadway calculations used in the analysis are shown in *Attachment 5*.

BAAQMD Permitted 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.[25] This mapping tool identifies the location of nearby stationary sources and their estimated risk and hazard impacts. Four sources were identified using this tool, three generators and one gas dispensing facility. A stationary source information request was not required as the BAAQMD GIS website provided screening risks and hazards for these sources.

The screening level risks and hazards provided by BAAQMD for the stationary sources were adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines and Gasoline Dispending Facilities*. Community risk impacts from the stationary source upon the MEI are reported in Table 7.

Summary of Cumulative Risks at Off-Site Project MEIs

Both the project and cumulative community risk impacts at the sensitive receptors most affected by construction (i.e., the MEIs) are reported in Table 7. Without mitigation, the project's community risk from project construction activities would exceed the maximum increased cancer risk single-source threshold. With the incorporation of *Mitigation Measure AQ-1 and AQ-2*, the mitigated cancer risk would no longer exceed the BAAQMD single-source significance

[24] BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012
[25] BAAQMD, Web: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

threshold. In addition, the combined unmitigated cancer risk, $PM_{2.5}$ concentration, and HI values would not exceed their respective cumulative thresholds.

Table 7. Impacts from Combined Sources at Off-Site School MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Project Construction	Unmitigated	**32.42 (infant)**	0.25	0.02
	Mitigated	5.87 (infant)	0.10	<0.01
BAAQMD Single-Source Threshold		***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated	*No*	*No*	*No*
Cumulative Sources				
City of Daly City (Facility ID #12876, Generator), MEI at 1000 feet		0.08	<0.01	<0.01
The Home Depot (Store #1092) (Facility ID #16794, Generator), MEI at 700 feet		0.58	<0.01	<0.01
Safeway Inc #3031 (Facility ID #22502, Generator), MEI at 35 feet		0.02	<0.01	<0.01
Arco Facility #00465 (Facility ID #110657, Gas Dispensing Facility), MEI at 570 feet		1.36	<0.01	<0.01
Lake Merced Boulevard, ADT 10,705		0.48	0.04	<0.01
Cumulative Total	Unmitigated	34.94 (infant)	<0.33	<0.07
	Mitigated	8.39 (infant)	<0.18	<0.06
BAAQMD Cumulative Source Threshold		***>100***	***>0.8***	***>10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
	Mitigated	*No*	*No*	*No*

Mitigation Measure AQ-2: **Use construction equipment that has low diesel particulate matter exhaust to minimize emissions**

Implement a feasible plan to reduce diesel particulate matter emissions by 70 percent such that increased cancer risk and annual $PM_{2.5}$ concentrations from construction would be reduced below TAC significance levels as follows:

1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for PM (PM_{10} and $PM_{2.5}$), if feasible, otherwise,

    a. If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 70 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).

    b. Use of electrical or non-diesel fueled equipment.

2. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 70 percent or greater. Elements of the plan could include a combination of some of the following measures:
    - Implementation of No. 1 above to use Tier 4 or alternatively fueled equipment,
    - Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors,
    - Use of electrically-powered equipment,
    - Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
    - Change in construction build-out plans to lengthen phases, and
    - Implementation of different building techniques that result in less diesel equipment usage.

    Such a construction operations plan would be subject to review by an air quality expert and approved by the City prior to construction.

Effectiveness of Mitigation Measure AQ-2

CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment met U.S. EPA Tier 4 interim engines standards and BAAQMD best management practices for construction were included. With these implemented, the project's cancer risk levels (assuming infant exposure) and annual $PM_{2.5}$ concentrations would be reduced to 5.87 per million with use of Tier 4 equipment. Assuming a lesser level of mitigation that achieves a 70-percent reduction, increased cancer risks would be reduced to below 10 chances per million. As a result, the project's construction and operational risks would be reduced below the BAAQMD single-source thresholds.

Non-CEQA: On-site Community Risk Assessment for TAC Sources - New Project Residences

In addition to evaluating health impact from project construction, a health risk assessment was completed to determine the impact that existing TAC sources would have on the new proposed sensitive receptors (residents) that the project would introduce. The same TAC sources identified above were used in this health risk assessment.[26]

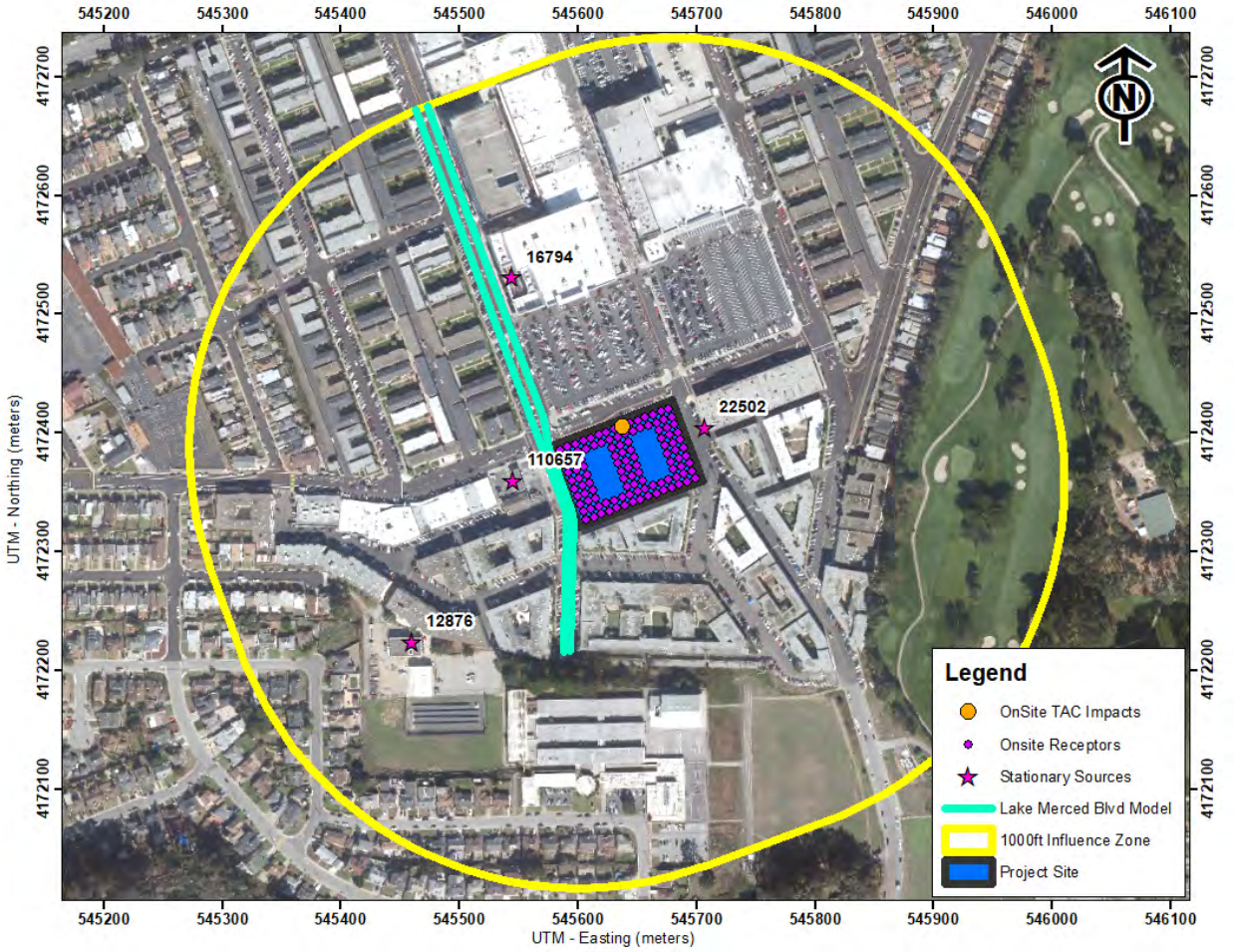
Local Roadways – Lake Merced Boulevard

The roadway analysis for the project residents was conducted in the same manner as described above for the off-site MEI. However, year 2026 (operational year) were conservatively assumed as being representative of future conditions, instead of 2023 (construction year). An analysis based on 2026 resulted in an increased ADT on Lake Merced Boulevard of 11,020. On-site receptors were placed throughout the project area and were spaced every 23 feet (7 meters). Roadway impacts were modeled at receptor heights of 25 feet (7.6 meters) and 35 feet (10.7 meters) representing sensitive receptors on the third and fourth floors of the residential portion of the building. The third and fourth floors of the proposed building represent the first and second floors of dwelling units, with the bottom two floors of the building containing retail space. The portions of Lake Merced Boulevard included in the modeling are shown in Figure 3 along with the project site and receptor locations where impacts were modeled.

Maximum increased cancer risks were calculated for the residents at the project site using the maximum modeled TAC concentrations. A 30-year exposure period was used in calculating cancer risks assuming the residents would include third trimester pregnancy and infants/children and were assumed to be in the new homes for 24 hours per day for 350 days per year. The highest impacts from Lake Merced Boulevard occurred at a third-floor receptor in the northern portion of the project site. Cancer risks associated with Lake Merced Boulevard are greatest closest to the roadway and decrease with distance from the road. The roadway community risk impacts at the project site are shown in Table 8. Details of the emission calculations, dispersion modeling, and cancer risk calculations are contained in *Attachment 5.*

[26] We note that to the extent this analysis considers *existing* air quality issues in relation to the impact on *future residents* of the Project, it does so for informational purposes only pursuant to the judicial decisions in *CBIA v. BAAQMD* (2015) 62 Cal.4th 369, 386 and *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473, which confirm that the impacts of the environment on a project are excluded from CEQA unless the project itself "exacerbates" such impacts.

Figure 3. Project Site and Onsite Residential Receptors, W Fremont Ave and S Mary Ave, and Location of Maximum TAC Impacts



Stationary Sources

The stationary source screening analysis for the new project sensitive receptors was conducted in the same manner as described above for the construction MEIs for three of the four sources. Table 8 shows the health risk screening assessment results from the stationary sources.

Stationary-Source: ARCO Facility #00465 (Plant #110657)

The project site is adjacent to an ARCO gasoline station that is permitted to operate by BAAQMD as Plant #110657. Gas dispensing facilities (GDFs) are a source of TACs that are associated with gasoline vapors. These TAC are associated with evaporative emissions of reactive organic gases (ROG) or otherwise referred to as volatile organic compounds (VOCs). BAAQMD provides screening cancer risk predictions for this facility by through their Stationary Source Risk & Hazards Screening Report that was ran October 21, 2021. The screening cancer risk at the facility was reported at 15.87 chances per million. However, this is an overprediction because BAAQMD uses gasoline throughputs that are based on maximum permitted levels rather than actual levels. These permitted levels can be much higher than actual levels. In addition,

there are new enhanced control measures incorporated into fueling stations. Note that GDF emissions are proportional to the quantity of fuel sold and the District bases their screening projections on the permitted amount of fuel that could be sold rather than actual sales. Since screening projections indicated cancer risk levels 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 BAAQMD tools. This involves obtaining actual emissions data for the facility reported by BAAAQMD and conducting additional screening modeling. A review of this station indicates that only gasoline products are sold as there do not appear to be any diesel pumps.

BAAQMD regulates the emissions of organic compounds (i.e., ROG or VOCs) from gasoline dispensing stations through Regulation 8, Rule 7. This rule requires these facilities to install enhanced vapor recovery (EVR) systems. Since these facilities emit more than 10 pounds of ROG (i.e., organic compounds or VOCs) in a single day, the Best Available Control Technology (BACT) requirement of Regulation 2-2-301 apply. BACT for Gasoline Dispensing Facilities is considered the use of CARB-certified Phase-I and Phase-II vapor recovery equipment.

The annual throughput of gasoline is the key input to computing emissions from the facility. The U.S. EPA found in 2017 that the average GDF dispenses about 125,000 gallons per month (gpm) or 1.5 million gallons per year. However, this value varies from under 10,000 gpm for some private outlets up to as much as 420,000 gpm in some very large retail outlets across the nation.[27] Statistics reported in CARB reports on Enhanced Vapor Recovery released in 2000 and 2002, indicated that almost 96 percent of the gasoline dispensing facilities had a throughput less than 2.4 million gallons per year.[28] The remaining four percent, or approximately 450 facilities statewide at that time, had throughputs exceeding 2.4 million gallons per year. For these very large stations, the average gasoline throughput was 3.6 million gallons per year. For this station, a throughput of 5 million gallons per year was assumed to be a conservative estimate for computing screening cancer risks.

VOC is the primary air pollutant emitted from the transfer and storage of gasoline. Benzene is the primary TAC contained in gasoline. The overall health risks from gasoline vapors are associated with benzene. Emissions of VOCs and benzene, which is a TAC, were computed based on projected annual throughput of gasoline (i.e., 5 million gallons) using emission factors developed by CARB.[29] The emission factors are based on annual gasoline throughput and account for emissions from fuel storage tank loading and pressure driven (breathing) losses, motor vehicle refueling, spillage while refueling, and minor emissions from vapor permeation through gasoline dispensing hoses. The fueling emission factors take into account the effects of vehicles equipped with onboard refueling vapor recovery (ORVR) systems. ORVR systems were phased in beginning with 1998 model year passenger vehicles, and are now installed on all

[27] Source: U.S. EPA 2013. Background Document: True Minor Source Gasoline Dispensing Facilities General Permit and Permit by Rule, Version 1.0. Last Modified: 2017. See https://www.epa.gov/sites/production/files/2016-5/documents/gasolinedispensingbackgrounddocument.pdf

[28] CARB. 2005. Air Quality and Land Use Handbook: A community Health Perspective. See https://ww3.arb.ca.gov/ch/handbook.pdf Note that while this document is over 15 years old, it does provide some perspective on the amount of fuel sold at gasoline stations throughout the State.

[29] CARB. 2013. *Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities.* December 23, 2013.

passenger, light-duty, and medium-duty vehicles manufactured since the 2006 model year. Emissions of benzene were computed at 0.043 pounds per day, assuming that benzene makes up 0.3% of gasoline vapor and 1% of liquid gasoline.[30]

BAAQMD's *Health Risk Calculator Beta Version 4.0* was used to compute cancer risk. The fueling station is located 125 feet or 35 meters or further from the project site. The average daily emissions and distance were input to the Calculator. The computed cancer risk would be 2.45 chances per million.

Summary of Cumulative Community Risks at the Project Site

Community risk impacts from the existing and TAC sources upon the project site are reported in Table 8. The risks from the singular TAC sources are compared against the BAAQMD single-source threshold. The risks from all the sources are then combined and compared against the BAAQMD cumulative-source threshold. As shown, none of the sources exceed the single-source or cumulative-source thresholds.

Table 8. Impacts from Combined Sources to Project Site Receptors

Source	Maximum Cancer Risk (per million)	Maximum Annual $PM_{2.5}$ ($\mu g/m^3$)	Maximum Hazard Index
Lake Merced Blvd, ADT 11,020	0.50	0.04	<0.01
City of Daly City (Facility ID #12876, Generator), Project Site at 540 feet	0.21	<0.01	<0.01
The Home Depot (Store #1092) (Facility ID #16794, Generator), Project Site at 450 feet	1.08	<0.01	<0.01
Safeway Inc #3031 (Facility ID #22502, Generator), Project Site at 65 feet	0.02	<0.01	<0.01
Arco Facility #00465 (Facility ID #110657, Gas Dispensing Facility), Project Site at 125 feet	2.45	<0.01	0.01
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold?	*No*	*No*	*No*
Cumulative Total	4.26	<0.08	<0.05
BAAQMD Cumulative Source Threshold	***100***	***0.8***	***10.0***
Exceed Threshold?	*No*	*No*	*No*

[30] CAPCOA. 1997. *Air Toxics "Hot Spots" Program, Gasoline Service Station Industrywide Risk Assessment Guidelines*, November 1997

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*. [31] 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.

