10TH AND CHESTNUT AIR QUALITY AND GREENHOUSE GAS EMISSION ASSESSMENT

Gilroy, California

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Introduction

The purpose of this report is to address air quality impacts, to evaluate community risk from toxic air contaminant (TAC) sources, and compute greenhouse gas (GHG) emissions associated with the commercial developments proposed at the northeast corner of East 10th and Chestnut Streets in Gilroy, California. The air quality impacts and GHG emissions would be associated with demolition and removal of the existing uses at the site, construction of the new buildings and infrastructure, and operation of the project. In addition, the potential project health risk impacts to nearby sensitive receptors and the impact of existing TAC sources were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The approximately 6.6-acre project site is located at the northeast corner of East 10th and Chestnut Streets, in the eastern portion of the City of Gilroy The project proposes to rezone the site from General Services Commercial in the General Plan and zoned Shopping Center Commercial (C3) and Commercial Industrial (CM) to C3-Planned Unit Development (PUD) overlay district in order to demolish and remove all improvements on-site and construct a 120-room hotel, a carwash, and four commercial buildings. The four commercial buildings and carwash would total approximately 19,649 square feet (sf). The site would be subdivided into six separate parcels and provide 274 surface parking spaces.

Hotel

The project would develop a four-story hotel building in the northwest corner of the project site. The hotel building would have a maximum height of 109 feet (including mechanical screening) and would include approximately 120 guest rooms. The hotel is proposed to operate 24 hours a day, seven days a week, and year-round. The hotel would have one diesel generator of sufficient capacity to run essential equipment in the event of a power outage.

Carwash

The project would develop an up to 125-foot long, 4,500 sf tunnel carwash building in the southeast corner of the project site. The one-story carwash building would be 25-feet in height (including mechanical screening). The carwash would have 27 vacuum spaces. Vehicles would enter from the east side and exit through the west side of the carwash.

Commercial Buildings

The project would develop four, single-story commercial buildings. The commercial buildings would total approximately 17,000 sf. Commercial Building A would be a gasoline service station with six pumps (or 12 fueling positions) that would be operate 24-hours and be approximately 4,103 sf. Commercial Building B would be an approximately 2,365 sf coffee shop with drive-thru

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

service and outdoor patio. Commercial Building C and D would be drive-thru restaurants with outdoor patio space that would be approximately 3,500 sf and 5,181 sf, respectively.

Setting

The project is located in Santa Clara 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 aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

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

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

Regulatory Setting

Federal Regulations

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

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[2]

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.[3] In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have 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.

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

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

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

Bay Area Air Quality Management District

BAAQMD 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 and California Ambient Air Quality Standards. 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.

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines*[4] 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 air toxics, odors, and greenhouse gas emissions. *Attachment 1* includes detailed community risk modeling methodology.

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

City of Gilroy General Plan

The City of Gilroy 2002-2020 General Plan was adopted by the City in June 2002. The pertinent goals and policies applicable to the proposed project are listed below. Additionally, an update to General Plan (Gilroy 2040 General Plan) is currently underway and the draft environmental impact report is out for public review.

Goal: Achievement of federal and state air quality standards by managing locally generated pollutants, coordinating with other jurisdictions, and implementing land use and transportation measures to reduce automobile trips and congestion, encouraging more walking, biking, and transit use.

- **Policy 21.01 "Sensitive Receptors."** Use land use planning and project siting to separate air pollution sources (such as freeways, arterials, industrial sites, etc.) from residential areas and other "sensitive receptors" (such as schools, hospital, and nursing homes) that would be adversely affected by close proximity to air pollutants.

    - ***Action 21.B Evaluation and Mitigation of Impacts for Sensitive Receptors***. Projects that are proposed within one mile of sensitive receptors with the potential to generate odors or toxic pollutants should be required to conduct an odor or health risk assessment to evaluate the project's compatibility with the sensitive receptor. A sufficient buffer zone shall be provided when necessary.

- **Policy 21.04 Regional Collaboration.** Cooperate with the Bay Area Air Quality Management District and other agencies that deal with issues related to air quality (e.g., the Metropolitan Transportation Commission and the Association of Bay Area Governments) to develop and implement regional air quality strategies. Also, support subregional coordination with other cities, counties and agencies in Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality

    - ***Action 21.C Emission Reductions for Construction-Related Equipment***. Require appropriate mitigation measures as a condition of project approval to ensure that the exhaust emissions from construction-related equipment are significantly reduced. Measures that may be required include: (a) Limiting the idling time of all construction equipment to less than 5 minutes; (b) Limiting the hours of operation of heavy duty equipment and/or the amount of equipment in use; (c) Requiring all equipment to be properly tuned and maintained in accordance with manufacturer specifications; (d) Requiring alternative fuel or electric construction equipment at the project site, when feasible; (e) Using the minimum practical engine size for construction equipment; (f) Requiring that gasoline-powered equipment be fitted with catalytic converters, when feasible.

- **Policy 21.05 Air Quality Impacts from Construction Activity**. Reduce the air quality impacts associated with construction activity by reducing the exhaust emissions through appropriate mitigation actions.

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, and elementary schools. The closest sensitive receptors to the project site are residences to the north. This project would not introduce new residential sensitive receptors to the area.

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 that were used in this analysis are summarized in Table 1.

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	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-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	
Odor			
5 confirmed complaints per year averaged over 3 years			
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually (for 2020)* OR 4.6 metric tons per capita (for 2020)*		
Stationary Sources – direct emissions	10,000 metric tons annually		

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.

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: 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 ozone 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 ozone and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO_X), 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 2016.3.2 was used to estimate emissions from construction and operation of the site assuming full build-out of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod. Traffic generated by construction (i.e. off-site construction activities), which included worker trips, vendor deliveries and material hauling trip were computed separately using the CARB EMission FACtors 2017 model (EMFAC2017). [5] The model output from CalEEMod along with construction inputs are included as *Attachment 2*. EMFAC2017 calculations and outputs are included as *Attachment 3*.

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	Acreage[2]
Parking Lot	274	Space	109,600	2.47
Fast Food Restaurant with Drive Thru	11.05	1,000 sf	11,046	0.25
Hotel	120	Room	79,641	4.67
Automobile Car Center[1]	4.50	1,000 sf	4,500	0.10
Convenience Market with Gas Pumps	6	Pump	4,103	0.02

Notes: [1]CalEEMod does not have a specific land use for a car wash so the automobile car center land use was used instead.
[2]Since default construction information was used, the default acreage was kept in the model. However, the entire project site is 6.6 acres.

[5] See CARB's EMFAC2017 Web Database at https://www.arb.ca.gov/emfac/2017/

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 CalEEMod default information. The construction schedule assumed that the earliest possible start date would be January 2021 and the project would be built out over a period of approximately 15 months, or 320 construction workdays.

Construction Traffic Emissions

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC 2014 motor vehicle emission factor model. This model has been superseded by the EMFAC2017 model; however, CalEEMod has not been updated to include EMFAC2017. 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 rate by the number of days in that phase. Haul trips for demolition were estimated from the provided hauling volumes. The traffic information was combined with EMFAC2017 motor vehicle emissions factors.

EMFAC2017 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 trucks, 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 or asphalt trucks, these were treated as vendor travel distances (7.3 miles). Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On road emissions in Santa Clara County for 2021 and 2022 were used in these calculations. Table 3 provides the traffic inputs that were combined with the EMFAC2017 emission database to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2017 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker Trips[1]	Total Vendor Trips[1]	Total Haul Trips	
Vehicle mix[1]	72% LDA 6% LDT1 22% LDT2	38% MHDT 62% HHDT	100% HDDT	
Trip Length (miles)	10.8	7.3	20.0 Demo 7.3 Concrete/Asphalt	Truck Idle Time = 5 minutes
Demolition	300	-	117	Haul 25,632 sf of demolished building material and CalEEMod default worker trips
Site Preparation	180	-	-	CalEEMod Default
Grading	300	-	-	CalEEMod Default Worker Trips. Balanced site.
Trenching	200	-	-	CalEEMod Default Worker Trips
Building Construction	20,010	7,820	400	200 cement truck round trips. CalEEMod Default Worker Trips
Paving	300	-	56	443 cy of asphalt hauled. CalEEMod default worker. trips
Architectural Coating	340	-		CalEEMod Default Worker Trips

Notes:
[1] Based on 2021 and 2022 EMFAC2017 VMT-based fleet mix for Santa Clara County.
Square feet = sf, Cubic yards = cy

Summary of Computed Construction Period Emissions

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

Table 4. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2021	0.31	2.95	0.16	0.14
2022	0.58	0.33	0.02	0.02
Annualized Daily Construction Emissions Per Day (pounds/day)				
2021 (261 construction workdays)	2.40	22.62	1.24	1.10
2022 (59 construction workdays)	19.61	11.04	0.62	0.52
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: Implement BAAQMD-Recommended Measures to Control Particulate Matter Emissions during Construction.