[31] 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

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 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.[32] 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

[32] 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.

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 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.[33]

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).[34] 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.[35] 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.[36] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011.

Daly City "Green Vision" Climate Action Plan

The Daly City "Green Vision" Climate Action Plan (CAP)[37] seeks to reduce the City operation's overall carbon footprint through a series of ten goals by the year 2020. The goals cover topics such as reducing solid waste, recycling and reuse of wastewater, preservation of urban forests, adoption of a master pedestrian and bicycle plan, reuse of biosolids, the use of green building standards, and community education. However, the CAP does not have a specific metric ton

[33] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf
[34] 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
[35] 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
[36] 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.
[37] Daly City, "Daly City's Green Vision" https://www.dalycity.org/DocumentCenter/View/694/Daly-City-Green-Vision-Final-PDF

GHG threshold for project-level construction or operation. Therefore, the BAAQMD's CEQA Air Quality Guideline's thresholds are used.

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 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.

Although BAAQMD has not published a quantified threshold for 2030 yet, 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. [38] 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.

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 operational period emissions. CalEEMod output is included in *Attachment 2*.

[38] Bay Area Air Quality Management District, 2016. *CLE International 12th Annual Super-Conference CEQA Guidelines, Case Law and Policy Update*. December.

Service Population

The project service population efficiency rate is based on the number of future residents and full-time employees. For this project, the number of future residents is the Daly City 2021 persons per household rate[39] multiplied by the number of dwelling units. The number of employees can be estimated by assuming 2.5 employees for every thousand square foot of retail space. The total service population of 739 was used to calculate the per capita emissions.

Construction Emissions

GHG emissions associated with construction were computed at 976 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.

Operational Emissions

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 9, the annual emissions resulting from operation of the proposed project are predicted to be 948 MT of CO_2e in 2026 and 900 MT of CO_{2e} in 2030. The service population emissions for the years 2026 and 2030 are predicted to be 1.3 and 1.2 MT/CO_{2e}/year/service population, respectively.

To be considered an exceedance of the threshold, the project emissions must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold in the future year of 2030. As shown in Table 9, the project would not exceed the per service population threshold of 2.8 MT of CO_2e/year/service population in 2026 and 2030. Therefore, the project would not be in exceedance for GHG emissions.

[39] State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark*. Sacramento, California. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

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

Source Category	Proposed Project in 2026	Proposed Project in 2030
Area	2.66	2.66
Energy Consumption	2.64	2.64
Mobile	878.39	830.45
Solid Waste Generation	55.21	55.21
Water Usage	9.05	9.05
Total (MT CO_2e/year)	947.95	900.01
Significance Threshold		***660 MT CO_2e/year***
Service Population Emissions (MT CO_{2e}/year/service population)	1.28	1.22
Significance Threshold		***2.8 in 2030***
Exceeds both thresholds?		*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 project would not conflict or otherwise interfere with the statewide GHG reduction measures identified in CARB's Scoping Plan nor would the project conflict with SB 100 goals. For example, 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.

Supporting Documentation

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

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

Attachment 3 includes the EMFAC2021 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 is the construction health risk assessment. 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 project site and project MEI.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminants (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.[40] 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.[41] 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.[42] 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). However, 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.

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,

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[40] 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.

[41] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

[42] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

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 8-hour breathing rates for moderate intensity.

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*

* Exposure Frequency can change dependent on the type of receptors (i.e. residential, worker, school, daycare). 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 Modeling Inputs and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: KIMCO Westlake South

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size
214 Dwelling Units
1.98 total project acres disturbed
197280 s.f. residential
11250 s.f. retail
2990 s.f. office/commercial
51,830 s.f. other, specify:
107303 s.f. parking garage — 300 spaces
4184 s.f. parking lot — 21 spaces

Construction Hours 0:00 am to pm

Pile Driving? Y/N? Y

Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? Y
IF YES (if BOTH separate values) -->
Kilowatts/Horsepower: 500 KVA
Fuel Type: DIESEL
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	Annual Hours	Comments
	Demolition	**Start Date:**	**1/2/2023**	**Total phase:**	**35**			**Overall Import/Export Volumes**
		End Date:	**2/17/2023**					
2	Concrete/Industrial Saws	81	0.73	6	7	1.2	84	**Demolition Volume**
2	Excavators	158	0.38	6	12	2.0571429	144	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	6	2	0.3428571	24	(*or* total tons to be hauled)
2	Tractors/Loaders/Backhoes	97	0.37	6	14	2.4	168	**85759** square feet *or*
								? Hauling volume (tons)
								Any pavement demolished and hauled? **? tons**
	Site Preparation	**Start Date:**	**2/18/2023**	**Total phase:**	**14**			
		End Date:	**3/9/2023**					
1	Graders	187	0.41	6	4	1.7142857	24	
1	Rubber Tired Dozers	247	0.4	6	5	2.1428571	30	
1	Tractors/Loaders/Backhoes	97	0.37	6	7	3	42	
	Grading / Excavation	**Start Date:**	**3/10/2023**	**Total phase:**	**21**			
		End Date:	**4/7/2023**					**Soil Hauling Volume**
1	Excavators	158	0.38	6	11	3.1428571	66	Export volume =9528.78 cubic yards
2	Graders	187	0.41	6	3	0.8571429	36	Import volume = **0** cubic yards
1	Rubber Tired Dozers	247	0.4	6	10	2.8571429	60	
1	Concrete/Industrial Saws	81	0.73	6	1	0.2857143	6	
1	Tractors/Loaders/Backhoes	97	0.37	6	19	5.4285714	114	
0	*Other Equipment?*							
	Trenching/Foundation	**Start Date:**	**4/8/2023**	**Total phase:**	**30**			
		End Date:	**5/19/2023**					
1	Tractor/Loader/Backhoe	97	0.37	6	30	6	180	
1	Excavators	158	0.38	6	6	1.2	36	
0	*Other Equipment?*							
	Building - Exterior	**Start Date:**	**5/20/2023**	**Total phase:**	**365**			**Cement Trucks?3000 Total Round-Trips**
		End Date:	**10/11/2024**					
2	Cranes	231	0.29	6	150	2.4657534	1800	Electric? (Y/N) Y Otherwise assumed diesel
2	Forklifts	89	0.2	6	80	1.3150685	960	Liquid Propane (LPG)? (Y/N)
2	Generator Sets	84	0.74	6	0	0	0	Or temporary line power? (Y/N) Y
1	Tractors/Loaders/Backhoes	97	0.37	6	10	0.1643836	60	
2	Welders	46	0.45	6	20	0.3287671	240	
	Other Equipment?					0		
	Building - Interior/Architectural Coating	**Start Date:**	**2/14/2024**	**Total phase:**	**240**			
		End Date:	**1/14/2025**					
3	Air Compressors	78	0.48	6	160	4	2880	
3	Aerial Lift	62	0.31	6	30	0.75	540	
	Other Equipment?							
	Paving	**Start Date:**	**1/15/2025**	**Total phase:**	**45**			
		Start Date:	**3/18/2025**					
1	Cement and Mortar Mixers	9	0.56	6	10	1.3333333	60	
1	Pavers	130	0.42	6	10	1.3333333	60	**Asphalt? ___ cubic yards or500round trips?**
1	Paving Equipment	132	0.36	6	10	1.3333333	60	
1	Rollers	80	0.38	6	10	1.3333333	60	
1	Tractors/Loaders/Backhoes	97	0.37	6	10	1.3333333	60	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						

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 horepower 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						
2023	0.04	0.38	0.02	0.02	57.08	
2024 & 2025	1.93	0.60	0.03	0.03	110.99	
EMFAC						
2023	0.06	0.46	0.03	0.01	368.16	
2024 & 2025	0.07	0.53	0.03	0.01	439.37	
Total Construction Emissions by Year						
2023	0.10	0.84	0.04	0.03	425.24	
2024 & 2025	1.99	1.13	0.06	0.04	550.37	
	Total Construction Emissions					
Tons	2.09	1.97	0.11	0.07	975.60	
Pounds/Workdays	*Average Daily Emissions*				Workdays	
2023	0.74	6.48	0.34	0.21		**260**
2024 & 2025	12.58	7.14	0.38	0.25		**317**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		
	Total Construction Emissions					
Pounds	13.32	13.62	0.73	0.46	0.00	
Average	7.24	6.84	0.37	0.23	0.00	577.00
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	1.81	0.36	0.90	0.23		
	Existing Use Emissions					
Total	0.00	0.00	0.00	0.00		
	Net Annual Operational Emissions					
Tons/year	1.81	0.36	0.90	0.23		
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**		
	Average Daily Emissions					
Pounds Per Day	9.91	1.98	4.91	1.28		
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Category	**CO2e**			
	Project	Existing	Project 2030	Existing
Area	2.66	0.00	2.66	0.00
Energy	2.64	0.00	2.64	0.00
Mobile	878.39	0.00	830.45	0.00
Waste	55.21	0.00	55.21	0.00
Water	9.05	0.00	9.05	0.00
TOTAL	947.95	0.00	900.01	0.00
Net GHG Emissions		947.95		900.01
Service Population	739.00			
Per Capita Emissions		1.28		1.22

Traffic Consultant Trip Gen					CalEEMod Default		
Land Use	**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**
Apartments Mid Rise	214	1164	971	***4.54***	5.44	4.91	4.09
Internal Capture		*-148*			*Rev*	***4.10***	***3.41***
Retail Pass-by Reduction		*-45*					
Land Use	**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**
Regional Shopping Center	10.8	408	214	***19.81***	37.75	46.12	21.1
Internal Capture		*-148*			*Rev*	***24.21***	***11.08***
Retail Pass-by Reduction		*-46*					

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	300.00	Space	0.00	107,303.00	0
Parking Lot	21.00	Space	0.00	8,400.00	0
Apartments Mid Rise	214.00	Dwelling Unit	1.98	252,100.00	612
Regional Shopping Center	10.80	1000sqft	0.00	10,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	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 -

Land Use - Unit amounts, acreage, square footage provided by applicant.

Construction Phase - Applicant provided phase lengths and demo start date

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

Date: 12/22/2021 1:56 PM

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Off-road Equipment - Construction info provided by applicant

Trips and VMT - All trips entered into EMFAC2021

Demolition -

Grading -

Vehicle Trips - Pass-by trip reduction given by traffic consultant. CalEEMod pass-B trip % added into primary trip.

Vehicle Emission Factors - Emission factors from EMFAC2021

Woodstoves - No hearths/fireplaces

Energy Use - Daly City reach code bans natural gas in residential. Nat gas intensity added into electricity energy intensity.

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - Electric cranes and gen sets (line power), all other equipment t4i, BMP

Fleet Mix - Fleet mix from EMFAC2021

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	240.00
tblConstructionPhase	NumDays	200.00	365.00
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	4.00	21.00
tblConstructionPhase	NumDays	10.00	45.00
tblConstructionPhase	NumDays	2.00	14.00
tblEnergyUse	NT24E	3,054.10	3,844.13
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	T24E	90.83	1,851.56
tblEnergyUse	T24NG	5,828.01	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	32.10	0.00

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tblFireplaces	NumberNoFireplace	8.56	0.00
tblFireplaces	NumberWood	36.38	0.00
tblFleetMix	HHD	1.9940e-003	2.5150e-003
tblFleetMix	HHD	1.9940e-003	2.5150e-003
tblFleetMix	HHD	1.9940e-003	2.5150e-003
tblFleetMix	HHD	1.9940e-003	2.5150e-003
tblFleetMix	LDA	0.46	0.44
tblFleetMix	LDA	0.46	0.44
tblFleetMix	LDA	0.46	0.44
tblFleetMix	LDA	0.46	0.44
tblFleetMix	LDT1	0.07	0.04
tblFleetMix	LDT1	0.07	0.04
tblFleetMix	LDT1	0.07	0.04
tblFleetMix	LDT1	0.07	0.04
tblFleetMix	LDT2	0.24	0.28
tblFleetMix	LDT2	0.24	0.28
tblFleetMix	LDT2	0.24	0.28
tblFleetMix	LDT2	0.24	0.28
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	6.5760e-003	6.5780e-003
tblFleetMix	LHD2	6.5760e-003	6.5780e-003
tblFleetMix	LHD2	6.5760e-003	6.5780e-003
tblFleetMix	LHD2	6.5760e-003	6.5780e-003
tblFleetMix	MCY	0.03	0.02
tblFleetMix	MCY	0.03	0.02
tblFleetMix	MCY	0.03	0.02

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tblFleetMix	MCY	0.03	0.02
tblFleetMix	MDV	0.15	0.16
tblFleetMix	MDV	0.15	0.16
tblFleetMix	MDV	0.15	0.16
tblFleetMix	MDV	0.15	0.16
tblFleetMix	MH	2.7100e-003	2.0620e-003
tblFleetMix	MH	2.7100e-003	2.0620e-003
tblFleetMix	MH	2.7100e-003	2.0620e-003
tblFleetMix	MH	2.7100e-003	2.0620e-003
tblFleetMix	MHD	0.01	8.6210e-003
tblFleetMix	MHD	0.01	8.6210e-003
tblFleetMix	MHD	0.01	8.6210e-003
tblFleetMix	MHD	0.01	8.6210e-003
tblFleetMix	OBUS	1.4220e-003	2.2850e-003
tblFleetMix	OBUS	1.4220e-003	2.2850e-003
tblFleetMix	OBUS	1.4220e-003	2.2850e-003
tblFleetMix	OBUS	1.4220e-003	2.2850e-003
tblFleetMix	SBUS	4.2900e-004	4.1200e-004
tblFleetMix	SBUS	4.2900e-004	4.1200e-004
tblFleetMix	SBUS	4.2900e-004	4.1200e-004
tblFleetMix	SBUS	4.2900e-004	4.1200e-004
tblFleetMix	UBUS	5.5300e-004	7.2000e-004
tblFleetMix	UBUS	5.5300e-004	7.2000e-004
tblFleetMix	UBUS	5.5300e-004	7.2000e-004
tblFleetMix	UBUS	5.5300e-004	7.2000e-004
tblGrading	MaterialExported	0.00	9,528.78
tblLandUse	LandUseSquareFeet	120,000.00	107,303.00
tblLandUse	LandUseSquareFeet	214,000.00	252,100.00
tblLandUse	LotAcreage	2.70	0.00

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tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	5.63	1.98
tblLandUse	LotAcreage	0.25	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	8.00	1.20
tblOffRoadEquipment	UsageHours	8.00	0.30
tblOffRoadEquipment	UsageHours	8.00	2.40
tblOffRoadEquipment	UsageHours	8.00	1.70
tblOffRoadEquipment	UsageHours	7.00	2.10
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	8.00	0.90
tblOffRoadEquipment	UsageHours	8.00	2.90
tblOffRoadEquipment	UsageHours	7.00	5.40
tblOffRoadEquipment	UsageHours	6.00	2.50
tblOffRoadEquipment	UsageHours	6.00	1.30
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.20
tblOffRoadEquipment	UsageHours	8.00	0.30
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	1.30

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tblOffRoadEquipment	UsageHours	6.00	1.30
tblOffRoadEquipment	UsageHours	8.00	1.30
tblOffRoadEquipment	UsageHours	7.00	1.30
tblOffRoadEquipment	UsageHours	8.00	1.30
tblTripsAndVMT	HaulingTripNumber	390.00	0.00
tblTripsAndVMT	HaulingTripNumber	1,191.00	0.00
tblTripsAndVMT	VendorTripNumber	44.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	206.00	0.00
tblTripsAndVMT	WorkerTripNumber	41.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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

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
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

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

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	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	86.00	89.00
tblVehicleTrips	PR_TP	54.00	65.00
tblVehicleTrips	ST_TR	4.91	4.10
tblVehicleTrips	ST_TR	46.12	24.21
tblVehicleTrips	SU_TR	4.09	3.41
tblVehicleTrips	SU_TR	21.10	11.08
tblVehicleTrips	WD_TR	5.44	4.54
tblVehicleTrips	WD_TR	37.75	19.81
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
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	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

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

tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	4.28	0.00
tblWoodstoves	NumberNoncatalytic	4.28	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

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					
2023	0.0379	0.3817	0.3055	6.5000e-004	0.0818	0.0171	0.0989	0.0257	0.0158	0.0415	0.0000	56.6499	56.6499	0.0173	0.0000	57.0811
2024	1.8471	0.5667	0.6242	1.1900e-003	0.0000	0.0259	0.0259	0.0000	0.0250	0.0250	0.0000	102.9125	102.9125	0.0173	0.0000	103.3444
2025	0.0814	0.0342	0.0557	9.0000e-005	0.0000	1.5400e-003	1.5400e-003	0.0000	1.4700e-003	1.4700e-003	0.0000	7.6038	7.6038	1.7400e-003	0.0000	7.6472
Maximum	**1.8471**	**0.5667**	**0.6242**	**1.1900e-003**	**0.0818**	**0.0259**	**0.0989**	**0.0257**	**0.0250**	**0.0415**	**0.0000**	**102.9125**	**102.9125**	**0.0173**	**0.0000**	**103.3444**

Mitigated Construction

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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					
2023	6.5100e-003	0.1430	0.2451	3.6000e-004	0.0368	8.3000e-004	0.0376	0.0116	8.3000e-004	0.0124	0.0000	31.3023	31.3023	9.0500e-003	0.0000	31.5285
2024	1.7934	0.3149	0.5216	8.2000e-004	0.0000	2.7000e-003	2.7000e-003	0.0000	2.7000e-003	2.7000e-003	0.0000	70.4364	70.4364	6.7700e-003	0.0000	70.6058
2025	0.0788	0.0353	0.0604	9.0000e-005	0.0000	1.8000e-004	1.8000e-004	0.0000	1.8000e-004	1.8000e-004	0.0000	7.6038	7.6038	1.7400e-003	0.0000	7.6472
Maximum	**1.7934**	**0.3149**	**0.5216**	**8.2000e-004**	**0.0368**	**2.7000e-003**	**0.0376**	**0.0116**	**2.7000e-003**	**0.0124**	**0.0000**	**70.4364**	**70.4364**	**9.0500e-003**	**0.0000**	**70.6058**

	ROG	NOx	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	**4.46**	**49.80**	**16.05**	**34.20**	**55.00**	**91.67**	**67.93**	**55.02**	**91.22**	**77.51**	**0.00**	**34.59**	**34.59**	**51.59**	**0.00**	**34.68**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-2-2023**	**4-1-2023**	0.1320	0.0875
2	**4-2-2023**	**7-1-2023**	0.0834	0.0343
3	**7-2-2023**	**10-1-2023**	0.1024	0.0129
4	**10-2-2023**	**1-1-2024**	0.1023	0.0129
5	**1-2-2024**	**4-1-2024**	0.4094	0.3211
6	**4-2-2024**	**7-1-2024**	0.6923	0.5972
7	**7-2-2024**	**10-1-2024**	0.6999	0.6038
8	**10-2-2024**	**1-1-2025**	0.6157	0.5923
9	**1-2-2025**	**4-1-2025**	0.1091	0.1077
		Highest	0.6999	0.6038

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2677	0.0183	1.5905	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.5000e-003	0.0000	2.6640
Energy	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437
Mobile	0.5400	0.3401	3.6141	9.4000e-003	0.8821	5.5100e-003	0.8876	0.2199	5.1300e-003	0.2250	0.0000	867.0316	867.0316	0.0413	0.0346	878.3865
Waste						0.0000	0.0000		0.0000	0.0000	22.2844	0.0000	22.2844	1.3170	0.0000	55.2085
Water						0.0000	0.0000		0.0000	0.0000	5.2161	0.0000	5.2161	0.0180	0.0113	9.0452
Total	**1.8080**	**0.3609**	**5.2066**	**9.4900e-003**	**0.8821**	**0.0145**	**0.8966**	**0.2199**	**0.0141**	**0.2340**	**27.5004**	**872.2612**	**899.7616**	**1.3787**	**0.0460**	**947.9479**

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	1.2677	0.0183	1.5905	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.5000e-003	0.0000	2.6640
Energy	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437
Mobile	0.5400	0.3401	3.6141	9.4000e-003	0.8821	5.5100e-003	0.8876	0.2199	5.1300e-003	0.2250	0.0000	867.0316	867.0316	0.0413	0.0346	878.3865

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Waste						0.0000	0.0000		0.0000	0.0000	22.2844	0.0000	22.2844	1.3170	0.0000	55.2085
Water						0.0000	0.0000		0.0000	0.0000	5.2161	0.0000	5.2161	0.0180	0.0113	9.0452
Total	**1.8080**	**0.3609**	**5.2066**	**9.4900e-003**	**0.8821**	**0.0145**	**0.8966**	**0.2199**	**0.0141**	**0.2340**	**27.5004**	**872.2612**	**899.7616**	**1.3787**	**0.0460**	**947.9479**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	2/17/2023	5	35	
2	Site Preparation	Site Preparation	2/18/2023	3/9/2023	5	14	
3	Grading	Grading	3/10/2023	4/7/2023	5	21	
4	Trenching	Trenching	4/8/2023	5/19/2023	5	30	
5	Building Construction	Building Construction	5/20/2023	10/11/2024	5	365	
6	Architectural Coating	Architectural Coating	2/14/2024	1/14/2025	5	240	
7	Paving	Paving	1/15/2025	3/18/2025	5	45	

Acres of Grading (Site Preparation Phase): 3.33

Acres of Grading (Grading Phase): 6.17

Acres of Paving: 0

Residential Indoor: 510,503; Residential Outdoor: 170,168; Non-Residential Indoor: 16,200; Non-Residential Outdoor: 5,400; Striped Parking Area:

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	2	1.20	81	0.73
Demolition	Excavators	2	2.10	158	0.38
Demolition	Rubber Tired Dozers	2	0.30	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	2.40	97	0.37
Site Preparation	Graders	1	1.70	187	0.41
Site Preparation	Rubber Tired Dozers	1	2.10	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	3.00	97	0.37
Grading	Concrete/Industrial Saws	1	0.30	81	0.73
Grading	Excavators	1	3.10	158	0.38
Grading	Graders	2	0.90	187	0.41
Grading	Rubber Tired Dozers	1	2.90	247	0.40
Grading	Tractors/Loaders/Backhoes	1	5.40	97	0.37
Trenching	Excavators	1	1.20	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Cranes	2	2.50	231	0.29
Building Construction	Forklifts	2	1.30	89	0.20
Building Construction	Generator Sets	2	0.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	0.20	97	0.37
Building Construction	Welders	2	0.30	46	0.45
Architectural Coating	Aerial Lifts	3	0.80	63	0.31
Architectural Coating	Air Compressors	3	4.00	78	0.48
Paving	Cement and Mortar Mixers	1	1.30	9	0.56
Paving	Pavers	1	1.30	130	0.42
Paving	Paving Equipment	1	1.30	132	0.36
Paving	Rollers	1	1.30	80	0.38
Paving	Tractors/Loaders/Backhoes	1	1.30	97	0.37

Trips and VMT

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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 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	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	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 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0422	0.0000	0.0422	6.3900e-003	0.0000	6.3900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9700e-003	0.0533	0.0766	1.2000e-004		2.5900e-003	2.5900e-003		2.4300e-003	2.4300e-003	0.0000	10.8483	10.8483	2.7300e-003	0.0000	10.9167
Total	**5.9700e-003**	**0.0533**	**0.0766**	**1.2000e-004**	**0.0422**	**2.5900e-003**	**0.0448**	**6.3900e-003**	**2.4300e-003**	**8.8200e-003**	**0.0000**	**10.8483**	**10.8483**	**2.7300e-003**	**0.0000**	**10.9167**

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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					
Fugitive Dust					0.0190	0.0000	0.0190	2.8800e-003	0.0000	2.8800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-003	0.0498	0.0868	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.8483	10.8483	2.7300e-003	0.0000	10.9167
Total	**2.1000e-003**	**0.0498**	**0.0868**	**1.2000e-004**	**0.0190**	**1.9000e-004**	**0.0192**	**2.8800e-003**	**1.9000e-004**	**3.0700e-003**	**0.0000**	**10.8483**	**10.8483**	**2.7300e-003**	**0.0000**	**10.9167**

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

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 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0128	0.0000	0.0128	6.2700e-003	0.0000	6.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0241	0.0141	3.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	2.9615	2.9615	9.6000e-004	0.0000	2.9855
Total	**2.2300e-003**	**0.0241**	**0.0141**	**3.0000e-005**	**0.0128**	**1.0100e-003**	**0.0138**	**6.2700e-003**	**9.3000e-004**	**7.2000e-003**	**0.0000**	**2.9615**	**2.9615**	**9.6000e-004**	**0.0000**	**2.9855**

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

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					
Fugitive Dust					5.7700e-003	0.0000	5.7700e-003	2.8200e-003	0.0000	2.8200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0000e-004	0.0103	0.0197	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.9615	2.9615	9.6000e-004	0.0000	2.9855
Total	**6.0000e-004**	**0.0103**	**0.0197**	**3.0000e-005**	**5.7700e-003**	**5.0000e-005**	**5.8200e-003**	**2.8200e-003**	**5.0000e-005**	**2.8700e-003**	**0.0000**	**2.9615**	**2.9615**	**9.6000e-004**	**0.0000**	**2.9855**

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**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0267	0.0000	0.0267	0.0130	0.0000	0.0130	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4800e-003	0.0563	0.0463	9.0000e-005		2.4700e-003	2.4700e-003		2.2800e-003	2.2800e-003	0.0000	8.2258	8.2258	2.6000e-003	0.0000	8.2909
Total	**5.4800e-003**	**0.0563**	**0.0463**	**9.0000e-005**	**0.0267**	**2.4700e-003**	**0.0292**	**0.0130**	**2.2800e-003**	**0.0153**	**0.0000**	**8.2258**	**8.2258**	**2.6000e-003**	**0.0000**	**8.2909**

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					
Fugitive Dust					0.0120	0.0000	0.0120	5.8700e-003	0.0000	5.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5800e-003	0.0324	0.0596	9.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	8.2258	8.2258	2.6000e-003	0.0000	8.2908
Total	**1.5800e-003**	**0.0324**	**0.0596**	**9.0000e-005**	**0.0120**	**1.5000e-004**	**0.0122**	**5.8700e-003**	**1.5000e-004**	**6.0200e-003**	**0.0000**	**8.2258**	**8.2258**	**2.6000e-003**	**0.0000**	**8.2908**

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**

3.5 Trenching - 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	2.1300e-003	0.0208	0.0324	5.0000e-005		1.0200e-003	1.0200e-003		9.4000e-004	9.4000e-004	0.0000	4.0986	4.0986	1.3300e-003	0.0000	4.1318
Total	**2.1300e-003**	**0.0208**	**0.0324**	**5.0000e-005**		**1.0200e-003**	**1.0200e-003**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**4.0986**	**4.0986**	**1.3300e-003**	**0.0000**	**4.1318**

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	9.3000e-004	0.0204	0.0352	5.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	4.0986	4.0986	1.3300e-003	0.0000	4.1318
Total	**9.3000e-004**	**0.0204**	**0.0352**	**5.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**4.0986**	**4.0986**	**1.3300e-003**	**0.0000**	**4.1318**

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

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

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 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2273	0.1360	3.5000e-004		9.9900e-003	9.9900e-003		9.2200e-003	9.2200e-003	0.0000	30.5157	30.5157	9.6300e-003	0.0000	30.7564
Total	**0.0221**	**0.2273**	**0.1360**	**3.5000e-004**		**9.9900e-003**	**9.9900e-003**		**9.2200e-003**	**9.2200e-003**	**0.0000**	**30.5157**	**30.5157**	**9.6300e-003**	**0.0000**	**30.7564**

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

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	1.3000e-003	0.0301	0.0439	6.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1681	5.1681	1.4300e-003	0.0000	5.2038
Total	**1.3000e-003**	**0.0301**	**0.0439**	**6.0000e-005**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**5.1681**	**5.1681**	**1.4300e-003**	**0.0000**	**5.2038**

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

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

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 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0266	0.2683	0.1702	4.5000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	39.0980	39.0980	0.0123	0.0000	39.4061
Total	**0.0266**	**0.2683**	**0.1702**	**4.5000e-004**		**0.0116**	**0.0116**		**0.0107**	**0.0107**	**0.0000**	**39.0980**	**39.0980**	**0.0123**	**0.0000**	**39.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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**

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	1.6700e-003	0.0386	0.0562	8.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.6220	6.6220	1.8200e-003	0.0000	6.6676
Total	**1.6700e-003**	**0.0386**	**0.0562**	**8.0000e-005**		**4.6000e-004**	**4.6000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**6.6220**	**6.6220**	**1.8200e-003**	**0.0000**	**6.6676**

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

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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**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.7778					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0428	0.2985	0.4540	7.4000e-004		0.0143	0.0143		0.0143	0.0143	0.0000	63.8145	63.8145	4.9500e-003	0.0000	63.9383
Total	**1.8206**	**0.2985**	**0.4540**	**7.4000e-004**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**63.8145**	**63.8145**	**4.9500e-003**	**0.0000**	**63.9383**

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					
Archit. Coating	1.7778					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.2763	0.4654	7.4000e-004		2.2400e-003	2.2400e-003		2.2400e-003	2.2400e-003	0.0000	63.8144	63.8144	4.9500e-003	0.0000	63.9382
Total	**1.7918**	**0.2763**	**0.4654**	**7.4000e-004**		**2.2400e-003**	**2.2400e-003**		**2.2400e-003**	**2.2400e-003**	**0.0000**	**63.8144**	**63.8144**	**4.9500e-003**	**0.0000**	**63.9382**

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

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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**

3.7 Architectural Coating - 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					
Archit. Coating	0.0773					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7600e-003	0.0122	0.0197	3.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	2.7745	2.7745	2.1000e-004	0.0000	2.7798
Total	**0.0791**	**0.0122**	**0.0197**	**3.0000e-005**		**5.3000e-004**	**5.3000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**2.7745**	**2.7745**	**2.1000e-004**	**0.0000**	**2.7798**

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					
Archit. Coating	0.0773					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	0.0120	0.0202	3.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	2.7745	2.7745	2.1000e-004	0.0000	2.7798
Total	**0.0779**	**0.0120**	**0.0202**	**3.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**2.7745**	**2.7745**	**2.1000e-004**	**0.0000**	**2.7798**

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

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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**

3.8 Paving - 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	2.3700e-003	0.0219	0.0359	6.0000e-005		1.0200e-003	1.0200e-003		9.4000e-004	9.4000e-004	0.0000	4.8292	4.8292	1.5300e-003	0.0000	4.8673
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.3700e-003**	**0.0219**	**0.0359**	**6.0000e-005**		**1.0200e-003**	**1.0200e-003**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**4.8292**	**4.8292**	**1.5300e-003**	**0.0000**	**4.8673**

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	8.7000e-004	0.0233	0.0402	6.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	4.8292	4.8292	1.5300e-003	0.0000	4.8673
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.7000e-004**	**0.0233**	**0.0402**	**6.0000e-005**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**4.8292**	**4.8292**	**1.5300e-003**	**0.0000**	**4.8673**