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

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

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

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

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

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

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

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

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action

within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Mitigation Measure AQ-1

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

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future customers, hotel guests, and employees. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

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. This analysis assumed that the project would be fully built out and operating in the year 2023.

EMFAC2017 Adjustment

The vehicle emission factors and fleet mix used in CalEEMod are based on EMission FACtors from 2014 (EMFAC2014), which is an older CARB emission inventory for on road and off road mobile sources. Since the release of CalEEMod Version 2016.3.2, new emission factors have been produced by CARB. EMFAC2017 became available for use in March 2018 and approved by the EPA in August 2019. It includes the latest data on California's car and truck fleets and travel activity. Additionally, CARB has recently released EMFAC off-model adjustment factors to account for the Safer Affordable Efficient (SAFE) Vehicle Rule Part one.[6,7] The SAFE vehicle Rule Part One revoked California's authority to set its own GHG emission standards and set zero emission vehicle mandates in California. As a result of this ruling, mobile criteria pollutant and GHG emissions would increase. Therefore, the CalEEMod vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2017, which were adjusted with the CARB EMFAC off-model adjustment factors. More details about the updates in emissions

[6] California Air Resource Board, 2019. *EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One*. November. Web: https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf

[7] California Air Resource Board, 2020. *EMFAC Off-Model Adjustment Factors for Carbon Dioxide (CO_20 Emissions to Accounts for the SAFE Vehicles Rule Part One and the Final SAFE Rule*. June. Web: https://ww3.arb.ca.gov/msei/emfac_off_model_co2_adjustment_factors_06262020-final.pdf?utm_medium=email&utm_source=govdelivery

calculation methodologies and data are available in the EMFAC2017 Technical Support Document.[8]

Operational Traffic

The traffic report provided both daily trip generation rates and daily vehicle miles traveled (VMT).[9],[10] Trip generation was provided for each land use with adjustments for internal capture (trips made from one project land use to another) and pass by trips. Pass by trips are from vehicles that do not travel out of their way to visit the project site. CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate that were adjusted by the traffic consultant was entered into the model. Total daily VMT of 6,695 miles was also provided. These traffic data were assumed to represent each day since there was no other information regarding Saturday or Sunday use and the project would operate seven days per week. The trip generation rates and VMT data were used in the modeling as follows:

1. Adjusted trip generation rates were adjusted to the units used by CalEEMod

2. Pass by and diverted trips were set to 0 percent as all trips were assumed to be primary trips since VMT data were used.

3. CalEEMod was run with default trip lengths.

4. The daily VMT were computed from the annualized VMT and compared against the VMT reported by the Traffic Consultant.

5. The ratio of the VMT reported for the project to the default VMT reported by CalEEMod were multiplied by the CalEEMod trip lengths. This yielded trip lengths of 1.2 to 1.55 miles per trip. These trips are associated with service type land uses that do not generate long trips.

The CalEEMod trip generation and VMT totals were compared to the traffic study to confirm proper adjustments were made.

Energy – Electricity

CalEEMod defaults for energy use were used, which include the 2016 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 641.3 pounds of CO_2 per megawatt (lbs. CO_2/MWh) of electricity produced, which is based on PG&E's 2008 emissions rate.

[8] See CARB 2018: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac

[9] Hexagon Transportation Consultants, Inc. 2020. *Tenth Street-Chestnut Street Commercial Development Transportation Analysis*. September.

[10] Hexagon Transportation Consultants, Inc. 2021.*Email from Gicela Del Rio*, dated June 11, 2021.

However, Silicon Valley Clean Energy (SVCE) is the official electricity provider for Gilroy. SVCE purchases carbon-free electricity and partners with PG&E to deliver this electricity over existing power lines that they maintain. SVCE provides 100-percent carbon-free energy and customers in the City of Gilroy are automatically enrolled in the SVCE GreenStart default program, which offers electricity that is carbon-free and with 50 percent of the power from renewable sources.[11] The carbon intensity factor for the SVCE GreenStart program is less than 25 lbs. CO_2/MWh. The analysis uses this intensity factor.

Project Generators

The project would include a diesel emergency generator at the hotel; however, the exact size and location are unknown at the time of this analysis. Based on hotels of similar size, it was assumed that the emergency generator would be approximately 750 kilowatts (kW) with a 1,005 horsepower (HP) diesel engine. This generator would be tested periodically and power the buildings in the event of a power failure. For modeling purposes, it was assumed that the generator would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

Other Inputs

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

Gasoline Dispensing Facility

The project would include a 6-pump gasoline station with 12 dispenser positions. CalEEMod does not compute evaporative ROG emissions from gasoline dispensing facilities (GDF). Therefore, these emissions were computed outside the model. The transfer and storage of gasoline results in emissions of organic compounds, considered in this assessment as ROG. The maximum throughput for this gas station is unknown at the time of this analysis; therefore, it was conservatively assumed that the project's maximum throughput would be 10,000,000 gallons per year.[12] Emissions of ROG and benzene, which is a TAC, were computed based on the projected throughput of gasoline using emission factors developed by CARB.[13] 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 include 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

[11] See: https://www.svcleanenergy.org/choices/
[12] CARB Considers an annual throughput of 9,000,000 gallon gasoline to represent the largest operating class of GDFs in the State.
[13] CARB. 2013. *Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities*. December 23, 2013.

installed on all passenger, light-duty, and medium-duty vehicles manufactured since the 2006 model year. These computations are provided in *Attachment 4* as part of the health risk assessment.

Existing Land Uses

The existing land uses include a strip mall with various retail stores. Emissions from existing uses were not included in this analysis.

Summary of Computed Operational Emissions

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

Table 5. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2023 Annual Project Operational Land Use(*tons/year*)	2.27 tons	1.80 tons	0.95 tons	0.28 tons
2023 Annual Project Operational GDF (*tons/year*)	3.35 tons	--	--	--
Net Emissions	5.62 tons	1.80 tons	0.95 tons	0.28 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2023 Daily Project Operational Emissions (*pounds/day*)[1]	31 lbs.	10 lbs.	5 lbs.	2 lbs.
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*
Notes: [1]Assumes 365-day operation.				

Impact AIR-2: 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. gas station and mobile sources).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would include the installation of an emergency generator powered by a diesel engine that would generate TAC and air pollutant emissions. In addition, the project would site a new gas station within 1,000 feet of sensitive receptors. The project would also generate some traffic, consisting of mostly light-duty vehicles. However, the number of daily trips generated by the project are less than 10,000 daily trips (i.e. 4,810 net daily trips) and are not considered a source of substantial TACs or $PM_{2.5}$.

Therefore, project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. In addition, there are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of

these existing sources of TAC was also assessed in terms of the cumulative risk that includes the project contribution.

Community Risk Methodology for Construction and Operation

Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. 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 is typically used, per BAAQMD guidance,[14] with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

Generally, the project increased cancer risk is computed by summing the project construction cancer risk and operation cancer risk contributions. 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's 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 modeling of TAC and $PM_{2.5}$ emissions, dispersion modeling and cancer risk computations.

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 include all adjacent existing residences to the north of the project site, east of U.S. Route 101, and west of the Chestnut Street and 10th Street intersection, as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e. infants, children, and adults) with almost continuous exposure to project emissions.

Community Risks from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. Although it was concluded in the previous sections (see Table 4) that construction 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 impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[15] This assessment included

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

dispersion modeling to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod model provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages of 0.1598 tons (320 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. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.0859 tons (172 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences) in the vicinity of the project construction area and construction haul routes. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[16]

Construction Sources

To represent the construction equipment exhaust emissions, an emission release height of 20 feet (6 meters) was used for the area sources.[17] The 20-foot release height used for the refined modeling of the project's construction equipment exhaust DPM emissions is a conservative estimate of the overall plume height and incorporates both the 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.

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

Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

AERMOD Inputs and Meteorological Data

The modeling used a 5-year meteorological data set (2013-2017) from the San Martin Airport prepared for use with the AERMOD model by the BAAQMD. This airport is approximately eight miles north of the project site. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2021-2022 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 5 feet (1.5 meters) used to represent the breathing heights of residences in the nearby townhomes and single-family homes.