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

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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**

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	0.5400	0.3401	3.6141	9.4000e-003	0.8821	5.5100e-003	0.8876	0.2199	5.1300e-003	0.2250	0.0000	867.0316	867.0316	0.0413	0.0346	878.3865
Unmitigated	0.5400	0.3401	3.6141	9.4000e-003	0.8821	5.5100e-003	0.8876	0.2199	5.1300e-003	0.2250	0.0000	867.0316	867.0316	0.0413	0.0346	878.3865

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	971.56	877.40	729.74	2,204,129	2,204,129
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	213.95	261.47	119.66	426,132	426,132
Total	1,185.51	1,138.87	849.40	2,630,260	2,630,260

4.3 Trip Type Information

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	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	89	11	0
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	65	35	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.435003	0.042472	0.283421	0.162637	0.029455	0.006578	0.008621	0.002515	0.002285	0.000720	0.023820	0.000412	0.002062
Enclosed Parking with Elevator	0.435003	0.042472	0.283421	0.162637	0.029455	0.006578	0.008621	0.002515	0.002285	0.000720	0.023820	0.000412	0.002062
Parking Lot	0.435003	0.042472	0.283421	0.162637	0.029455	0.006578	0.008621	0.002515	0.002285	0.000720	0.023820	0.000412	0.002062
Regional Shopping Center	0.435003	0.042472	0.283421	0.162637	0.029455	0.006578	0.008621	0.002515	0.002285	0.000720	0.023820	0.000412	0.002062

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	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437

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NaturalGas Unmitigated	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	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
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	49248	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437
Total		**2.7000e-004**	**2.4100e-003**	**2.0300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.6281**	**2.6281**	**5.0000e-005**	**5.0000e-005**	**2.6437**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	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

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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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	49248	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437
Total		**2.7000e-004**	**2.4100e-003**	**2.0300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.6281**	**2.6281**	**5.0000e-005**	**5.0000e-005**	**2.6437**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.37755e+006	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	583728	0.0000	0.0000	0.0000	0.0000
Parking Lot	2940	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	110592	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

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	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.37755e+006	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	583728	0.0000	0.0000	0.0000	0.0000
Parking Lot	2940	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	110592	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					
Mitigated	1.2677	0.0183	1.5905	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.5000e-003	0.0000	2.6640
Unmitigated	1.2677	0.0183	1.5905	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.5000e-003	0.0000	2.6640

6.2 Area by SubCategory

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

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	0.1855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0342					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0479	0.0183	1.5905	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.5000e-003	0.0000	2.6640
Total	**1.2677**	**0.0183**	**1.5905**	**8.0000e-005**		**8.8200e-003**	**8.8200e-003**		**8.8200e-003**	**8.8200e-003**	**0.0000**	**2.6015**	**2.6015**	**2.5000e-003**	**0.0000**	**2.6640**

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	0.1855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0342					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0479	0.0183	1.5905	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.5000e-003	0.0000	2.6640

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Total	**1.2677**	**0.0183**	**1.5905**	**8.0000e-005**		**8.8200e-003**	**8.8200e-003**		**8.8200e-003**	**8.8200e-003**	**0.0000**	**2.6015**	**2.6015**	**2.5000e-003**	**0.0000**	**2.6640**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.2161	0.0180	0.0113	9.0452
Unmitigated	5.2161	0.0180	0.0113	9.0452

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.943 / 8.79013	4.9330	0.0170	0.0107	8.5544
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

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Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.799983 / 0.490312	0.2830	9.7000e-004	6.2000e-004	0.4908
Total		**5.2161**	**0.0180**	**0.0114**	**9.0452**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.943 / 8.79013	4.9330	0.0170	0.0107	8.5544
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.799983 / 0.490312	0.2830	9.7000e-004	6.2000e-004	0.4908
Total		**5.2161**	**0.0180**	**0.0114**	**9.0452**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.2844	1.3170	0.0000	55.2085
Unmitigated	22.2844	1.3170	0.0000	55.2085

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	98.44	19.9824	1.1809	0.0000	49.5056
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	11.34	2.3019	0.1360	0.0000	5.7029
Total		**22.2844**	**1.3170**	**0.0000**	**55.2085**

Mitigated

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

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	98.44	19.9824	1.1809	0.0000	49.5056
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	11.34	2.3019	0.1360	0.0000	5.7029
Total		**22.2844**	**1.3170**	**0.0000**	**55.2085**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

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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
Enclosed Parking with Elevator	300.00	Space	0.00	107,303.00	0
Parking Lot	21.00	Space	0.00	8,400.00	0
Apartments Mid Rise	214.00	Dwelling Unit	1.98	252,100.00	612
Regional Shopping Center	10.80	1000sqft	0.00	10,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	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 -

Land Use - Unit amounts, acreage, square footage provided by applicant.

Construction Phase - Applicant provided phase lengths and demo start date

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

Off-road Equipment - Construction info provided by applicant

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Off-road Equipment - Construction info provided by applicant

Trips and VMT - All trips entered into EMFAC2021

Demolition -

Grading -

Vehicle Trips - Pass-by trip reduction given by traffic consultant. CalEEMod pass-B trip % added into primary trip.

Vehicle Emission Factors - Emission factors from EMFAC2021

Woodstoves - No hearths/fireplaces

Energy Use - Daly City reach code bans natural gas for residential. Nat gas intensity added into electricity energy intensity.

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - Electric cranes and gen sets (line power), all other equipment t4i, BMP

Fleet Mix - Fleet mix from EMFAC2021

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	240.00
tblConstructionPhase	NumDays	200.00	365.00
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	4.00	21.00
tblConstructionPhase	NumDays	10.00	45.00
tblConstructionPhase	NumDays	2.00	14.00
tblEnergyUse	NT24E	3,054.10	3,844.13
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	T24E	90.83	1,851.56
tblEnergyUse	T24NG	5,828.01	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	32.10	0.00

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

tblFireplaces	NumberNoFireplace	8.56	0.00
tblFireplaces	NumberWood	36.38	0.00
tblFleetMix	HHD	1.7910e-003	2.3620e-003
tblFleetMix	HHD	1.7910e-003	2.3620e-003
tblFleetMix	HHD	1.7910e-003	2.3620e-003
tblFleetMix	HHD	1.7910e-003	2.3620e-003
tblFleetMix	LDA	0.43	0.39
tblFleetMix	LDA	0.43	0.39
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	LDT1	0.08	0.04
tblFleetMix	LDT1	0.08	0.04
tblFleetMix	LDT2	0.25	0.31
tblFleetMix	LDT2	0.25	0.31
tblFleetMix	LDT2	0.25	0.31
tblFleetMix	LDT2	0.25	0.31
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	7.1360e-003	7.4140e-003
tblFleetMix	LHD2	7.1360e-003	7.4140e-003
tblFleetMix	LHD2	7.1360e-003	7.4140e-003
tblFleetMix	LHD2	7.1360e-003	7.4140e-003
tblFleetMix	MCY	0.03	0.02
tblFleetMix	MCY	0.03	0.02
tblFleetMix	MCY	0.03	0.02

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tblFleetMix	MCY	0.03	0.02
tblFleetMix	MDV	0.16	0.18
tblFleetMix	MDV	0.16	0.18
tblFleetMix	MDV	0.16	0.18
tblFleetMix	MDV	0.16	0.18
tblFleetMix	MH	2.9170e-003	2.1460e-003
tblFleetMix	MH	2.9170e-003	2.1460e-003
tblFleetMix	MH	2.9170e-003	2.1460e-003
tblFleetMix	MH	2.9170e-003	2.1460e-003
tblFleetMix	MHD	0.01	8.2620e-003
tblFleetMix	MHD	0.01	8.2620e-003
tblFleetMix	MHD	0.01	8.2620e-003
tblFleetMix	MHD	0.01	8.2620e-003
tblFleetMix	OBUS	1.3500e-003	2.2040e-003
tblFleetMix	OBUS	1.3500e-003	2.2040e-003
tblFleetMix	OBUS	1.3500e-003	2.2040e-003
tblFleetMix	OBUS	1.3500e-003	2.2040e-003
tblFleetMix	SBUS	4.2100e-004	3.9400e-004
tblFleetMix	SBUS	4.2100e-004	3.9400e-004
tblFleetMix	SBUS	4.2100e-004	3.9400e-004
tblFleetMix	SBUS	4.2100e-004	3.9400e-004
tblFleetMix	UBUS	4.9600e-004	6.4500e-004
tblFleetMix	UBUS	4.9600e-004	6.4500e-004
tblFleetMix	UBUS	4.9600e-004	6.4500e-004
tblFleetMix	UBUS	4.9600e-004	6.4500e-004
tblGrading	MaterialExported	0.00	9,528.78
tblLandUse	LandUseSquareFeet	120,000.00	107,303.00
tblLandUse	LandUseSquareFeet	214,000.00	252,100.00
tblLandUse	LotAcreage	2.70	0.00

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tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	5.63	1.98
tblLandUse	LotAcreage	0.25	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	8.00	1.20
tblOffRoadEquipment	UsageHours	8.00	0.30
tblOffRoadEquipment	UsageHours	8.00	2.40
tblOffRoadEquipment	UsageHours	8.00	1.70
tblOffRoadEquipment	UsageHours	7.00	2.10
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	8.00	0.90
tblOffRoadEquipment	UsageHours	8.00	2.90
tblOffRoadEquipment	UsageHours	7.00	5.40
tblOffRoadEquipment	UsageHours	6.00	2.50
tblOffRoadEquipment	UsageHours	6.00	1.30
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.20
tblOffRoadEquipment	UsageHours	8.00	0.30
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	1.30

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tblOffRoadEquipment	UsageHours	6.00	1.30
tblOffRoadEquipment	UsageHours	8.00	1.30
tblOffRoadEquipment	UsageHours	7.00	1.30
tblOffRoadEquipment	UsageHours	8.00	1.30
tblTripsAndVMT	HaulingTripNumber	390.00	0.00
tblTripsAndVMT	HaulingTripNumber	1,191.00	0.00
tblTripsAndVMT	VendorTripNumber	44.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	206.00	0.00
tblTripsAndVMT	WorkerTripNumber	41.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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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
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

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

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
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	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	86.00	89.00
tblVehicleTrips	PR_TP	54.00	65.00
tblVehicleTrips	ST_TR	4.91	4.10
tblVehicleTrips	ST_TR	46.12	24.21
tblVehicleTrips	SU_TR	4.09	3.41
tblVehicleTrips	SU_TR	21.10	11.08
tblVehicleTrips	WD_TR	5.44	4.54
tblVehicleTrips	WD_TR	37.75	19.81
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
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	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

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

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	4.28	0.00
tblWoodstoves	NumberNoncatalytic	4.28	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	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	1.2674	0.0183	1.5878	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.4900e-003	0.0000	2.6637
Energy	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437
Mobile	0.4671	0.2729	3.1898	8.8900e-003	0.8825	4.3800e-003	0.8868	0.2200	4.0800e-003	0.2241	0.0000	820.2431	820.2431	0.0350	0.0313	830.4516
Waste						0.0000	0.0000		0.0000	0.0000	22.2844	0.0000	22.2844	1.3170	0.0000	55.2085
Water						0.0000	0.0000		0.0000	0.0000	5.2161	0.0000	5.2161	0.0180	0.0113	9.0452
Total	**1.7348**	**0.2936**	**4.7796**	**8.9800e-003**	**0.8825**	**0.0134**	**0.8958**	**0.2200**	**0.0131**	**0.2331**	**27.5004**	**825.4726**	**852.9730**	**1.3725**	**0.0427**	**900.0127**

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

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	1.2674	0.0183	1.5878	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.4900e-003	0.0000	2.6637
Energy	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437
Mobile	0.4671	0.2729	3.1898	8.8900e-003	0.8825	4.3800e-003	0.8868	0.2200	4.0800e-003	0.2241	0.0000	820.2431	820.2431	0.0350	0.0313	830.4516
Waste						0.0000	0.0000		0.0000	0.0000	22.2844	0.0000	22.2844	1.3170	0.0000	55.2085
Water						0.0000	0.0000		0.0000	0.0000	5.2161	0.0000	5.2161	0.0180	0.0113	9.0452
Total	**1.7348**	**0.2936**	**4.7796**	**8.9800e-003**	**0.8825**	**0.0134**	**0.8958**	**0.2200**	**0.0131**	**0.2331**	**27.5004**	**825.4726**	**852.9730**	**1.3725**	**0.0427**	**900.0127**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

Mitigated	0.4671	0.2729	3.1898	8.8900e-003	0.8825	4.3800e-003	0.8868	0.2200	4.0800e-003	0.2241	0.0000	820.2431	820.2431	0.0350	0.0313	830.4516
Unmitigated	0.4671	0.2729	3.1898	8.8900e-003	0.8825	4.3800e-003	0.8868	0.2200	4.0800e-003	0.2241	0.0000	820.2431	820.2431	0.0350	0.0313	830.4516

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	971.56	877.40	729.74	2,204,129	2,204,129
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	213.95	261.47	119.66	426,132	426,132
Total	1,185.51	1,138.87	849.40	2,630,260	2,630,260

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	89	11	0
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	65	35	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.392609	0.040642	0.308969	0.177896	0.031644	0.007414	0.008262	0.002362	0.002204	0.000645	0.024811	0.000394	0.002146
Enclosed Parking with Elevator	0.392609	0.040642	0.308969	0.177896	0.031644	0.007414	0.008262	0.002362	0.002204	0.000645	0.024811	0.000394	0.002146
Parking Lot	0.392609	0.040642	0.308969	0.177896	0.031644	0.007414	0.008262	0.002362	0.002204	0.000645	0.024811	0.000394	0.002146
Regional Shopping Center	0.392609	0.040642	0.308969	0.177896	0.031644	0.007414	0.008262	0.002362	0.002204	0.000645	0.024811	0.000394	0.002146

5.0 Energy Detail

Historical Energy Use: N

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

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	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437
NaturalGas Unmitigated	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	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
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	49248	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437

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

Total		**2.7000e-004**	**2.4100e-003**	**2.0300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.6281**	**2.6281**	**5.0000e-005**	**5.0000e-005**	**2.6437**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	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
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	49248	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6281	2.6281	5.0000e-005	5.0000e-005	2.6437
Total		**2.7000e-004**	**2.4100e-003**	**2.0300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.6281**	**2.6281**	**5.0000e-005**	**5.0000e-005**	**2.6437**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.37755e+006	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

Enclosed Parking with Elevator	583728	0.0000	0.0000	0.0000	0.0000
Parking Lot	2940	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	110592	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			
Apartments Mid Rise	1.37755e+006	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	583728	0.0000	0.0000	0.0000	0.0000
Parking Lot	2940	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	110592	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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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					
Mitigated	1.2674	0.0183	1.5878	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.4900e-003	0.0000	2.6637
Unmitigated	1.2674	0.0183	1.5878	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.4900e-003	0.0000	2.6637

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	0.1855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0342					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0477	0.0183	1.5878	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.4900e-003	0.0000	2.6637
Total	**1.2674**	**0.0183**	**1.5878**	**8.0000e-005**		**8.8200e-003**	**8.8200e-003**		**8.8200e-003**	**8.8200e-003**	**0.0000**	**2.6015**	**2.6015**	**2.4900e-003**	**0.0000**	**2.6637**

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

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0342					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0477	0.0183	1.5878	8.0000e-005		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.0000	2.6015	2.6015	2.4900e-003	0.0000	2.6637
Total	**1.2674**	**0.0183**	**1.5878**	**8.0000e-005**		**8.8200e-003**	**8.8200e-003**		**8.8200e-003**	**8.8200e-003**	**0.0000**	**2.6015**	**2.6015**	**2.4900e-003**	**0.0000**	**2.6637**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.2161	0.0180	0.0113	9.0452
Unmitigated	5.2161	0.0180	0.0113	9.0452

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.943 / 8.79013	4.9330	0.0170	0.0107	8.5544
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.799983 / 0.490312	0.2830	9.7000e-004	6.2000e-004	0.4908
Total		**5.2161**	**0.0180**	**0.0114**	**9.0452**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.943 / 8.79013	4.9330	0.0170	0.0107	8.5544
Enclosed Parking with Elevator	0 / 0	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

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.799983 / 0.490312	0.2830	9.7000e-004	6.2000e-004	0.4908
Total		**5.2161**	**0.0180**	**0.0114**	**9.0452**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.2844	1.3170	0.0000	55.2085
Unmitigated	22.2844	1.3170	0.0000	55.2085

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	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

Apartments Mid Rise	98.44	19.9824	1.1809	0.0000	49.5056
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	11.34	2.3019	0.1360	0.0000	5.7029
Total		**22.2844**	**1.3170**	**0.0000**	**55.2085**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	98.44	19.9824	1.1809	0.0000	49.5056
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	11.34	2.3019	0.1360	0.0000	5.7029
Total		**22.2844**	**1.3170**	**0.0000**	**55.2085**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 3: EMFAC2021 Calculations

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														
2023	0.0582	0.4611	0.7763	0.0036	0.1825	0.0276	0.2101	0.0275	0.0113	0.0387	355.6876	0.0352	0.0389	368.1556
2024 & 2025	0.0655	0.5310	0.8906	0.0043	0.2221	0.0333	0.2554	0.0334	0.0135	0.0469	424.5501	0.0410	0.0463	439.3745
Toxic Air Contaminants (1.0 Mile Trip Length)														
2023	0.0480	0.1076	0.2557	0.0004	0.0166	0.0024	0.0190	0.0025	0.0011	0.0035	39.2071	0.0074	0.0053	40.9727
2024 & 2025	0.0544	0.1271	0.2930	0.0005	0.0202	0.0029	0.0231	0.0030	0.0013	0.0043	46.8132	0.0086	0.0063	48.9036

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	20	0	700	0	390	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	7560	0	7800
Site Preparation	8	0	112	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1209.6	0	0
Grading	15	0	315	0	1191	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3402	0	23820
Trenching/Foundation	5	0	150	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1620	0	0
Paving	13	0	585	0	1000	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	6318	0	20000
Building Construction	206	44	75190	16060	6000	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	812052	117238	120000
Architectural Coating	41	0	9840	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	106272	0	0

Number of Days Per Year					
2023	1/2/23	12/31/23	364	260	
2024 & 2025	1/1/24	3/18/25	443	317	
			807	**577**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/2/2023	2/17/2023	5	35
Site Preparation	2/18/2023	3/9/2023	5	14
Grading	3/10/2023	4/7/2023	5	21
Trenching/Foundation	4/8/2023	5/19/2023	5	30
Paving	1/15/2025	3/18/2025	5	45
Building Construction	5/20/2023	10/11/2024	5	365
Architectural Coating	2/14/2024	1/14/2025	5	240

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

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_IDL	PM10_STR	PM10_PM	CO_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	2023	HHDT	Aggregate	Aggregate	Gasoline	4.303891	593.3265	593.3265	0	86.1122	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	0.045	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	0.197741	0.123869	46.58006	0	0.017459	0.078517	0
San Mateo	2023	HHDT	Aggregate	Aggregate	Electricity	0.738781	40.81187	0	40.81187	9.636589	0	0	0	0	0	0	0.008666	0.01378	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
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	0.009	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	0.73711	17.41229	66.41256	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	0.0031	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
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	0.0031	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
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	0.0031	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
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	0.002253	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	0.184546	0.371953	0.909745	0	0.005975	0.001223	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	0.196309	0.303972	0.909745	0	0.007088	0.001942	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	0.0031	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
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	0.061382	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	0.185977	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	0.206918	0.148734	7.579195	0	0.010946	0.021442	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
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	0.003	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	1.06	3.064735	35.81803	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	0.217631	0.094166	5.629794	0	0.011845	0.011607	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	0.003	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	1.06	3.19115	6.306096	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	0.134019	0.208594	4.289616	0	0.010887	0.021276	0
San Mateo	2023	SBUS	Aggregate	Aggregate	Electricity	0.041475	0.481131	0	0.481131	0.600564	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
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	0.003	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	1.06	11.51682	21.10371	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	0.122644	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	0.009	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
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	4.537297	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

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_PMI	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	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	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	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	0.002346	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	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	0	0	0.0031	0.304144	0	0	0.002206	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	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	0.038557	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	0	0	0.0031	1.668132	0	0	0.003959	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	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	0	0	0.0031	0.119356	0	0	0.002928	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	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	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	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	0	0	0.0031	0.171126	0	0	0.003383	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	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	0	0	0.190835	0.284597	0	0	0.010288	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	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	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	0.002	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	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	0.003145	0	0	0.192799	0	0	0.067719	0	0	0	0	0.077093	0	0	0	0	0	0.22	0.077195	0	0	0.011595	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	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	0.030963	0.11	1262.656	0	0	4.100531	0	0	0.257401	0	0	0.058588	0	0	0	0	4.184893	0	0	0	0	0	0.97	46.50633	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_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	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	0.000813	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	18014.9	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	0.008097	0.0385	0.007135	0	0	0.032386	0.11	1223.487	0	0	0.003145	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	0.007371	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
	0.435003	0.042472	0.283421	0.162637	0.029455	0.006578	0.008621	0.002515	0.002285	0.00072	0.02382	0.000412	0.002062

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

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	CO_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	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	0.033801	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	0.002349	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	0.206497	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	0	0.002054	0	0	0	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	0.083505	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	0.009438	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	0.007786	0.0385	0.000286	0	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
	0.392609	0.040642	0.308969	0.177896	0.031644	0.007414	0.008262	0.002362	0.002204	0.000645	0.024811	0.000394	0.002146

Attachment 4: Project Construction Emissions and Health Risk Calculations

99 Southgate Ave, Daly City, 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 ($g/s/m^2$)
2023	Construction	0.0195	CON_DPM	39.0	0.01188	1.50E-03	7,991	1.87E-07
2024 & 2025	Construction	0.0303	CON_DPM	60.7	0.01847	2.33E-03	7,991	2.91E-07
Total		***0.0499***		***99.7***	***0.0304***	***0.0038***		

Construction Hours

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

99 Southgate Ave, Daly City, 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 $g/s/m^2$
2023	Construction	CON_FUG	0.0282	56.4	0.01717	2.16E-03	7,991	2.71E-07
2024 & 2025	Construction	CON_FUG	0.0030	6.1	0.00185	2.33E-04	7,991	2.91E-08
Total			***0.0312***	***62.5***	***0.0190***	***0.0024***		

Construction Hours

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

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

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 ($g/s/m^2$)
2023	Construction	0.0032	CON_DPM	6.5	0.00198	2.49E-04	7,991	3.12E-08
2024 & 2025	Construction	0.0058	CON_DPM	11.6	0.00352	4.44E-04	7,991	5.55E-08
Total		***0.0090***		***18.1***	***0.0055***	***0.0007***		

Construction Hours

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

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

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 $g/s/m^2$
2023	Construction	CON_FUG	0.0141	28.2	0.00858	1.08E-03	7,991	1.35E-07
2024 & 2025	Construction	CON_FUG	0.0030	6.1	0.00185	2.33E-04	7,991	2.91E-08
Total			***0.0171***	***34.3***	***0.0104***	***0.0013***		

Construction Hours

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

99 Southgate Ave, Daly City, CA
Construction Health Impact Summary

Maximum Impacts at MEI Location - Without Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2023	0.0748	0.1181	13.30	0.21	0.01	0.25
2024 & 2025	0.1164	0.0127	19.12	0.33	0.02	0.12
Total	-	-	**32.42**	**0.55**		-
Maximum	0.1164	0.1181	**-**	**-**	**0.02**	**0.25**

Maximum Impacts at MEI Location - With Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2023	0.0125	0.0588	1.93	0.04	0.00	0.10
2024 & 2025	0.0222	0.0127	3.65	0.06	0.00	0.04
Total	-	-	**5.58**	**0.10**	-	-
Maximum	0.0222	0.0588	**-**	**-**	**0.00**	**0.10**

- Tier 4 Interim Engine and BMP Mitigation

Maximum Impacts at Benjamin Franklin Intermediate School

Construction Year	Unmitigated Emissions: Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Unmitigated Emissions: Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2023	0.0015	0.0024	0.10	0.0003	0.004
2024 & 2025	0.0024	0.0003	0.15	0.0005	0.003
Total	-	-	**0.25**	-	-
Maximum	0.0024	0.0024	**-**	**0.0003**	**0.004**

99 Southgate Ave, Daly City, 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						
							Modeled				Maximum		
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2023	0.0591	10	0.80	2023	0.0591	-	-			
1	1	0 - 1	2023	0.0591	10	9.70	2023	0.0591	1	0.17	0.012	0.06	0.12
2	1	1 - 2	2024 & 2025	0.0919	10	15.10	2024 & 2025	0.0919	1	0.26	0.018	0.01	0.10
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
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						**25.60**				**0.43**			

* Third trimester of pregnancy

99 Southgate Ave, Daly City, 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						
							Modeled				Maximum		
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2023	0.0748	10	1.02	2023	0.0748	-	-			
1	1	0 - 1	2023	0.0748	10	12.28	2023	0.0748	1	0.21	0.015	0.118	0.19
2	1	1 - 2	2024 & 2025	0.1164	10	19.12	2024 & 2025	0.1164	1	0.33	0.023	0.013	0.13
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
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						**32.42**				**0.55**			

* Third trimester of pregnancy

99 Southgate Ave, Daly City, 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						
							Modeled				Maximum		
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2023	0.0642	10	0.87	2023	0.0642	-	-			
1	1	0 - 1	2023	0.0642	10	10.54	2023	0.0642	1	0.18	0.01	0.182	0.25
2	1	1 - 2	2024 & 2025	0.0999	10	16.40	2024 & 2025	0.0999	1	0.29	0.02	0.020	0.12
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
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						**27.81**				**0.47**			

* Third trimester of pregnancy

99 Southgate Ave, Daly City, CA - Construction Impacts - With 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						
							Modeled				Maximum		
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2023	0.0099	10	0.13	2023	0.0099	-	-			
1	1	0 - 1	2023	0.0099	10	1.62	2023	0.0099	1	0.03	0.0020	0.029	0.04
2	1	1 - 2	2024 & 2025	0.0175	10	2.88	2024 & 2025	0.0175	1	0.05	0.004	0.0064	0.02
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
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						**4.63**				**0.08**			

* Third trimester of pregnancy

99 Southgate Ave, Daly City, CA - Construction Impacts - With 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 --> / Parameter	3rd Trimester	0 - 2	2 - 16	16 - 30
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)	Adult - Exposure Information: Modeled DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum Hazard Index	Maximum Fugitive PM2.5	Maximum Total PM2.5
0	0.25	-0.25 - 0*	2023	0.0125	10	0.17	2023	0.0125	-	-			
1	1	0 - 1	2023	0.0125	10	2.05	2023	0.0125	1	0.04	0.002	0.06	0.07
2	1	1 - 2	2024 & 2025	0.0222	10	3.65	2024 & 2025	0.0222	1	0.06	0.004	0.01	0.03
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
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						**5.87**				**0.10**			

* Third trimester of pregnancy

99 Southgate Ave, Daly City, CA - Construction Impacts - With 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				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*	2023	0.0107	10	0.15	2023	0.0107	-	-			
1	1	0 - 1	2023	0.0107	10	1.76	2023	0.0107	1	0.03	0.002	0.09	0.10
2	1	1 - 2	2024 & 2025	0.0191	10	3.13	2024 & 2025	0.0191	1	0.05	0.004	0.020	0.04
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
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						**5.03**				**0.09**			

* Third trimester of pregnancy

99 Southgate Ave, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Benjamin Franklin Intermediate School - 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	10 - 11	2023	0.0015	3	0.1
2	1	11 - 12	2024 & 2025	0.0024	3	0.1
3	1			0.0000	3	0.0
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						**0.25**

* Children assumed to be 10 years of age or older with 3 years of Construction Exposure

Maximum		
Hazard Index	**Fugitive PM2.5**	**Total PM2.5**
0.0003	0.0024	0.004
0.0005	0.0003	0.003

Attachment 5: Community Risk Modeling Information and Calculations

```
           File Name:   Lake Merced Blvd 2023.EF
CT-EMFAC2017 Version:   1.0.2.27401
            Run Date:   12/6/2021 3:20:26 PM
                Area:   San Mateo (SF)
       Analysis Year:   2023
              Season:   Annual

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

Vehicle Category        VMT Fraction            Diesel VMT Fraction     Gas VMT Fraction
                        Across Category         Within Category         Within Category
         Truck 1             0.017                  0.482                   0.518
         Truck 2             0.014                  0.870                   0.113
       Non-Truck             0.969                  0.017                   0.960

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

               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
                PM2.5      0.002092
                  TOG      0.054124
           Diesel PM       0.000291

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

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

       Pollutant Name   Emission Factor
                  TOG          1.192095

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

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          0.016805

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.014874

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

```
           File Name:   Lake Merced Blvd 2026.EF
CT-EMFAC2017 Version:   1.0.2.27401
            Run Date:   12/6/2021 3:21:17 PM
                Area:   San Mateo (SF)
       Analysis Year:   2026
              Season:   Annual

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

Vehicle Category        VMT Fraction            Diesel VMT Fraction     Gas VMT Fraction
                        Across Category         Within Category         Within Category
         Truck 1             0.017                   0.504                   0.496
         Truck 2             0.014                   0.870                   0.112
       Non-Truck             0.969                   0.017                   0.950

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

               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
                PM2.5      0.001834
                  TOG      0.050573
            Diesel PM      0.000251

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

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

       Pollutant Name   Emission Factor
                  TOG          1.078348

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.002044

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.016815

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.014999

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

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2023**

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	43.7	3.4	25	5,353
DPM_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	43.7	3.4	25	5,353
									Total	10,705

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00029			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and DPM Emissions - DPM_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.81%	204	4.92E-06	9	6.66%	357	8.59E-06	17	6.50%	348	8.38E-06
2	3.15%	169	4.06E-06	10	8.16%	437	1.05E-05	18	3.85%	206	4.96E-06
3	2.32%	124	2.99E-06	11	6.33%	339	8.17E-06	19	2.35%	126	3.03E-06
4	1.00%	53	1.28E-06	12	7.66%	410	9.88E-06	20	1.19%	64	1.54E-06
5	1.00%	53	1.28E-06	13	6.83%	366	8.81E-06	21	3.02%	161	3.89E-06
6	2.16%	115	2.78E-06	14	6.66%	357	8.59E-06	22	5.01%	268	6.46E-06
7	4.67%	250	6.03E-06	15	6.00%	321	7.74E-06	23	3.32%	178	4.28E-06
8	3.35%	179	4.32E-06	16	4.34%	232	5.60E-06	24	0.66%	36	8.55E-07
								Total		5,353	

2023 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.81%	204	4.91E-06	9	6.66%	357	8.59E-06	17	6.50%	348	8.37E-06
2	3.15%	169	4.06E-06	10	8.16%	437	1.05E-05	18	3.85%	206	4.96E-06
3	2.32%	124	2.99E-06	11	6.33%	339	8.16E-06	19	2.35%	126	3.03E-06
4	1.00%	53	1.28E-06	12	7.66%	410	9.87E-06	20	1.19%	64	1.54E-06
5	1.00%	53	1.28E-06	13	6.83%	366	8.80E-06	21	3.02%	161	3.89E-06
6	2.16%	115	2.78E-06	14	6.66%	357	8.59E-06	22	5.01%	268	6.45E-06
7	4.67%	250	6.02E-06	15	6.00%	321	7.73E-06	23	3.32%	178	4.27E-06
8	3.35%	179	4.31E-06	16	4.34%	232	5.60E-06	24	0.66%	36	8.55E-07
								Total		5,353	