Construction emissions were modeled as occurring daily between 7:00 a.m. to 7:00 p.m. Monday through Friday and from 9:00 a.m. to 7:00 p.m. on Saturday to align with the City of Gilroy's zoning ordinance (Chapter 16.38) for allowable construction hours. The emission rates used for dispersion modeling were calculated using the total annual construction emissions computed using CalEEMod (based on construction occurring 5 days per week) and dividing by 12 hours per day for 365 days (i.e., normalizing the emissions to an annualized pound per hour emission rate over the period being modeled). The dispersion modeling was conducted, assuming emissions would occur 12 hours per day Monday through Friday and for 10 hours on Saturday, using the variable emission option in the U.S. EPA AERMOD dispersion model, Monday through Friday.

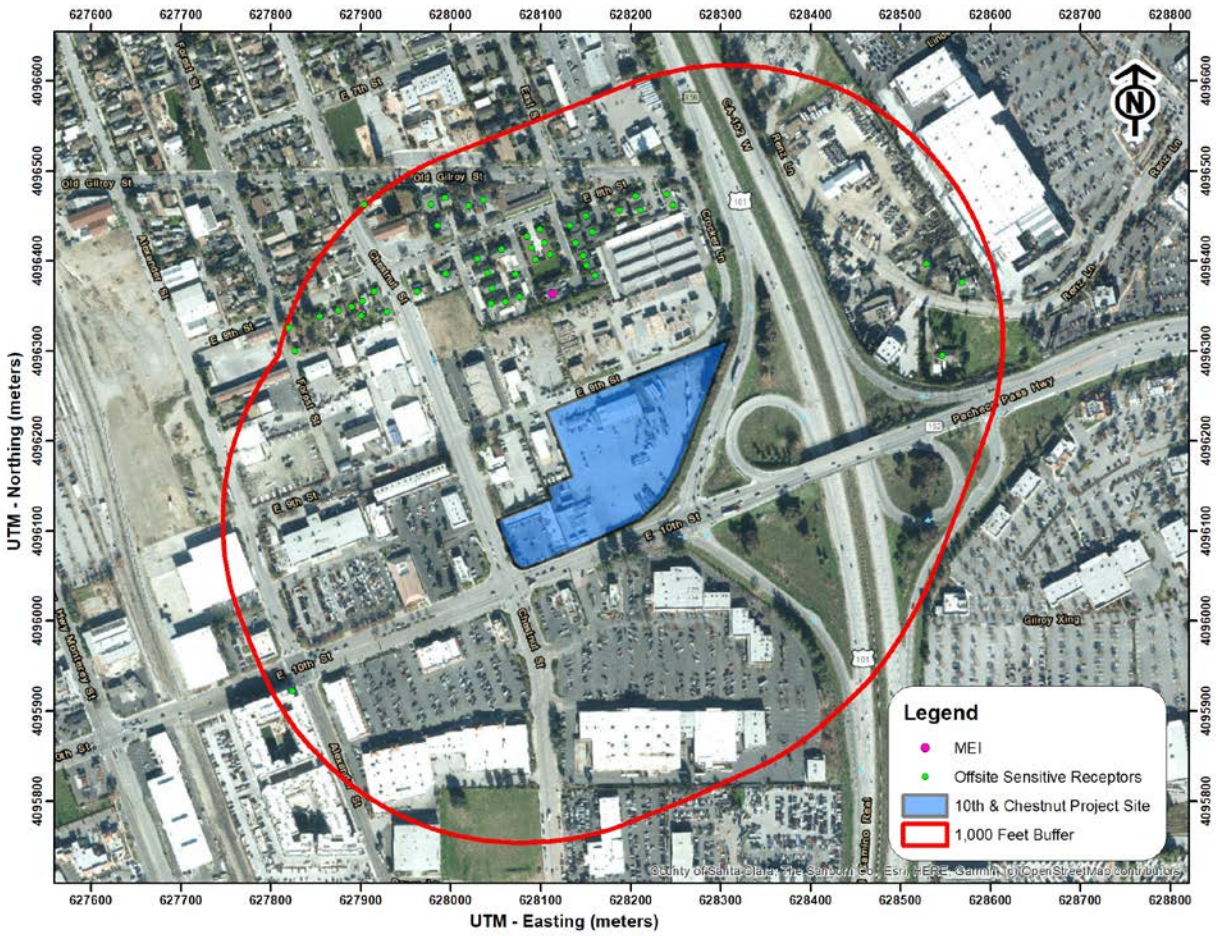
Summary of Construction Community Risk Impacts

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

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

The maximum modeled annual DPM and $PM_{2.5}$ concentrations, which includes both the DPM and fugitive $PM_{2.5}$ concentrations, were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEI). Table 6 lists the community risks from construction at the location of existing offsite residential MEI. *Attachment 4* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

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



Community Risks from Project Operation – Traffic, Gas Station & Emergency Generator

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

Project Traffic

Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicle per day is considered a low-impact source of TACs.[18] This project would generate 4,810 net daily trips with a majority of the trips being from light-duty vehicles (i.e. passenger cars), which is less than 10,000 daily vehicles. BAAQMD considers roadways that have less than 10,000 average daily trips (ADT) to be low-impact sources of TACs and do not need to be considered in the CEQA

[18] 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

analysis.[19] Therefore, emissions from project traffic would be negligible and are not included in this analysis.

Project Operational Emergency Generator

The project would include a 750-kW emergency generator with an approximately 1,005 HP diesel engine. The generator would be part of the hotel so it was conservatively assumed to be located north of the hotel building where the mechanical equipment would be located. Figure 2 shows the location of the modeled emergency generator.

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

Dispersion Modeling

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

To calculate the increased cancer risk from the generators at the MEI, the cancer risks exposure duration was adjusted to account for the MEI being exposed to construction for the first two years of the 30-year lifetime period. The exposure duration for the generators was adjusted for 27 years. Table 6 lists the risks and hazards from the project generator. The emissions and health risk calculations for the proposed generators are included in *Attachment 4*.

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

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

Project Gas Station

As described above in the project description, the project would include a gasoline service station with six pumps or 12 fueling positions that would operate 24-hours per day. The gas station would be located on Parcel A at the intersection of Chestnut Street and East 10th Street (see Figure 2).

The maximum throughput for this gas station is unknown at the time of this analysis; therefore, it was conservatively assumed that the project's maximum throughput would be 10,000,000 gallons per year. The annual TAC emissions (benzene, ethylbenzene, hexane, toluene, and xylene) from the gas station were estimated and then converted into pounds per days emissions. Those pounds per day emissions were then put into the BAAQMD Health Risk Calculator to screen the risks and hazards from the gas station. The BAAQMD's *Gasoline Dispensing Facility Distance Multiplier Tool* was used with the project MEI being approximately 850 feet (260 meters) away from the source. Note that the screening risks and hazards from the proposed gas station were not adjusted to account for a shorter exposure duration. The community risks from the proposed gas station would be less with refined dispersion modeling and increased cancer risk calculations. The results are listed in Table 6. The emissions and health risk calculations for the proposed generators are included in *Attachment 4*.

Summary of Project-Related Community Risks at Offsite Project MEI

For this project, the sensitive receptor identified in Figure 1 as the construction MEI is also the project MEI. At this location, the MEI would be exposed to four years of construction cancer risks and 26 years of operational (i.e. emergency backup generator and a gas station) cancer risks. The cancer risks from construction and operation of the project were summed together. The annual $PM_{2.5}$ concentration, and HI values are based on an annual maximum risk for the entirety of the project, so they were not summed.

As shown in Table 6, the unmitigated project construction and operation community risks would exceed the BAAQMD single-source thresholds for increased cancer risk. However, with *Mitigation Measure AQ-1 and AQ-2*, the increased cancer risk from construction activities would be reduced and the total project increased cancer risk would below the BAAQMD single-source threshold. The maximum project annual $PM_{2.5}$ and HI value do not exceed the BAAQMD annual $PM_{2.5}$ nor the HI single-source thresholds.

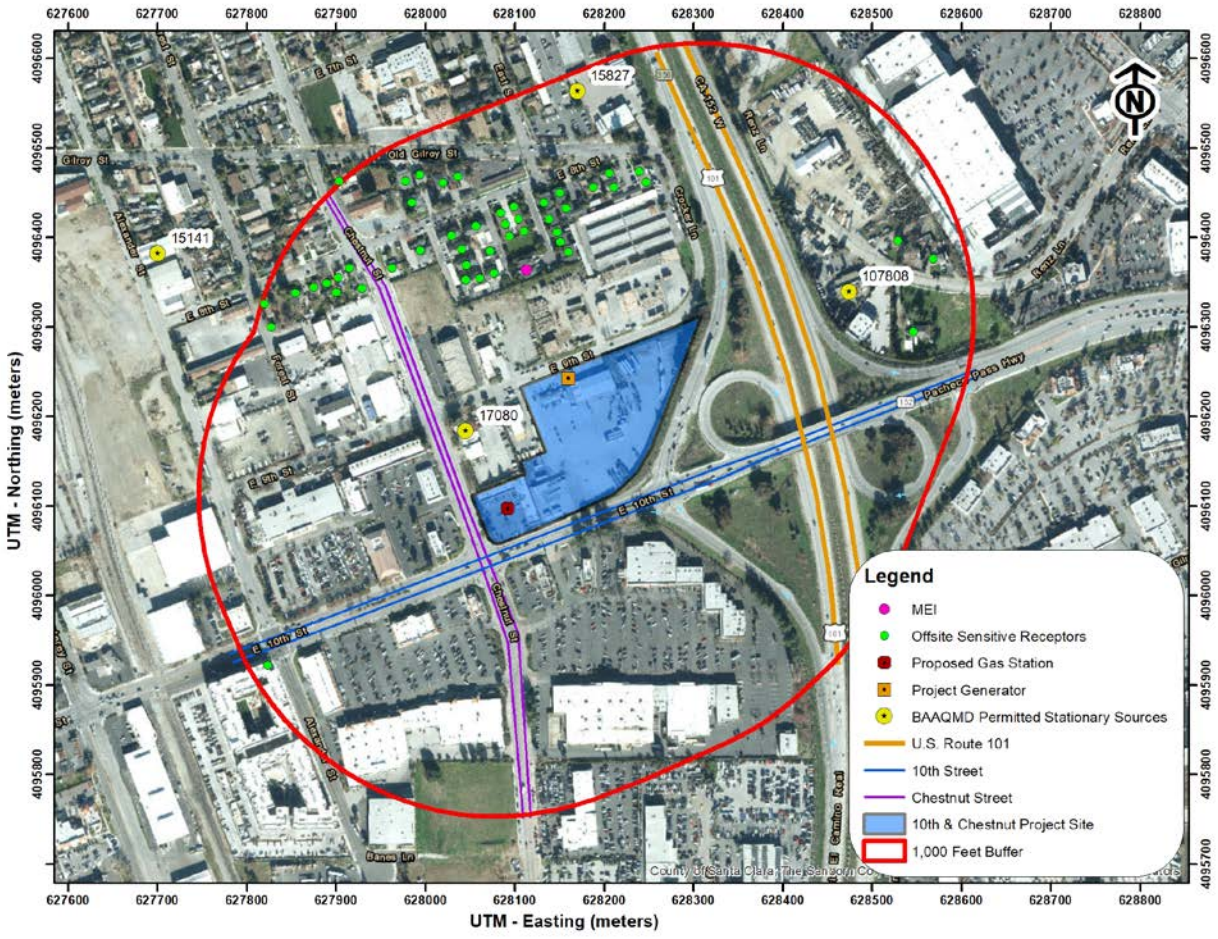
Table 6. Construction and Operation Risk Impacts at the Offsite Project MEI

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Unmitigated Project Construction (Years 0-2)	9.74 (infant)	0.10	0.01
Mitigated Project Construction (Years 0-2)	1.73 (infant)	0.02	<0.01
Project Generator – 750 kW (Years 3-30)	0.43	0.03	<0.01
Gas Station (10,000,000 gallon/year maximum throughput)	0.21	-	<0.01
Unmitigated Total/Maximum Project Risks (Years 0-30)	**10.38**	0.10	0.01
Mitigated Total/Maximum Project Risks (Years 0-30)	2.37	0.03	<0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold? Unmitigated	***Yes***	*No*	*No*
Mitigated	*No*	*No*	*No*

Cumulative Community Risks of all TAC Sources at the Offsite Project MEI

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site (i.e. influence area). These sources include freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic 10th Street, Chestnut Street, and United States (U.S.) Highway 101 would exceed 10,000 daily vehicles. All other nearby streets would have less than 10,000 vehicles per day. A review of BAAQMD's stationary source Google Earth map tool identified four stationary sources with the potential to affect the project MEI. The project would also include a gas station and an emergency generator that would emit TACs once operational. Figure 2 shows the location of the sources affecting the MEI. Community risk impacts from these sources upon the MEI reported in Table 7. Details of the modeling and community risk calculations are included in *Attachment 5.*

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



Highways & Local Roadways – U.S. Route 101, 10th Street & Chestnut Street

A refined analysis of potential health impacts from vehicle traffic on U.S. Route 101, 10th Street and Chestnut Street was conducted. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on both roadways near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks are then computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

Traffic Emissions Modeling

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on both roadways using the Caltrans version of the EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (e.g., TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear from re-entrained roadway dust were included in these emissions.

DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (i.e., Santa Clara County), type of road, truck percentage (2018 Caltrans data for U.S. Route 101[21] and CT-EMFAC2017 Santa Clara County default truck percentages for 10th Street and Chestnut Street), traffic mix assigned by CT-EMFAC2017 for the county, year of analysis, and season. The CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2023. Year 2023 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated (i.e. 30 years).

The annual average daily traffic (AADT) for U.S. Route 101 was based on 2018 Caltrans AADT data for state highways,[22] while the ADT on Chestnut Street and 10th Street was based on the AM and PM peak-hour data cumulative plus project traffic volumes.[23] The predicted AADT on U.S. Route 101 would be 109,410 vehicles. The ADT on 10th Street and Chestnut Street would be 29,595 and 11,510 vehicles, respectively. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[24] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for both roadways.

For all hours of the day, other than during peak a.m. and p.m. periods, an average speed of 65 miles per hour (mph) was assumed for all vehicles on U.S. Route 101. Based on traffic data from the Santa Clara Valley Transportation Authority's 2017 Monitoring and Conformance Report,

[21] Caltrans. 2020. 2018 Annual Average Daily Truck Traffic on the California State Highway System.
[22] Caltrans. 2019. *2018 Traffic Volumes California State Highways.* See https://dot.ca.gov/programs/traffic-operations/census
[23] Hexagon Transportation Consultants, Inc. 2020. *Tenth Street-Chestnut Street Commercial Development.* July.
[24] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2017 does not include Burden type output with hour by hour traffic volume information.

traffic speeds during the peak a.m. and p.m. periods were identified.[25] For both the a.m. and p.m. 2-hour peak periods, an average speed of 60 mph was used for both northbound and southbound traffic. For both 10th Street and Chestnut Street, an average travel speed of 35 mph (posted speed limit) was used for all for all hours of the day.

Dispersion Modeling

Highway 101, Chestnut Street, and 10th Street were modeled with the AERMOD model using line-area sources (a series of adjacent area sources along a line) to represent traffic emissions on roadway segments within about 1,000 feet of the project site. Five years (2013-2017) of hourly meteorological data from the San Martin Airport, prepared for use with the AERMOD model by the BAAQMD, were used for the modeling. The San Martin Airport is about 5.7 miles north-northwest from the project site.

TAC and $PM_{2.5}$ concentrations for 2023 were calculated by the model at the same residential receptor locations as used for the construction health risk modeling. Roadway and receptor terrain elevations were based on United States Geological Survey National Elevation Data with a 10-meter resolution. A receptor height of 1.5 meters above ground level was used to represent the breathing heights of residents at the modeled receptors. Based on the land uses in the region surrounding the project site, rural dispersion parameters were used for the modeling. Estimated risk values for the roadways are listed in Table 7.

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) website[26]. This mapping tool identifies the location of nearby stationary sources and their estimated risk and hazard impacts. Four sources were identified with two of the sources being diesel generators (City of Gilroy, Facility ID #15827 and #107808), one of the sources being a gas dispensing facility (California Highway Patrol, Facility ID #107808), and one source being a coating operation facility (Mission Power Coating, Inc, Facility ID #15141). Note that the Mission Power Coating, Inc had no community risks, so it was not included in the cumulative analysis.

The screening level risks and hazards posted on the GIS website for the sources were adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines, Gasoline Dispensing Facility Distance Multiplier Tool,* or *Generic Distance Multiplier Tool* when appropriate. Estimated risk values for all permitted stationary sources are listed in Table 7.

Summary of Cumulative Risks at the Project MEI

Table 7 reports both the project and cumulative community risk impacts. The project would have an exceedance with respect to community risk caused by project construction and operation activities, since the maximum unmitigated cancer risk exceeds the BAAQMD single-source

[25] Santa Clara Valley Transportation Authority. *2016 CMP Monitoring and Conformance Report 2017*.
[26] BAAQMD, Web: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

thresholds. However, with implementation of *Mitigation Measures AQ-1 and AQ-2* the project's risk would be lowered to a level below the single-source thresholds. The cumulative risks, unmitigated or mitigated, do not exceed the BAAQMD cumulative-source thresholds.