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2023

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	44	1.3	25	5,353
PM2.5_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	44	1.3	25	5,353
									Total	10,705

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002092			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	60	1.04E-05	9	7.12%	381	6.60E-05	17	7.43%	398	6.89E-05
2	0.41%	22	3.83E-06	10	4.37%	234	4.06E-05	18	8.24%	441	7.64E-05
3	0.37%	20	3.48E-06	11	4.65%	249	4.31E-05	19	5.72%	306	5.30E-05
4	0.17%	9	1.58E-06	12	5.89%	315	5.46E-05	20	4.30%	230	3.99E-05
5	0.46%	25	4.27E-06	13	6.17%	330	5.72E-05	21	3.25%	174	3.01E-05
6	0.85%	45	7.86E-06	14	6.05%	324	5.61E-05	22	3.31%	177	3.07E-05
7	3.73%	200	3.46E-05	15	7.06%	378	6.54E-05	23	2.48%	133	2.30E-05
8	7.77%	416	7.20E-05	16	7.19%	385	6.67E-05	24	1.87%	100	1.74E-05
								Total		5,353	

2023 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	60	1.04E-05	9	7.12%	381	6.59E-05	17	7.43%	398	6.89E-05
2	0.41%	22	3.83E-06	10	4.37%	234	4.05E-05	18	8.24%	441	7.63E-05
3	0.37%	20	3.47E-06	11	4.65%	249	4.31E-05	19	5.72%	306	5.30E-05
4	0.17%	9	1.58E-06	12	5.89%	315	5.45E-05	20	4.30%	230	3.99E-05
5	0.46%	25	4.26E-06	13	6.17%	330	5.71E-05	21	3.25%	174	3.01E-05
6	0.85%	45	7.85E-06	14	6.05%	324	5.61E-05	22	3.31%	177	3.07E-05
7	3.73%	200	3.46E-05	15	7.06%	378	6.54E-05	23	2.48%	133	2.30E-05
8	7.77%	416	7.20E-05	16	7.19%	385	6.66E-05	24	1.87%	100	1.74E-05
								Total		5,353	

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2023

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	44	1.3	25	5,353
TEXH_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	44	1.3	25	5,353
									Total	10,705

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.05412			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	60	2.69E-04	9	7.12%	381	1.71E-03	17	7.43%	398	1.78E-03
2	0.41%	22	9.91E-05	10	4.37%	234	1.05E-03	18	8.24%	441	1.98E-03
3	0.37%	20	8.99E-05	11	4.65%	249	1.12E-03	19	5.72%	306	1.37E-03
4	0.17%	9	4.09E-05	12	5.89%	315	1.41E-03	20	4.30%	230	1.03E-03
5	0.46%	25	1.10E-04	13	6.17%	330	1.48E-03	21	3.25%	174	7.80E-04
6	0.85%	45	2.03E-04	14	6.05%	324	1.45E-03	22	3.31%	177	7.95E-04
7	3.73%	200	8.95E-04	15	7.06%	378	1.69E-03	23	2.48%	133	5.96E-04
8	7.77%	416	1.86E-03	16	7.19%	385	1.72E-03	24	1.87%	100	4.50E-04
								Total		5,353	

2023 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	60	2.68E-04	9	7.12%	381	1.71E-03	17	7.43%	398	1.78E-03
2	0.41%	22	9.90E-05	10	4.37%	234	1.05E-03	18	8.24%	441	1.97E-03
3	0.37%	20	8.98E-05	11	4.65%	249	1.11E-03	19	5.72%	306	1.37E-03
4	0.17%	9	4.08E-05	12	5.89%	315	1.41E-03	20	4.30%	230	1.03E-03
5	0.46%	25	1.10E-04	13	6.17%	330	1.48E-03	21	3.25%	174	7.79E-04
6	0.85%	45	2.03E-04	14	6.05%	324	1.45E-03	22	3.31%	177	7.94E-04
7	3.73%	200	8.94E-04	15	7.06%	378	1.69E-03	23	2.48%	133	5.95E-04
8	7.77%	416	1.86E-03	16	7.19%	385	1.72E-03	24	1.87%	100	4.49E-04
								Total		5,353	

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2023

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	44	1.3	25	5,353
TEVAP_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	44	1.3	25	5,353
									Total	10,705

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.19210			
Emissions per Vehicle per Mile (g/VMT)	0.04768			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	60	2.37E-04	9	7.12%	381	1.50E-03	17	7.43%	398	1.57E-03
2	0.41%	22	8.73E-05	10	4.37%	234	9.24E-04	18	8.24%	441	1.74E-03
3	0.37%	20	7.92E-05	11	4.65%	249	9.83E-04	19	5.72%	306	1.21E-03
4	0.17%	9	3.60E-05	12	5.89%	315	1.24E-03	20	4.30%	230	9.09E-04
5	0.46%	25	9.72E-05	13	6.17%	330	1.30E-03	21	3.25%	174	6.87E-04
6	0.85%	45	1.79E-04	14	6.05%	324	1.28E-03	22	3.31%	177	7.00E-04
7	3.73%	200	7.89E-04	15	7.06%	378	1.49E-03	23	2.48%	133	5.25E-04
8	7.77%	416	1.64E-03	16	7.19%	385	1.52E-03	24	1.87%	100	3.96E-04
								Total		5,353	

2023 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	60	2.37E-04	9	7.12%	381	1.50E-03	17	7.43%	398	1.57E-03
2	0.41%	22	8.72E-05	10	4.37%	234	9.24E-04	18	8.24%	441	1.74E-03
3	0.37%	20	7.91E-05	11	4.65%	249	9.82E-04	19	5.72%	306	1.21E-03
4	0.17%	9	3.60E-05	12	5.89%	315	1.24E-03	20	4.30%	230	9.08E-04
5	0.46%	25	9.71E-05	13	6.17%	330	1.30E-03	21	3.25%	174	6.86E-04
6	0.85%	45	1.79E-04	14	6.05%	324	1.28E-03	22	3.31%	177	7.00E-04
7	3.73%	200	7.88E-04	15	7.06%	378	1.49E-03	23	2.48%	133	5.24E-04
8	7.77%	416	1.64E-03	16	7.19%	385	1.52E-03	24	1.87%	100	3.96E-04
								Total		5,353	

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = **2023**

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	44	1.3	25	5,353
FUG_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	44	1.3	25	5,353
									Total	10,705

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)	0.01681			
Road Dust - Emissions per Vehicle (g/VMT)	0.01487			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03373			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	60	1.67E-04	9	7.12%	381	1.06E-03	17	7.43%	398	1.11E-03
2	0.41%	22	6.18E-05	10	4.37%	234	6.54E-04	18	8.24%	441	1.23E-03
3	0.37%	20	5.60E-05	11	4.65%	249	6.95E-04	19	5.72%	306	8.55E-04
4	0.17%	9	2.55E-05	12	5.89%	315	8.80E-04	20	4.30%	230	6.43E-04
5	0.46%	25	6.88E-05	13	6.17%	330	9.22E-04	21	3.25%	174	4.86E-04
6	0.85%	45	1.27E-04	14	6.05%	324	9.05E-04	22	3.31%	177	4.95E-04
7	3.73%	200	5.58E-04	15	7.06%	378	1.05E-03	23	2.48%	133	3.71E-04
8	7.77%	416	1.16E-03	16	7.19%	385	1.07E-03	24	1.87%	100	2.80E-04
								Total		5,353	

2023 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	60	1.67E-04	9	7.12%	381	1.06E-03	17	7.43%	398	1.11E-03
2	0.41%	22	6.17E-05	10	4.37%	234	6.53E-04	18	8.24%	441	1.23E-03
3	0.37%	20	5.60E-05	11	4.65%	249	6.95E-04	19	5.72%	306	8.54E-04
4	0.17%	9	2.54E-05	12	5.89%	315	8.79E-04	20	4.30%	230	6.42E-04
5	0.46%	25	6.87E-05	13	6.17%	330	9.21E-04	21	3.25%	174	4.85E-04
6	0.85%	45	1.27E-04	14	6.05%	324	9.04E-04	22	3.31%	177	4.95E-04
7	3.73%	200	5.57E-04	15	7.06%	378	1.05E-03	23	2.48%	133	3.71E-04
8	7.77%	416	1.16E-03	16	7.19%	385	1.07E-03	24	1.87%	100	2.80E-04
								Total		5,353	

99 Southgate Ave, Daly City, CA - Lake Merced Blvd Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Residential MEI Receptors (2 Location - 1.5 & 4.5 meter receptor height)

Emission Year	2023
Receptor Information	Construction Residential MEI receptor
Number of Receptors	2
Receptor Height	1.5 & 4.5 Meters
Receptor Distances	At Construction Residential MEI locations
Meteorological Conditions	
BAAQMD Fort Funston Met Data	2010, 2012 - 2013
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	0.0003	0.0582	0.0513

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	0.0443	0.0417	0.0026

99 Southgate Ave, Daly City, CA - Lake Merced Blvd Traffic Cancer Risk
Impacts at Construction Residential MEI - 4.5 (Cancer) & 1.5 (PM) 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	0.0003	0.0582	0.0513	0.004	0.005	0.0002	0.01
1	1	0 - 1	2022	10	0.0003	0.0582	0.0513	0.048	0.055	0.0028	0.10
2	1	1 - 2	2023	10	0.0003	0.0582	0.0513	0.048	0.055	0.0028	0.10
3	1	2 - 3	2024	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
4	1	3 - 4	2025	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
5	1	4 - 5	2026	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
6	1	5 - 6	2027	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
7	1	6 - 7	2028	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
8	1	7 - 8	2029	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
9	1	8 - 9	2030	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
10	1	9 - 10	2031	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
11	1	10 - 11	2032	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
12	1	11 - 12	2033	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
13	1	12 - 13	2034	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
14	1	13 - 14	2035	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
15	1	14 - 15	2036	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
16	1	15 - 16	2037	3	0.0003	0.0582	0.0513	0.007	0.009	0.0004	0.02
17	1	16-17	2038	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
18	1	17-18	2039	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
19	1	18-19	2040	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
20	1	19-20	2041	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
21	1	20-21	2042	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
22	1	21-22	2043	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
23	1	22-23	2044	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
24	1	23-24	2045	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
25	1	24-25	2046	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
26	1	25-26	2047	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
27	1	26-27	2048	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
28	1	27-28	2049	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
29	1	28-29	2050	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
30	1	29-30	2051	1	0.0003	0.0582	0.0513	0.001	0.001	0.0000	0.00
Total Increased Cancer Risk								0.22	0.247	0.013	**0.48**

* Third trimester of pregnancy

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

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2026

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	43.7	3.4	25	5,510
DPM_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	43.7	3.4	25	5,510
									Total	11,020

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00025			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and DPM Emissions - DPM_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.87%	213	4.43E-06	9	6.64%	366	7.60E-06	17	6.48%	357	7.42E-06
2	3.23%	178	3.69E-06	10	8.06%	444	9.23E-06	18	3.90%	215	4.46E-06
3	2.58%	142	2.96E-06	11	6.32%	348	7.23E-06	19	2.28%	126	2.62E-06
4	0.97%	53	1.11E-06	12	7.61%	419	8.71E-06	20	1.16%	64	1.32E-06
5	0.97%	53	1.11E-06	13	7.12%	393	8.16E-06	21	2.74%	151	3.14E-06
6	2.26%	124	2.59E-06	14	6.64%	366	7.60E-06	22	4.84%	267	5.54E-06
7	4.52%	249	5.17E-06	15	6.16%	339	7.05E-06	23	3.39%	187	3.88E-06
8	3.25%	179	3.72E-06	16	4.22%	233	4.83E-06	24	0.81%	44	9.23E-07
								Total		5,510	

2026 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.81%	210	4.36E-06	9	6.66%	367	7.63E-06	17	6.50%	358	7.44E-06
2	3.15%	174	3.61E-06	10	8.16%	449	9.33E-06	18	3.85%	212	4.40E-06
3	2.32%	128	2.66E-06	11	6.33%	349	7.25E-06	19	2.35%	130	2.69E-06
4	1.00%	55	1.14E-06	12	7.66%	422	8.76E-06	20	1.19%	66	1.36E-06
5	1.00%	55	1.14E-06	13	6.83%	376	7.81E-06	21	3.02%	166	3.45E-06
6	2.16%	119	2.47E-06	14	6.66%	367	7.63E-06	22	5.01%	276	5.73E-06
7	4.67%	258	5.35E-06	15	6.00%	331	6.87E-06	23	3.32%	183	3.79E-06
8	3.35%	184	3.83E-06	16	4.34%	239	4.97E-06	24	0.66%	37	7.59E-07
								Total		5,510	

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2026

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	44	1.3	25	5,510
PM2.5_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	44	1.3	25	5,510
									Total	11,020

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.001834			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	62	9.39E-06	9	7.12%	392	5.96E-05	17	7.44%	410	6.22E-05
2	0.41%	23	3.46E-06	10	4.38%	241	3.66E-05	18	8.23%	454	6.89E-05
3	0.38%	21	3.15E-06	11	4.65%	256	3.89E-05	19	5.73%	315	4.79E-05
4	0.18%	10	1.47E-06	12	5.89%	324	4.93E-05	20	4.30%	237	3.60E-05
5	0.45%	25	3.80E-06	13	6.17%	340	5.16E-05	21	3.25%	179	2.72E-05
6	0.85%	47	7.09E-06	14	6.05%	333	5.06E-05	22	3.31%	183	2.77E-05
7	3.73%	206	3.12E-05	15	7.06%	389	5.91E-05	23	2.49%	137	2.08E-05
8	7.76%	428	6.49E-05	16	7.18%	396	6.01E-05	24	1.87%	103	1.57E-05
								Total		5,510	

2026 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	62	9.37E-06	9	7.12%	392	5.95E-05	17	7.43%	410	6.21E-05
2	0.41%	23	3.45E-06	10	4.37%	241	3.66E-05	18	8.24%	454	6.89E-05
3	0.37%	21	3.13E-06	11	4.65%	256	3.89E-05	19	5.72%	315	4.78E-05
4	0.17%	9	1.42E-06	12	5.89%	324	4.92E-05	20	4.30%	237	3.60E-05
5	0.46%	25	3.85E-06	13	6.17%	340	5.16E-05	21	3.25%	179	2.72E-05
6	0.85%	47	7.09E-06	14	6.05%	334	5.06E-05	22	3.31%	183	2.77E-05
7	3.73%	206	3.12E-05	15	7.06%	389	5.90E-05	23	2.48%	137	2.08E-05
8	7.77%	428	6.50E-05	16	7.19%	396	6.01E-05	24	1.87%	103	1.57E-05
								Total		5,510	

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2026

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	44	1.3	25	5,510
TEXH_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	44	1.3	25	5,510
									Total	11,020

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.05057			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	62	2.59E-04	9	7.12%	392	1.64E-03	17	7.44%	410	1.72E-03
2	0.41%	23	9.54E-05	10	4.38%	241	1.01E-03	18	8.23%	454	1.90E-03
3	0.38%	21	8.69E-05	11	4.65%	256	1.07E-03	19	5.73%	315	1.32E-03
4	0.18%	10	4.06E-05	12	5.89%	324	1.36E-03	20	4.30%	237	9.93E-04
5	0.45%	25	1.05E-04	13	6.17%	340	1.42E-03	21	3.25%	179	7.50E-04
6	0.85%	47	1.96E-04	14	6.05%	333	1.40E-03	22	3.31%	183	7.64E-04
7	3.73%	206	8.62E-04	15	7.06%	389	1.63E-03	23	2.49%	137	5.74E-04
8	7.76%	428	1.79E-03	16	7.18%	396	1.66E-03	24	1.87%	103	4.32E-04
								Total		5,510	