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

Source	Maximum Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Project Impacts			
Unmitigated Total/Maximum Project Risks (Years 0-30)	**10.38**	0.10	0.01
Mitigated Total/Maximum Project Risks (Years 0-30)	2.37	0.03	<0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?			
Unmitigated	***Yes***	*No*	*No*
Mitigated	*No*	*No*	*No*
Cumulative Sources			
U.S. Route 101, ADT 109,410	8.27	0.20	<0.01
10th Street, ADT 29,595	1.69	0.12	<0.01
Chestnut Street, ADT 11,150	0.56	0.04	<0.01
City of Gilroy (Facility ID #15827, Generator) MEI Distance	0.14	-	-
City of Gilroy (Facility ID #17080, Generator) MEI Distance	0.12	-	-
California Highway Patrol (Facility ID #107808, Gas Dispensing Facility) MEI Distance	0.01	-	-
Cumulative Sources			
Unmitigated	21.17	0.46	<0.04
Mitigated	13.16	0.39	<0.04
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Exceed Threshold?			
Unmitigated	***Yes***	*No*	*No*
Mitigated	*No*	*No*	*No*

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

A feasible plan to reduce emissions such that risks and hazards from construction would be further reduced below significance levels is 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 or exceed at least U.S. EPA Tier 2 emission standards for PM (PM_{10} and $PM_{2.5}$) with CARB Level 3 verifiable diesel emission control devices (VDECS) if one is available for the equipment being used. Use of equipment with Tier 4 engine standards would also be acceptable and would not require VDECS.

Effectiveness of Mitigation Measure AQ-2

The project's construction community risks do not exceed the BAAQMD single-source thresholds for increased cancer risk, annual $PM_{2.5}$ concentration, nor the HI value. However, the total project increase cancer risk does exceed the threshold. Therefore, mitigation would be needed.

CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment met with equipment that meets Tier 2 off-road emission standards and are retrofitted with level 3 VDECS. BAAQMD best management practices for construction were also included. With this mitigation, the project's construction increased cancer risk would be reduced from 9.74 per million. to 1.73 per million. The total project increased cancer risk would then be reduced from 10.38 per million to 2.37 per million. As a result, the project's construction risk would be further reduced below the thresholds and the project's total increased cancer risk would be below the BAAQMD single-source threshold of greater than 10.0 per million.

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*. [27] While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

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

[27] 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

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 bikable 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 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.[28] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

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

[28] 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.

systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[29]

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).[30] 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.[31] 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.[32] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011

BAAQMD 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 service population. 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.

City of Gilroy GHG Significance Threshold Methodology

In lieu of a quantified threshold from BAAQMD for projects operational post-2020, the City of Gilroy has developed an approach based on the CARB scoping plans. The CARB stated in their 2013 scoping plan update that a 5.2 percent per year reduction from the projected 2020 statewide GHG emissions would be needed to achieve the state reduction targets for 2030 and 2050.[33] The City recommends using this reduction percentage and the land use driven emissions from the 2020 state GHG emissions inventory (see Table 8) to derive a statewide emissions volume target for the first year of project operation. The 1990 statewide GHG inventory was used since the 1990 inventory represents the target emissions levels for the year 2020.[34] As shown in Table 8, the

[29] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf
[30] 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
[31] 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
[32] 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.
[33] California Air Resource Board, 2014. *First Update to the Climate Change Scoping Plan Building on the Framework Pursuant to AB 32 The California Global Warming Solutions Act of 2006.* May. Web: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf
[34] California Air Resource Board, 2007. *GHG 1990-2004 Inventory & Documentation.* November. Web: https://ww2.arb.ca.gov/ghg-1990-to-2004

adjusted land use driven emissions would be 286.71 MMT of CO_2e in 2020. The predicted 2020 statewide emission target would then be divided by the projected service population (i.e. residential population and employment population) for the first year of project operation to predict a MT of CO_2e per service population threshold.

Table 8. 1990 California Greenhouse Gas Inventory for Land Use Driven Emission Sectors

Land Use Type	Emissions (MMT CO_2e)
On-Road Transportation	
Passenger Cars	63.77
Light Duty Trucks	44.75
Motorcycles	0.43
Heavy Duty Trucks	29.03
Freight	0.02
Subtotal	**138.00**
Electricity Generation In-State	
Commercial Cogeneration	0.70
Merchant Owned	2.33
Transmission and Distribution	1.56
Utility Owned	29.92
Subtotal	**34.51**
Electricity Generation Out-of-State	
Specified Imports	29.61
Transmission and Distribution	1.02
Unspecified Imports	30.96
Subtotal	**61.59**
Commercial	
CHP: Commercial	0.40
Communication	0.07
Domestic Utilities	0.34
Education	1.42
Food Services	1.89
Healthcare	1.32
Hotels	0.67
Not Specified Commercial	5.58
Offices	1.46
Retail & Wholesale	0.68
Transportation Services	0.03
Subtotal	**13.86**
Residential	
Household Use	29.66
Subtotal	**29.66**
Industrial	
Landfills	6.26
Domestic Wastewater Treatment	2.83
Subtotal	**9.09**
TOTAL EMISSIONS	**286.71**

Source: California Air Resource Board, 2007

For this project, the first year of operation would be 2023. Thus, a statewide emissions volume target for 2023 was derived using the 286.71 MMT CO_2e and the 5.2 percent reduction for three years (i.e. three-year difference between 2020 and 2023). A continuously compounded interest formula was used to predict the 2023 MMT CO_2e (see formula below). The 2023 statewide emissions would be 245.30 MMT CO_2e.

$$F = Ve^{rt}$$

F = Future Value (MMT CO_2e)
V = Initial Value (MM CO_2e)
e = Euler's Number (2.71828…)
r = Rate (i.e. 5.2 percent reduction)
t = time (years)

$$245.30\text{MMTCO}_2\text{e} = (286.71\text{MMTCO}_2\text{e})e^{-0.052*3\ years}$$

The statewide 2023 service population was predicted using the projected 2023 statewide population from the California Department of Finance and the long-term statewide industry employment projections from the State of California Employment Development Department.[35,36] The projected 2023 statewide population would be 40,716,512 persons and the projected 2023 employment projection would be approximately 19,471,419 employees.[37] Note the 2023 employment projection was calculated using a linear interpolation formula.

$$Y_2 = \frac{(X_2 - X_1) \times (Y_3 - Y_1)}{X_3 - X_1} + Y_1$$

The total service population would be 60,187,931 persons. Therefore, the 2023 service population threshold of significance would be 245.30 MMT CO_2e divided by the service population or **4.08 MT CO_2e per service population.** Table 9 lists the population and MMT CO_2e used to derive the 2023 service population threshold.

Table 9. 2023 Service Population Threshold and Inputs

Input	Year 2023
Population	40,716,512
Employment	19,471,419
Service Population	60,187,931
Emission Target	245.30 MMT CO_2e
2023 Service Population Threshold	245.30 MMT CO_2e/60,187,931 = 4.08 MT CO_2e per service population

The 2030 service population threshold was also calculated for informational purposes only. To calculate the 2030 service population threshold, the same methodology above was used with the exception of the employee population. The California employment projects are only estimated out to 2028. Therefore, an average growth rate percentage was calculated from the 2018 and 2028

[35] California Department of Finance, 2020. *Total Estimated and Projected Population for California and Counties: July 1, 2010 to July 1, 2060 in 1-year Increments*. January. Web: http://www.dof.ca.gov/Forecasting/Demographics/Projections/
[36] State of California Employment Development Department, *2018-2028 Industry Employment Projections California Statewide.* Web: https://www.labormarketinfo.edd.ca.gov/data/employment-projections.html
[37] The long-term dataset for employment projections provides total employment in 2018 and in 2028. Therefore, the employment projection for 2023 was linearly interpolated using the 2018 and 2028 employment numbers.
Formula: $Y_2 = [(X_2-X_1)*(Y_3-Y_1)/(X_3-X_1)] + Y_1$

employment estimates to then predict the 2030 employee population. A growth rate formula was used (see below), and an 0.81 percent growth rate was predicted. Using the compounded interest formula with the 0.81 percent growth rate, the number of employees in California in 2030 would be approximately 20,084,482. Table 10 lists the predicted future service population thresholds

$$G = \left(\frac{F}{P}\right)^{1/n} - 1$$

G = Growth Rate Percentage
P = Starting Value
F = Final Value
n = time (years)

$$\left(0.0081 = \left(\frac{20{,}412{,}500\ employees\ in\ 2030}{18{,}825{,}900\ employees\ in\ 2018}\right)^{\frac{1}{12}} - 1\right)$$

Table 10. Service Population Threshold and Inputs

Year	People	Employment	Emissions in MT	Per Capita Emissions in MT
2023	40,716,512	9,471,419	245.30	4.08
2024	40,938,929	9,603,155	232.87	3.85
2025	41,176,614	9,735,782	221.07	3.63
2026	41,405,901	9,869,307	209.87	3.42
2027	41,629,615	0,003,735	199.23	3.23
2028	41,847,285	0,139,072	189.14	3.05
2029	42,058,192	0,275,325	179.55	2.88
2030	42,263,654	0,412,500	170.46	2.72

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, the generator, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended by the City of Gilroy.

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. CalEEMod output is included in *Attachment 2*.

Service Population

The project service population efficiency rate is based on the number of future employees. Based on information from the project applicant, the project would generate approximately 104 to 134 employees on-site. The service population would be the average of 119 employees.

Construction GHG Emissions

GHG emissions associated with construction were computed to be 545 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 (i.e. *MM AQ-1*) to reduce GHG emissions during construction where feasible and applicable.

Operational GHG Emissions

The CalEEMod model was used to estimate daily emissions associated with operation of the fully developed site under the proposed project. The existing land use GHG emissions for the year 2020 were also computed. The effects from project-specific sustainability measures were not included in this analysis. The 2030 GHG emissions and service population significance threshold are shown for informational purposes only. The opening year emissions will be used for impact findings.

As shown in Table 11, net annual emissions from the proposed project are predicted to be 1,166 MT of CO_2e in 2023 and 1,038 MT of CO_2e in 2030. The service population emissions for the year 2023 are predicted to be 9.79 MT/CO_{2e}/year/service population and 8.70 MT/CO_2e/year/service population in 2030. The 2023 service population emissions exceed the threshold by 680 MT/CO_{2e}/year in 2023 (assuming the project is fully operational) and exceed the 2030 threshold by 714 MT/CO_{2e}/year.

Table 11. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Existing Land Uses in 2020	Proposed Project in 2023	Proposed Project in 2030
Area	<1	<1	<1
Energy Consumption	6	306	306
Mobile	206	984	856
Solid Waste Generation	12	92	92
Water Usage	1	9	9
Metric Ton Total	225	1,391[2]	1,263[2]
Net Metric Tons		1,166	1,038
Service Population Emissions[1]		9.79	8.70
Service Population Significance Threshold		*4.08 MT CO_2e/year/service population*	*2.72 MT of CO_2e/year/service population*
Exceed Threshold?		***Yes***	***Yes***

Note: [1]Based on a service population of 119 employees. [2]The project would also have emission of 19 MT MT/CO_{2e}/ year associated with a standby generator that would be permitted by BAAQMD, and thus, those emissions are compared to the stationary threshold of 10,000 MT/CO_{2e}/year.

Supporting Documentation

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

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

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

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

Attachment 5 includes the screening community risk calculations from sources affecting the MEI. Due to the large size of the BAAQMD health risk calculators, these files were not included but are available upon request and would be provided in digital format.

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.[38] 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.[39] 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.[40] 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, 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

[38] 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.
[39] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[40] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

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 Input Assumptions and Outputs

Air Quality/Noise Construction Information Data Request

Project Name:

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

****Make any changes in a different color**

Project Size	120	Rooms	6.61	total project acres disturbed	
	79,641	s.f. hotel			
	11,046	s.f. retail (Fast Food and Coffee Shops)			
	6 pumps & 4,103 sf	s.f. convenience market with gas pumps			
	4,500	s.f. other, specify: Car Wash			
	-	s.f. parking garage	-	spaces	
		s.f. parking lot	274	spaces	
Construction Hours		am to		pm	
IR UPDATES					

Pile Driving? Y/N?

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

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	Demolition	**Start Date:**		**1/1/2021**	**Total phase:**	**20**			**Overall Import/Export Volumes**
		End Date:		**1/28/2021**					
1	Concrete/Industrial Saws	81	0.73	0.73	8	20	8	160	**Demolition Volume**
3	Excavators	158	0.38	0.38	8	20	8	480	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	0.4	8	20	8	320	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37	0.37			0	0	25632 square feet *or*
									_?_ Hauling volume (tons)
									Any pavement demolished and hauled? 2235 tons
	Site Preparation	**Start Date:**		**1/29/2021**	**Total phase:**	**10**			
		End Date:		**2/11/2021**					
	Graders	187	0.41	0.41			0	0	
3	Rubber Tired Dozers	247	0.4	0.4	8	10	8	240	
4	Tractors/Loaders/Backhoes	97	0.37	0.37	8	10	8	320	
	Grading / Excavation	**Start Date:**		**2/12/2021**	**Total phase:**	**20**			
		End Date:		**3/11/2021**					**Soil Hauling Volume**
1	Excavators	158	0.38	0.38	8	20	8	160	Export volume = **_0_** cubic yards?
1	Graders	187	0.41	0.41	8	20	8	160	Import volume = **_0_** cubic yards?
1	Rubber Tired Dozers	247	0.4	0.4	8	20	8	160	
	Scrapers	367	0.48	0.73			0	0	
3	Tractors/Loaders/Backhoes	97	0.37	0.37	8	20	8	480	
	Other Equipment?								
	Trenching/Foundation	**Start Date:**		**2/12/2021**	**Total phase:**	**20**			
	**Assuming overlap w/Grading*	**End Date:**		**3/11/2021**					
2	Tractor/Loader/Backhoe	97	0.37	0.37	8	20	8	320	
2	Excavators	158	0.38	0.38	8	20	8	320	
	Other Equipment?								
	Building - Exterior	**Start Date:**		**3/12/2021**	**Total phase:**	**230**			**Cement Trucks? 200 Total Round-Trips**
		End Date:		**1/27/2022**					
1	Cranes	231	0.29	0.29	7	230	7	1610	Electric? (Y/N) _N__ Otherwise assumed diesel
3	Forklifts	89	0.2	0.2	8	230	8	5520	Liquid Propane (LPG)? (Y/N) _N__ Otherwise Assumed diesel
1	Generator Sets	84	0.74	0.74	8	230	8	1840	Or temporary line power? (Y/N) _N__
3	Tractors/Loaders/Backhoes	97	0.37	0.37	7	230	7	4830	
1	Welders	46	0.45	0.45	8	230	8	1840	
	Other Equipment?								
Building - Interior/Architectural Coating		**Start Date:**		**2/25/2022**	**Total phase:**	**20**			
		End Date:		**3/24/2022**					
1	Air Compressors	78	0.48	0.48	6	20	6	120	
	Aerial Lift	62	0.31	0.31			0	0	
	Other Equipment?								
	Paving	**Start Date:**		**1/28/2022**	**Total phase:**	**20**			
		Start Date:		**2/24/2022**					
	Cement and Mortar Mixers	9	0.56	0.56			0	0	
2	Pavers	130	0.42	0.42	8	20	8	320	**Asphalt? 443 cubic yards or ____ round trips?**
2	Paving Equipment	132	0.36	0.36	8	20	8	320	
2	Rollers	80	0.38	0.38	8	20	8	320	
	Tractors/Loaders/Backhoes	97	0.37	0.37			0	0	
	Other Equipment?								
	Additional Phases	**Start Date:**			**Total phase:**				
		Start Date:							
							#DIV/0!	0	
							#DIV/0!	0	
							#DIV/0!	0	
							#DIV/0!	0	
							#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

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

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Summary of Construction Traffic Emissions (EMFAC2017) 10th and Chestnut Commercial Developments

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2
					Tons						*Metric Tons*
Criteria Pollutants											
2021	0.030	0.267	0.275	0.001	0.079	0.020	0.098	0.012	0.010	0.022	130.472
2022	0.006	0.052	0.057	0.000	0.018	0.004	0.022	0.003	0.002	0.005	28.893
Toxic Air Contaminants (1 Mile Trip Length)											
2021	0.020	0.076	0.099	0.000	0.008	0.002	0.010	0.001	0.001	0.002	20.531
2022	0.004	0.016	0.022	0.000	0.002	0.000	0.002	0.000	0.000	0.001	4.590

VMT per Capita Hexagon Transportation Consultants			
Land Use	**VMT Per Capita**	**Population**	**Estimated VMT**
Project VMT			***11,308***

Daily Trip Estimate from Traffic Data	
Estimated Net Gross Daily Trips	4,868

VMT	Citywide			Project ONLY
	No Project	With Project	Project - No Project	
Home-Based Work (HBW) VMT	432,122	431,806	-316	5,084
Home-Based Shop/Other (HBSO) VMT	315,690	315,968	278	6,225
Total VMT	747,812	747,774	**-38**	**11,308**
Number of Jobs	21,729	21,729	0	275
HBW VMT/Job	19.89	19.87	-0.01	18.49

Source: City of Gilroy Travel Demand Forecasting Model.