2026 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	62	2.59E-04	9	7.12%	392	1.64E-03	17	7.44%	410	1.71E-03
2	0.41%	23	9.54E-05	10	4.38%	241	1.01E-03	18	8.23%	454	1.90E-03
3	0.38%	21	8.69E-05	11	4.65%	256	1.07E-03	19	5.73%	315	1.32E-03
4	0.18%	10	4.06E-05	12	5.89%	324	1.36E-03	20	4.30%	237	9.92E-04
5	0.45%	25	1.05E-04	13	6.17%	340	1.42E-03	21	3.25%	179	7.50E-04
6	0.85%	47	1.95E-04	14	6.05%	333	1.39E-03	22	3.31%	183	7.64E-04
7	3.73%	206	8.61E-04	15	7.06%	389	1.63E-03	23	2.49%	137	5.73E-04
8	7.76%	428	1.79E-03	16	7.18%	396	1.66E-03	24	1.87%	103	4.31E-04
								Total		5,510	

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2026

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	44	1.3	25	5,510
TEVAP_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	44	1.3	25	5,510
									Total	11,020

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.07835			
Emissions per Vehicle per Mile (g/VMT)	0.04313			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	62	2.21E-04	9	7.12%	392	1.40E-03	17	7.44%	410	1.46E-03
2	0.41%	23	8.14E-05	10	4.38%	241	8.61E-04	18	8.23%	454	1.62E-03
3	0.38%	21	7.41E-05	11	4.65%	256	9.15E-04	19	5.73%	315	1.13E-03
4	0.18%	10	3.47E-05	12	5.89%	324	1.16E-03	20	4.30%	237	8.47E-04
5	0.45%	25	8.95E-05	13	6.17%	340	1.21E-03	21	3.25%	179	6.40E-04
6	0.85%	47	1.67E-04	14	6.05%	333	1.19E-03	22	3.31%	183	6.52E-04
7	3.73%	206	7.35E-04	15	7.06%	389	1.39E-03	23	2.49%	137	4.89E-04
8	7.76%	428	1.53E-03	16	7.18%	396	1.41E-03	24	1.87%	103	3.68E-04
								Total		5,510	

2026 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	62	2.21E-04	9	7.12%	392	1.40E-03	17	7.44%	410	1.46E-03
2	0.41%	23	8.13E-05	10	4.38%	241	8.61E-04	18	8.23%	454	1.62E-03
3	0.38%	21	7.41E-05	11	4.65%	256	9.14E-04	19	5.73%	315	1.13E-03
4	0.18%	10	3.46E-05	12	5.89%	324	1.16E-03	20	4.30%	237	8.46E-04
5	0.45%	25	8.94E-05	13	6.17%	340	1.21E-03	21	3.25%	179	6.39E-04
6	0.85%	47	1.67E-04	14	6.05%	333	1.19E-03	22	3.31%	183	6.51E-04
7	3.73%	206	7.34E-04	15	7.06%	389	1.39E-03	23	2.49%	137	4.89E-04
8	7.76%	428	1.53E-03	16	7.18%	396	1.41E-03	24	1.87%	103	3.68E-04
								Total		5,510	

99 Southgate Ave, Daly City, CA - Off-Site Residential
Cumulative Plus Project Operation - Lake Merced Boulevard
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = **2026**

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_LMB	Lake Merced Boulevard Northbound	NB	2	479.7	0.30	13.3	44	1.3	25	5,510
FUG_SB_LMB	Lake Merced Boulevard Southbound	SB	2	479.3	0.30	13.3	44	1.3	25	5,510
									Total	11,020

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00204			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01682			
Road Dust - Emissions per Vehicle (g/VMT)	0.01500			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03386			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_LMB

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.12%	62	1.73E-04	9	7.12%	392	1.10E-03	17	7.44%	410	1.15E-03
2	0.41%	23	6.39E-05	10	4.38%	241	6.76E-04	18	8.23%	454	1.27E-03
3	0.38%	21	5.82E-05	11	4.65%	256	7.18E-04	19	5.73%	315	8.84E-04
4	0.18%	10	2.72E-05	12	5.89%	324	9.10E-04	20	4.30%	237	6.65E-04
5	0.45%	25	7.02E-05	13	6.17%	340	9.53E-04	21	3.25%	179	5.02E-04
6	0.85%	47	1.31E-04	14	6.05%	333	9.34E-04	22	3.31%	183	5.12E-04
7	3.73%	206	5.77E-04	15	7.06%	389	1.09E-03	23	2.49%	137	3.84E-04
8	7.76%	428	1.20E-03	16	7.18%	396	1.11E-03	24	1.87%	103	2.89E-04
								Total		5,510	

2026 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_LMB

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.12%	62	1.73E-04	9	7.12%	392	1.10E-03	17	7.44%	410	1.15E-03
2	0.41%	23	6.38E-05	10	4.38%	241	6.76E-04	18	8.23%	454	1.27E-03
3	0.38%	21	5.81E-05	11	4.65%	256	7.17E-04	19	5.73%	315	8.84E-04
4	0.18%	10	2.72E-05	12	5.89%	324	9.09E-04	20	4.30%	237	6.64E-04
5	0.45%	25	7.02E-05	13	6.17%	340	9.52E-04	21	3.25%	179	5.02E-04
6	0.85%	47	1.31E-04	14	6.05%	333	9.34E-04	22	3.31%	183	5.11E-04
7	3.73%	206	5.76E-04	15	7.06%	389	1.09E-03	23	2.49%	137	3.84E-04
8	7.76%	428	1.20E-03	16	7.18%	396	1.11E-03	24	1.87%	103	2.89E-04
								Total		5,510	

99 Southgate Ave, Daly City, CA - Lake Merced Blvd Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at OnSite MEI Receptor (1 Location - 7.6 meter receptor height)

Emission Year	2026
Receptor Information	Construction Residential MEI receptor
Number of Receptors	114
Receptor Height	7.6 Meters
Receptor Distances	At Construction Residential MEI locations
Meteorological Conditions	
BAAQMD Fort Funston Met Data	2010, 2012 - 2013
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	0.0003	0.0592	0.0505

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	0.0418	0.0396	0.0022

99 Southgate Ave, Daly City, CA - Lake Merced Blvd Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at OnSite MEI Receptor (1 Location - 10.7 meter receptor height)

Emission Year	2026
Receptor Information	Construction Residential MEI receptor
Number of Receptors	114
Receptor Height	10.7 Meters
Receptor Distances	At Construction Residential MEI locations
Meteorological Conditions	
BAAQMD Fort Funston Met Data	2010, 2012 - 2013
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	0.0002	0.0327	0.0279

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	0.0231	0.0219	0.0012

99 Southgate Ave, Daly City, CA - Lake Merced Blvd Traffic Cancer Risk
Impacts at OnSite MEI - 7.6 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*	2026	10	0.0003	0.0592	0.0505	0.004	0.005	0.0002	0.01
1	1	0 - 1	2026	10	0.0003	0.0592	0.0505	0.053	0.055	0.0028	0.11
2	1	1 - 2	2027	10	0.0003	0.0592	0.0505	0.053	0.055	0.0028	0.11
3	1	2 - 3	2028	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
4	1	3 - 4	2029	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
5	1	4 - 5	2030	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
6	1	5 - 6	2031	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
7	1	6 - 7	2032	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
8	1	7 - 8	2033	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
9	1	8 - 9	2034	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
10	1	9 - 10	2035	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
11	1	10 - 11	2036	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
12	1	11 - 12	2037	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
13	1	12 - 13	2038	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
14	1	13 - 14	2039	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
15	1	14 - 15	2040	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
16	1	15 - 16	2041	3	0.0003	0.0592	0.0505	0.008	0.009	0.0004	0.02
17	1	16-17	2042	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
18	1	17-18	2043	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
19	1	18-19	2044	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
20	1	19-20	2045	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
21	1	20-21	2046	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
22	1	21-22	2047	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
23	1	22-23	2048	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
24	1	23-24	2049	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
25	1	24-25	2050	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
26	1	25-26	2051	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
27	1	26-27	2052	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
28	1	27-28	2053	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
29	1	28-29	2054	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
30	1	29-30	2055	1	0.0003	0.0592	0.0505	0.001	0.001	0.0000	0.00
Total Increased Cancer Risk								0.24	0.251	0.013	**0.50**

* Third trimester of pregnancy

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

99 Southgate Ave, Daly City, CA - Lake Merced Blvd Traffic Cancer Risk
Impacts at OnSite MEI - 10.7 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*	2026	10	0.0002	0.0327	0.0279	0.003	0.003	0.0001	0.01
1	1	0 - 1	2026	10	0.0002	0.0327	0.0279	0.031	0.031	0.0015	0.06
2	1	1 - 2	2027	10	0.0002	0.0327	0.0279	0.031	0.031	0.0015	0.06
3	1	2 - 3	2028	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
4	1	3 - 4	2029	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
5	1	4 - 5	2030	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
6	1	5 - 6	2031	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
7	1	6 - 7	2032	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
8	1	7 - 8	2033	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
9	1	8 - 9	2034	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
10	1	9 - 10	2035	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
11	1	10 - 11	2036	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
12	1	11 - 12	2037	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
13	1	12 - 13	2038	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
14	1	13 - 14	2039	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
15	1	14 - 15	2040	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
16	1	15 - 16	2041	3	0.0002	0.0327	0.0279	0.005	0.005	0.0002	0.01
17	1	16-17	2042	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
18	1	17-18	2043	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
19	1	18-19	2044	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
20	1	19-20	2045	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
21	1	20-21	2046	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
22	1	21-22	2047	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
23	1	22-23	2048	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
24	1	23-24	2049	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
25	1	24-25	2050	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
26	1	25-26	2051	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
27	1	26-27	2052	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
28	1	27-28	2053	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
29	1	28-29	2054	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
30	1	29-30	2055	1	0.0002	0.0327	0.0279	0.001	0.001	0.0000	0.00
Total Increased Cancer Risk								0.14	0.139	0.007	**0.29**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0000	0.02	0.02

* 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	**10/21/2021**
Contact Name	Zachary Palm
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x117
Email	zpalm@illingworthrodkin.com
Project Name	99 Southgate Ave
Address	99 Southgate Ave
City	Daly City
County	San Mateo
Type (residential, commercial, mixed use, industrial, etc.)	Mixed Use
Project Size (# of units or building square feet)	214du
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 Earth address 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 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
1000+	12876	City of Daly City	295 Coronado Avenue	2.07	0	0		Generators		2018 Dataset
700	16794	The Home Depot (Store# 1092)	303 E Lake Merced Blvd	7.21	0.02	0.01		Generators		2018 Dataset
35	22502	Safeway Inc #3031	85 W Lake Center	0.02	0.00	0.00		Generators		2018 Dataset
570	110657	Arco Facility #00465	151 Southgate Ave	35.67	0.16	0		Gas Dispensing Facility		2018 Dataset

Construction MEIs

Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
0.04	0.1	0.000	0.00
0.08	0.6	0.002	0.00
1.00	0.02	0.000	0.00
0.04	1.36	0.006	0.00

Project Site

Distance from Receptor (feet) or MEI[1]	FACID (Plant No.)	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
540	12876	0.10	0.21	0.000	0.000
450	16794	0.15	1.08	0.003	0.002
65	22502	1.00	0.02	0.000	0.000
125	110657	0.45	15.87	0.071	0.000

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.

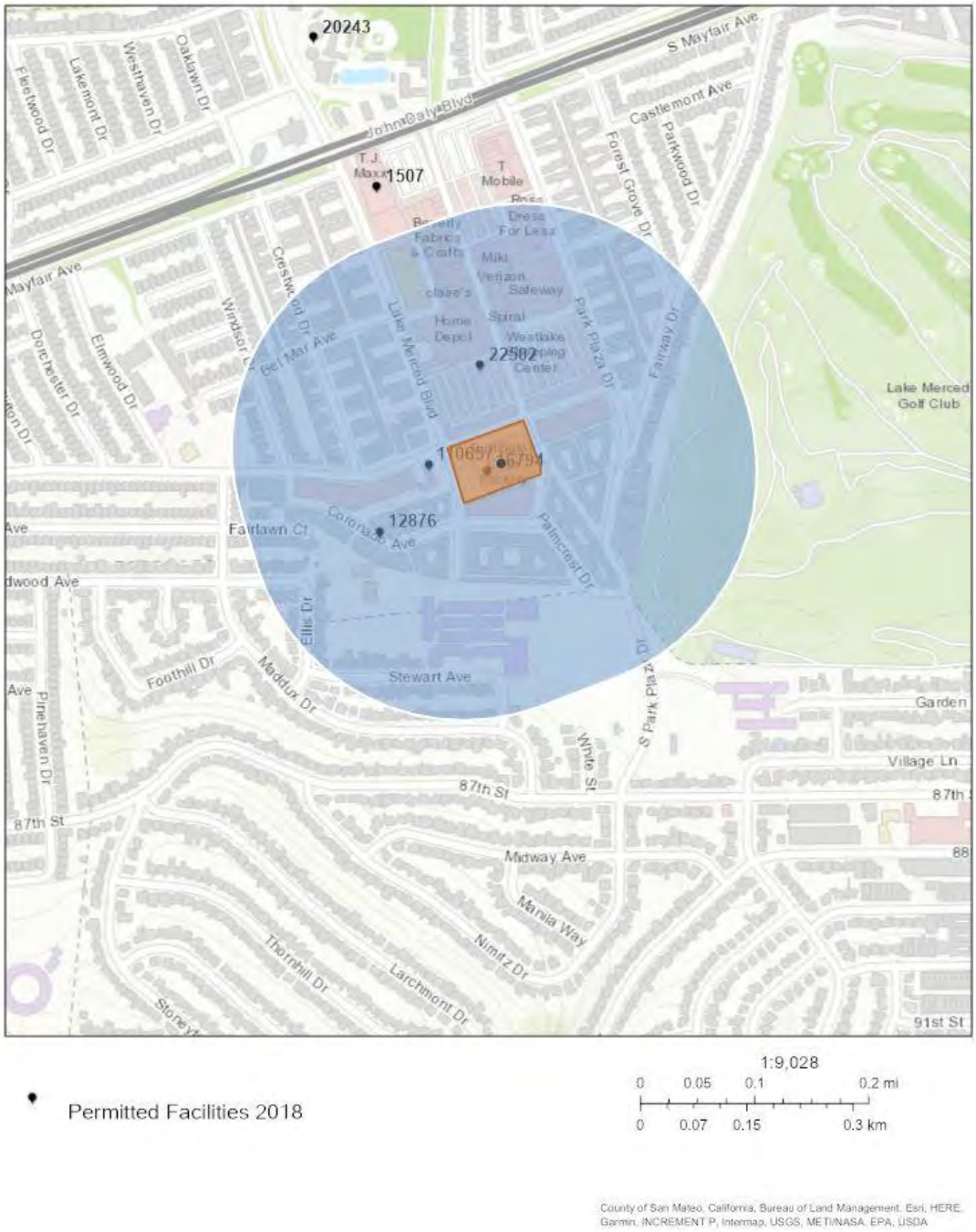
Date last updated:
03/13/2018

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 4,513,076.21 ft²

Oct 21 2021 15:04:42 Pacific Daylight Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Facilities 2018	4	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	12876	City of Daly City	295 Coronado Avenue	Daly City	CA
2	16794	The Home Depot (Store# 1092)	303 E Lake Merced Blvd	Daly City	CA
3	22502	Safeway Inc #3031	85 W Lake Center	Daly City	CA
4	110657	Arco Facility #00465	151 Southgate Ave	Daly City	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	94015	San Mateo	2.070	0.000	0.000	Generators	1
2	94015	San Mateo	7.210	0.020	0.010	Generators	1
3	94015	San Mateo	0.020	0.000	0.000	Generators	1
4	94015	San Mateo	35.670	0.160	0.000	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.