PROJECT	***10th and Chestnut Commercial Developments***				
Construction Criteria Air Pollutants					
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**
Year	Tons				MT
Construction Equipment					
2021	0.2829	2.6844	0.1428	0.1336	338
2022	0.5731	0.2737	0.0142	0.0133	45
EMFAC					
2021	0.0297	0.2673	0.0197	0.0100	130
2022	0.0055	0.0519	0.0041	0.0019	29
Total Construction Emissions by Year					
2021	0.31	2.95	0.16	0.14	468
2022	0.58	0.33	0.02	0.02	74
	Total Construction Emissions				
Tons	0.89	3.28	0.18	0.16	542

Pounds/Workdays	*Average Daily Emissions*				Workdays
2021	2.40	22.62	1.24	1.10	261
2022	19.61	11.04	0.62	0.52	59

Operational Criteria Air Pollutants				
Unmitigated	ROG	NOX	Total PM10	Total PM2.5
Year	Tons			
Project	2.27	1.8019	0.953	0.281
	3.35			
Total	5.62	1.80	0.95	0.28
	Existing Use Emissions (2020)			
Total	0.40	0.28	0.19	0.05
	Net Annual Operational Emissions			
Tons/year	5.22	1.52	0.76	0.23
	Average Daily Emissions			
Pounds Per Day	30.79	9.87	5.22	1.54

Category	**CO2e**				
		Project	*Project*	Project 2030	Existing (2020)
Area	0	0	0	0	0
Energy	306	306	306	306	6
Mobile	1533	984	984	856	206
Waste	92	92	92	92	12
Water	9	9	4	9	1
TOTAL	1940	1,391		1,263	225
Net GHG Emissions		1,166		1,038	
Service Population		119			
Per Capita Emissions		11.69		10.63	

Land Use		Size	CalEEMod Size	CalEEMod units	Daily Trips	New Trips		Weekday Trip Gen	
Hotel		120	120	Rooms	928	835	6.96	***6.96***	***835.00***
	Reduction				*-93*				
	Reduction								
Gasoline/Service Station w/Convenience Market		12	6	Pumps	2464	1084	205.33	***90.33***	***1084.00***
	Reduction				*-1380*				
	Reduction								
Fast-Food with Drive-Through		8,681	8.681	1000sf	4088	2044	470.91	***235.46***	***2044.00***
	Reduction				*-2044*				
	Reduction								
Coffee/Donut Shop with Drive-Through		2,365	1	UserDefined	1940	970	820.30	***410.15***	***970.00***
	Reduction				*-970*				
	Reduction								
Automated Car Wash		1	4.5	1000sf	780	585	780.00	***585.00***	***585.00***
	Reduction				*-195*				
	Reduction								
Strip Mall - Existing Land Use		22,550	4.50	1000sf	1120	739	49.67	***32.77***	***739.00***
	Reduction				*-381*				

Table 3
Project Trip Generation Estimates

Land Use	ITE Land Use Code	Size	Daily Rate	Daily Trip	AM Peak-Hour Rate	AM Split In	AM Split Out	AM Trip In	AM Trip Out	AM Trip Total	PM Peak-Hour Rate	PM Split In	PM Split Out	PM Trip In	PM Trip Out	PM Trip Total	SAT Peak-Hour Rate	SAT Split In	SAT Split Out	SAT Trip In	SAT Trip Out	SAT Trip Total
Proposed Land Uses																						
Hotel	**310**	**120** Rooms	7.73	928	0.46	59%	41%	32	23	55	0.53	51%	49%	33	31	64	0.52	56%	44%	35	28	63
Hotel and Commercial Internal Reduction [1]			*10%*	*-93*	*10%*			*-3*	*-2*	*-5*	*10%*			*-3*	*-3*	*-6*	*10%*			*-4*	*-3*	*-7*
Gasoline/Service Station with Convenience Market	**945**	**12** Vehicle Fueling Positions	205.36	2,464	12.47	51%	49%	77	73	150	13.99	51%	49%	86	82	168	19.28	50%	50%	116	115	231
Passby Reduction [2]			*56%*	*-1,380*	*62%*			*-48*	*-45*	*-93*	*56%*			*-48*	*-46*	*-94*	*56%*			*-65*	*-64*	*-129*
Fast-Food Restaurant with Drive-Through Window	**934**	**8,681** Square Feet	470.95	4,088	40.19	51%	49%	178	171	349	32.67	52%	48%	148	136	284	54.86	51%	49%	243	233	476
Passby Reduction [2]			*50%*	*-2,044*	*49%*			*-87*	*-84*	*-171*	*50%*			*-74*	*-68*	*-142*	*50%*			*-122*	*-117*	*-239*
Coffee/Donut Shop with Drive-Through Window	**937**	**2,365** Square Feet	820.38	1,940	88.99	51%	49%	107	103	210	43.38	50%	50%	52	51	103	87.70	50%	50%	104	103	207
Passby Reduction [3]			*50%*	*-970*	*49%*			*-52*	*-50*	*-102*	*50%*			*-26*	*-26*	*-52*	*50%*			*-52*	*-52*	*-104*
Automated Car Wash [4]	**948**	**1** Car Wash Tunnel	780.00	780	N/A	N/A	N/A	0	0	0	77.50	50%	50%	39	39	78	41.00	46%	54%	19	22	41
Passby Reduction [5]			*25%*	*-195*				*0*	*0*	*0*	*25%*			*-10*	*-10*	*-20*	*25%*			*-5*	*-5*	*-10*
Hotel and Retail Internal Reduction [1]				*-93*				*-2*	*-3*	*-5*				*-3*	*-3*	*-6*				*-3*	*-4*	*-7*
Gross Project Trips Before Reductions				10,200				394	370	764				358	339	697				517	501	1,018
Total Passby Trip Reduction				-4,589				-187	-179	-366				-158	-150	-308				-244	-238	-482
Total Internal Reduction				-186				-5	-5	-10				-6	-6	-12				-7	-7	-14
Existing Land Use Credit																						
Existing Retail [6]				-1,120				-30	-21	-51				-60	-52	-112				-70	-63	-133
Passby Reduction [2]			*34%*	*381*				*0*	*0*	*0*	*34%*			*20*	*18*	*38*	*26%*			*18*	*16*	*34*
Total Net Project Trips				**4,686**				**172**	**165**	**337**				**154**	**149**	**303**				**214**	**209**	**423**
Total Project Trips at Site Driveways				10,014				390	366	754				352	333	685				510	494	1,004

Source: Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 10th Edition 2017.

[1] A 10 percent (%) internal trip reduction was applied for the interaction between the hotel and the commercial land uses, as recommended in the VTA *Transportation Impact Analysis Guidelines*. Ten percent of the smaller trip-generator is applied to both land uses.

[2] AM and PM peak-hour passerby reduction rates obtained from the *ITE Trip Generation Handbook*, Third Edition. Daily and Saturday peak-hour pass-by reductions for the land uses listed above are assumed to be the same as their PM peak-hour pass-by rate.

[3] The ITE *Trip Generation Handbook* does not provide pass-by data for coffee/donut shop with drive-through window land use. Therefore, the passerby trip reduction for fast-food restaurant with drive-through window was applied to the coffee/donut shop with drive-through window land use.

[4] The ITE *Trip Generation* manual does not include trip generation information for the automated car wash land use during the AM peak-hour. Presumably, the traffic generated by the proposed car wash during the AM peak-hour would be negligible.

[5] The *ITE Trip Generation Handbook* does not provide pass-by data for car wash land use. Therefore, it was conservatively assumed in this analysis that the passer by trip reduction associated with the car wash would be 25% during the PM and Saturday peak hours.

[6] Based on existing site driveway counts conducted September 26 and September 28, 2019.

VMT per Capita Hexagon Transportation Consultants			
Land Use	**VMT Per Capita**	**Population**	**Estimated VMT**
Project VMT			***6,695***

Daily Trip Estimate from Traffic Data	
Estimated Net Gross Daily Trips	4,686

VMT	Project ONLY
Home-Based Work (HBW) VMT	2,194
Number of Jobs	119
HBW VMT/Job	18.44
Home-Based Work (HBW) VMT	2,194
Home-Based Shop/Other (HBSO) VMT	3,276
Other Non-Home-Based VMT	**1,224**
TOTAL PROJECT VMT	**6,695**
Source: City of Gilroy Travel Demand Forecasting Model.	