Annual Fuel (gal)		TOG EF (lb/1000 gal)[1]	TOG (lbs/year)
5,000,000			
	Fueling; Non-ORVR	0.42	273
	& ORVR[2]	0.021	91.35
	Tank Filling	0.15	750
	Tank breathing	0.024	120
	Spillage	0.24	1200
	Fueling	0.009	45
			2479.35

	TOG (lbs/year)	Operation (hours/day)	Benzene %[3]	Benzene lbs/yr	Benzene lbs/day	Benzene lbs/hr	Benzene (g/s)	Per Island
Refuel	409.35	16	0.3	1.22805	0.0033645	0.0002103	2.6495E-05	8.8317E-06
Spill	1200.00	16	1	12	0.0328767	0.0020548	2.5890E-04	8.6300E-05
UST Fill	750.00	24	0.3	2.25	0.0061644	0.0002568	3.2362E-05	
UTS Breath	120.00	24	0.3	0.36	0.0009863	4.11E-05	5.1780E-06	
				15.838	0.043	0.003	0.000	

1. Emission factors from CARB "Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities". December 23, 2013 (CARB, 2013). Assumes use of enhanced vapor recovery systems.
2. Fueling emissions based on CARB data for 2020 of 87% of vehicles use ORVR (CARB, 2013).
3. CAPCOA Air Toxics "Hot Spots" Program, Gasoline Service Station Industrywide Risk Assessment Guidelines, November 1997

Step 1:

Plant Name	Arco Facility #00465
Plant No.	110657

Step 4: Specify Source Type

Does facility have only diesel backup generators?	no
Is this analysis for a gas station?	yes

Note: Default generic distance multiplier used if source is not a generator or gas station.

Step 2: Estimate Distance

What is the distance (m) from the facility boundary to the MEI?	35

Step 5: Read Estimates

Total Cancer Risk	2.448	per 1,000,000
Total Chronic Hazard	0.012	
Total PM2.5 Concentration	0.000	µg/m³

Step 3: Enter Emissions Data

Chemical Name	CAS No. (dashes removed)	Emission (lb/day)	Cancer (# / 1,000,000)	Chronic (index)	Concentration (µg/m3)
Fine Particulate Matter (PM2.5)					
1,1,1-Trichloroethane	71556	0.00E+00			
1,1,2,2-Tetrachloroethane	79345	0.00E+00			
1,1,2-Trichloroethane	79005	0.00E+00			
1,1-Dichloroethane	75343	0.00E+00			
1,1-Dichloroethylene	75354	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268879	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001020	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822469	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562394	0.00E+00			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673897	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227286	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653857	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408743	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219	0.00E+00			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321764	0.00E+00			
1,2,3,7,8-Pentachlorodibenzofuran	57117416	0.00E+00			
1,2-Dibromo-3-chloropropane	96128	0.00E+00			
1,2-Dibromoethane	106934	0.00E+00			
1,2-Dichloroethane	107062	0.00E+00			
1,2-Epoxybutane	106887	0.00E+00			
1,3-Butadiene	106990	0.00E+00			
1,3-Propane sultone	1120714	0.00E+00			
1,4-Dichlorobenzene	106467	0.00E+00			
1,4-Dioxane	123911	0.00E+00			
1,6-Dinitropyrene	42397648	0.00E+00			
1,8-Dinitropyrene	42397659	0.00E+00			
1-Nitropyrene	5522430	0.00E+00			
2',3,4,4',5-PeCB	65510443	0.00E+00			
2,3',4,4',5,5'-HxCB	52663726	0.00E+00			
2,3',4,4',5-PeCB	31508006	0.00E+00			
2,3,3',4,4',5'-HxCB	69782907	0.00E+00			
2,3,3',4,4',5,5'-HpCB	39635319	0.00E+00			
2,3,3',4,4',5-HxCB	38380084	0.00E+00			
2,3,3',4,4'-PeCB	32598144	0.00E+00			
2,3,4,4',5-PeCB	74472370	0.00E+00			
2,3,4,6,7,8-hexachlorodibenzofuran	60851345	0.00E+00			
2,3,4,7,8-Pentachlorodibenzofuran	57117314	0.00E+00			
2,3,7,8-Tetrachlorodibenzo-p-dioxin and related comp	1746016	0.00E+00			
2,3,7,8-Tetrachlorodibenzofuran	51207319	0.00E+00			
2,4,6-Trichlorophenol	88062	0.00E+00			
2,4-Diaminoanisole	615054	0.00E+00			
2,4-Diaminotoluene	95807	0.00E+00			
2,4-Dinitrotoluene	121142	0.00E+00			
2-Aminoanthraquinone	117793	0.00E+00			
2-Nitrofluorene	607578	0.00E+00			
3,3',4,4',5,5'-HxCB	32774166	0.00E+00			
3,3',4,4',5-PeCB	57465288	0.00E+00			
3,3',4,4'-TCB	32598133	0.00E+00			
3,3-Dichlorobenzidine	91941	0.00E+00			
3,4,4'5-TCB	70362504	0.00E+00			
3-Methylcholanthrene	56495	0.00E+00			
4,4-Methylene bis(2-chloroaniline)	101144	0.00E+00			
4,4-Methylenedianiline	101779	0.00E+00			
4-Chloro-ortho-phenylenediamine	95830	0.00E+00			
4-Dimethylaminoazobenzene	60117	0.00E+00			
4-Nitropyrene	57835924	0.00E+00			
5-Methylchrysene	3697243	0.00E+00			

5-Nitroacenaphthene	602879	0.00E+00		
6-Nitrochrysene	7496028	0.00E+00		
7,12-Dimethylbenz(a)anthracene	57976	0.00E+00		
7H-dibenzo(c,g)carbazole	194592	0.00E+00		
Acetaldehyde	75070	0.00E+00		
Acetamide	60355	0.00E+00		
Acrolein	107028	0.00E+00		
Acrylamide	79061	0.00E+00		
Acrylic Acid	79107	0.00E+00		
Acrylonitrile	107131	0.00E+00		
Allyl chloride	107051	0.00E+00		
Ammonia	7664417	0.00E+00		
Aniline	62533	0.00E+00		
Arsenic	7440382	0.00E+00		
Arsine	7784421	0.00E+00		
Asbestos [1/(100 PCM fibers/m^3)]^-1	1332214	0.00E+00		
Benz(a)anthracene	56553	0.00E+00		
Benzene	71432	4.30E-02	5.50E+00	2.71E-02
Benzidine	92875	0.00E+00		
Benzo(a)pyrene	50328	0.00E+00		
Benzo(b)fluoranthene	205992	0.00E+00		
Benzo(j)fluoranthene	205823	0.00E+00		
Benzo(k)fluoranthene	207089	0.00E+00		
Benzyl Chloride	100447	0.00E+00		
Beryllium	7440417	0.00E+00		
Bis(2-chloroethyl) Ether	111444	0.00E+00		
Bis(2-chloromethyl) Ether	542881	0.00E+00		
Cadmium	7440439	0.00E+00		
Caprolactam	105602	0.00E+00		
Carbon Disulfide	75150	0.00E+00		
Carbon Monoxide	630080	0.00E+00		
Carbon Tetrachloride	56235	0.00E+00		
Carbonyl Sulfide	463581	0.00E+00		
Chlorinated paraffins (Avg. chain length C12; approx. 6	108171262	0.00E+00		
Chlorine	7782505	0.00E+00		
Chlorine Dioxide	10049044	0.00E+00		
Chlorite	7758192	0.00E+00		
Chlorobenzene	108907	0.00E+00		
Chlorodibromomethane	124481	0.00E+00		
Chloroethane (Ethyl Chloride)	75003	0.00E+00		
Chloroform	67663	0.00E+00		
Chloropicrin	76062	0.00E+00		
Chromic Trioxide	1333820	0.00E+00		
Chromium-hexavalent	18540299	0.00E+00		
Barium chromate2	10294403	0.00E+00		
Calcium chromate2	13765190	0.00E+00		
Lead chromate2	7758976	0.00E+00		
Sodium dichromate2	10588019	0.00E+00		
Strontium chromate2	7789062	0.00E+00		
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00		
Chrysene	218019	0.00E+00		
Copper	7440508	0.00E+00		
Copper and Copper Compounds	7440508	0.00E+00		
Cresol Mixtures	1319773	0.00E+00		
Cupferron	135206	0.00E+00		
Cyanide	57125	0.00E+00		
Di(2-ethylhexyl)phthalate	117817	0.00E+00		
Dibenz(a-h)acridine	226368	0.00E+00		
Dibenz(a-h)anthracene	53703	0.00E+00		
Dibenz(a-j)acridine	224420	0.00E+00		
Dibenzo(a-e)pyrene	192654	0.00E+00		
Dibenzo(a-h)pyrene	189640	0.00E+00		
Dibenzo(a-i)pyrene	189559	0.00E+00		
Dibenzo(a-l)pyrene	191300	0.00E+00		
Diesel Exhaust Particulate	85105	0.00E+00		
Diethanolamine	111422	0.00E+00		
Dimethylformamide	68122	0.00E+00		
Direct Black 38 (Technical Grade)	1937377	0.00E+00		
Direct Blue 6 (Technical Grade)	2602462	0.00E+00		
Direct Brown 95 (Technical Grade)	16071866	0.00E+00		
Epichlorohydrin	106898	0.00E+00		
Ethylbenzene	100414	0.00E+00		
Ethylene Glycol	107211	0.00E+00		
Ethylene Glycol Monobutyl Ether	111762	0.00E+00		
Ethylene Glycol Monoethyl Ether	110805	0.00E+00		
Ethylene Glycol Monoethyl Ether Acetate	111159	0.00E+00		
Ethylene Glycol Monomethyl Ether	109864	0.00E+00		
Ethylene Glycol Monomethyl Ether Acetate	110496	0.00E+00		
Ethylene Oxide	75218	0.00E+00		

Ethylene Thiourea	96457	0.00E+00
Fluorides	1101	0.00E+00
Formaldehyde (gas)	50000	0.00E+00
Glutaraldehyde	111308	0.00E+00
Hexachlorobenzene	118741	0.00E+00
Hexachlorocyclohexane (Technical Grade)	608731	0.00E+00
Hexachlorocyclohexane- Alpha Isomer	319846	0.00E+00
Hexachlorocyclohexane- Beta Isomer	319857	0.00E+00
Hexachlorocyclohexane- Gamma Isomer	58899	0.00E+00
Hydrazine	302012	0.00E+00
Hydrogen Chloride	7647010	0.00E+00
Hydrogen Cyanide	74908	0.00E+00
Hydrogen Fluoride	7664393	0.00E+00
Hydrogen Selenide	7783075	0.00E+00
Hydrogen Sulfide	7783064	0.00E+00
Indeno(1-2-3-c-d)pyrene	193395	0.00E+00
Isophorone	78591	0.00E+00
Isopropyl Alcohol	67630	0.00E+00
Lead Acetate	301042	0.00E+00
Lead and Lead Compounds	7439921	0.00E+00
Lead Phosphate	7446277	0.00E+00
Lead Subacetate	1335326	0.00E+00
m-CRESOL	108394	0.00E+00
m-XYLENE	108383	0.00E+00
Maleic Anhydride	108316	0.00E+00
Manganese & Manganese Compounds	7439965	0.00E+00
Mercury (Inorganic)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
Methanol	67561	0.00E+00
Methyl Bromide	74839	0.00E+00
Methyl Ethyl Ketone	78933	0.00E+00
Methyl Isocyanate	624839	0.00E+00
Methyl Tertiary Butyl Ether	1634044	0.00E+00
Methylene Chloride (Dichloromethane)	75092	0.00E+00
Methylene Diphenyl Isocyanate (MDI)	101688	0.00E+00
Michlers Ketone	90948	0.00E+00
n-Hexane	110543	0.00E+00
n-Nitroso-n-methylethylamine	10595956	0.00E+00
n-Nitrosodi-n-Butylamine	924163	0.00E+00
n-Nitrosodi-n-Propylamine	621647	0.00E+00
n-Nitrosodiethylamine	55185	0.00E+00
n-Nitrosodimethylamine	62759	0.00E+00
n-Nitrosodiphenylamine	86306	0.00E+00
n-Nitrosomorpholine	59892	0.00E+00
n-Nitrosopiperidine	100754	0.00E+00
n-Nitrosopyrrolidine	930552	0.00E+00
Naphthalene	91203	0.00E+00
Nickel and Nickel Compounds	7440020	0.00E+00
Nickel acetate	373024	0.00E+00
Nickel carbonate	3333673	0.00E+00
Nickel carbonyl	13463393	0.00E+00
Nickel hydroxide	12054487	0.00E+00
Nickelocene	1271289	0.00E+00
Nickel Oxide	1313991	0.00E+00
Nickel Refinery Dust	1146	0.00E+00
Nickel Subsulfide	12035722	0.00E+00
Nitric Acid	7697372	0.00E+00
Nitrogen Dioxide	10102440	0.00E+00
o-CRESOL	95487	0.00E+00
o-XYLENE	95476	0.00E+00
Oleum	8014957	0.00E+00
Ozone	10028156	0.00E+00
p-Chloro-o-toluidine	95692	0.00E+00
p-Cresidine	120718	0.00E+00
p-CRESOL	106445	0.00E+00
p-Nitrosodiphenylamine	156105	0.00E+00
p-XYLENE	106423	0.00E+00
Pentachlorophenol	87865	0.00E+00
Perchloroethylene	127184	0.00E+00
Phenol	108952	0.00E+00
Phosgene	75445	0.00E+00
Phosphine	7803512	0.00E+00
Phosphoric Acid	7664382	0.00E+00
Phthalic Anhydride	85449	0.00E+00
Polychlorinated Biphenyls	1336363	0.00E+00
Potassium Bromate	7758012	0.00E+00
Propylene	115071	0.00E+00

Propylene Glycol Monomethyl Ether	107982	0.00E+00			
Propylene oxide	75569	0.00E+00			
Selenium	7782492	0.00E+00			
Selenium sulfide	7446346	0.00E+00			
Silica (crystalline, respirable)	7631869	0.00E+00			
Sodium hydroxide	1310732	0.00E+00			
Styrene	100425	0.00E+00			
Sulfates	9960	0.00E+00			
Sulfur Dioxide	7446095	0.00E+00			
Sulfuric Acid	7664939	0.00E+00			
Sulfur Trioxide	7446719	0.00E+00			
Tertiary-butyl acetate	540885	0.00E+00			
Tetrachloroethylene	127184	0.00E+00			
Thioacetamide	62555	0.00E+00			
Toluene	108883	0.00E+00			
Toluene Diisocyanates	26471625	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	584849	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	91087	0.00E+00			
Trichloroethylene	79016	0.00E+00			
Triethylamine	121448	0.00E+00			
Urethane	51796	0.00E+00			
Vanadium pentoxide	1314621	0.00E+00			
Vinyl acetate	108054	0.00E+00			
Vinyl chloride	75014	0.00E+00			
Xylenes (technical mixture of m, o, p-isomers)	1330207	0.00E+00			
Vanadium	7440622	0.00E+00			
	TOTAL UNADJUSTED Risk Values		**5.499**	**0.027**	**0.000**