CalEEMod Default Annual VMT	**15,012,189**
CalEEMod Estimated daily VMT	**41,129**
Traffic - Project Estimate	**6,695**
Adjusted VMT %	**16.28%**
Non-Resident C-C trip =	1.19
Non-Resident C-W trip =	1.55
Non-Resident C-NW trip =	1.19

Gilroy - 10th and Chestnut Construction AQ-GHG Model

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	274.00	Space	2.47	109,600.00	0
Fast Food Restaurant with Drive Thru	11.05	1000sqft	0.25	11,046.00	0
Hotel	120.00	Room	4.00	79,641.00	0
Automobile Care Center	4.50	1000sqft	0.10	4,500.00	0
Convenience Market With Gas Pumps	6.00	Pump	0.02	4,103.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction Model for 10th and Chestnut

Land Use - Based on 6.24.2020 Project Description with default acreage to get default construction schedule and equipment

Construction Phase - Default schedule with overlapping trenching phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Trenching equipment

Trips and VMT - EMFAC2017 post-model for construction truck and hauling trip emissions

Demolition - Demo 25,632 sqft of building

Grading - Balanced site

Vehicle Trips -

Energy Use -

Construction Off-road Equipment Mitigation - BMPs for construction and tier 2 and level 3 DPF for engine exhaust

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblLandUse	LandUseSquareFeet	11,050.00	11,046.00
tblLandUse	LandUseSquareFeet	174,240.00	79,641.00
tblLandUse	LandUseSquareFeet	847.05	4,103.00
tblTripsAndVMT	HaulingTripNumber	117.00	0.00
tblTripsAndVMT	VendorTripNumber	34.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	87.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00

tblTripsAndVMT	WorkerTripNumber	17.00	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					
2021	0.2829	2.6843	2.3393	3.8800e-003	0.1685	0.1428	0.3113	0.0852	0.1336	0.2188	0.0000	335.6844	335.6844	0.0871	0.0000	337.8610
2022	0.5731	0.2737	0.3194	5.1000e-004	0.0000	0.0142	0.0142	0.0000	0.0133	0.0133	0.0000	44.5947	44.5947	0.0119	0.0000	44.8927
Maximum	**0.5731**	**2.6843**	**2.3393**	**3.8800e-003**	**0.1685**	**0.1428**	**0.3113**	**0.0852**	**0.1336**	**0.2188**	**0.0000**	**335.6844**	**335.6844**	**0.0871**	**0.0000**	**337.8610**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1497	3.3915	2.5623	3.88E-03	0.0758	0.0183	0.0941	0.0192	0.0183	0.0375	0	335.684	335.684	0.0871	0	337.8606
2022	0.5646	0.4484	0.3611	5.10E-04	0	2.43E-03	2.43E-03	0	2.43E-03	2.43E-03	0	44.5947	44.5947	0.0119	0	44.8926
Maximum	**0.5646**	**3.3915**	**2.5623**	**3.8800e-003**	**0.0758**	**0.0183**	**0.0941**	**0.0192**	**0.0183**	**0.0375**	**0.0000**	**335.6840**	**335.6840**	**0.0871**	**0.0000**	**337.8606**

	ROG	NOx	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	**16.55**	**-29.81**	**-9.96**	**0.00**	**55.00**	**86.79**	**70.33**	**77.50**	**85.87**	**82.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	1.0657	1.1181
2	4-1-2021	6-30-2021	0.6283	0.8006
3	7-1-2021	9-30-2021	0.6352	0.8094
4	10-1-2021	12-31-2021	0.6352	0.8094
5	1-1-2022	3-31-2022	0.8493	1.0165
		Highest	1.0657	1.1181

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	1/1/2021	1/28/2021	5	20	
2	Site Preparation	Site Preparation	1/29/2021	2/11/2021	5	10	
3	Grading	Grading	2/12/2021	3/11/2021	5	20	
4	Trenching	Trenching	2/12/2021	3/11/2021	5	20	Overlap with Grading
5	Building Construction	Building Construction	3/12/2021	1/27/2022	5	230	
6	Paving	Paving	1/28/2022	2/24/2022	5	20	
7	Architectural Coating	Architectural Coating	2/25/2022	3/24/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.47

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 148,935; Non-Residential Outdoor: 49,645; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38

Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	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	4	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
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0126	0.0000	0.0126	1.9100e-003	0.0000	1.9100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**0.0126**	**0.0155**	**0.0281**	**1.9100e-003**	**0.0144**	**0.0163**	**0.0000**	**34.0008**	**34.0008**	**9.5700e-003**	**0.0000**	**34.2400**

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					5.6800e-003	0.0000	5.6800e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0126	0.3266	0.2467	3.9000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	**0.0126**	**0.3266**	**0.2467**	**3.9000e-004**	**5.6800e-003**	**1.3700e-003**	**7.0500e-003**	**4.3000e-004**	**1.3700e-003**	**1.8000e-003**	**0.0000**	**34.0007**	**34.0007**	**9.5700e-003**	**0.0000**	**34.2400**

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 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7179**	**16.7179**	**5.4100e-003**	**0.0000**	**16.8530**

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					0.0407	0.0000	0.0407	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.1686	0.1148	1.9000e-004		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	**6.0500e-003**	**0.1686**	**0.1148**	**1.9000e-004**	**0.0407**	**7.1000e-004**	**0.0414**	**0.0112**	**7.1000e-004**	**0.0119**	**0.0000**	**16.7178**	**16.7178**	**5.4100e-003**	**0.0000**	**16.8530**

Mitigated Construction Off-Site

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

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2644
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0655**	**0.0116**	**0.0771**	**0.0337**	**0.0107**	**0.0443**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2644**

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					0.0295	0.0000	0.0295	7.5800e-003	0.0000	7.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.2628	0.1899	3.0000e-004		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
Total	**0.0101**	**0.2628**	**0.1899**	**3.0000e-004**	**0.0295**	**1.1600e-003**	**0.0307**	**7.5800e-003**	**1.1600e-003**	**8.7400e-003**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2643**

Mitigated Construction Off-Site

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

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.3300e-003	0.0810	0.1106	1.7000e-004		4.3200e-003	4.3200e-003		3.9800e-003	3.9800e-003	0.0000	14.5348	14.5348	4.7000e-003	0.0000	14.6523
Total	**8.3300e-003**	**0.0810**	**0.1106**	**1.7000e-004**		**4.3200e-003**	**4.3200e-003**		**3.9800e-003**	**3.9800e-003**	**0.0000**	**14.5348**	**14.5348**	**4.7000e-003**	**0.0000**	**14.6523**

Unmitigated Construction Off-Site

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.9400e-003	0.1485	0.1252	1.7000e-004		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	14.5348	14.5348	4.7000e-003	0.0000	14.6523
Total	**6.9400e-003**	**0.1485**	**0.1252**	**1.7000e-004**		**7.7000e-004**	**7.7000e-004**		**7.7000e-004**	**7.7000e-004**	**0.0000**	**14.5348**	**14.5348**	**4.7000e-003**	**0.0000**	**14.6523**

Mitigated Construction Off-Site

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

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2006	1.8391	1.7487	2.8400e-003		0.1011	0.1011		0.0951	0.0951	0.0000	244.3773	244.3773	0.0590	0.0000	245.8513
Total	**0.2006**	**1.8391**	**1.7487**	**2.8400e-003**		**0.1011**	**0.1011**		**0.0951**	**0.0951**	**0.0000**	**244.3773**	**244.3773**	**0.0590**	**0.0000**	**245.8513**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1140	2.4850	1.8857	2.8400e-003		0.0143	0.0143		0.0143	0.0143	0.0000	244.3770	244.3770	0.0590	0.0000	245.8510
Total	**0.1140**	**2.4850**	**1.8857**	**2.8400e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**244.3770**	**244.3770**	**0.0590**	**0.0000**	**245.8510**

Mitigated Construction Off-Site

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

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0162	0.1484	0.1555	2.6000e-004		7.6900e-003	7.6900e-003		7.2300e-003	7.2300e-003	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1458

Total	**0.0162**	**0.1484**	**0.1555**	**2.6000e-004**		**7.6900e-003**	**7.6900e-003**		**7.2300e-003**	**7.2300e-003**	**0.0000**	**22.0139**	**22.0139**	**5.2700e-003**	**0.0000**	**22.1458**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.2238	0.1698	2.6000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1457
Total	**0.0103**	**0.2238**	**0.1698**	**2.6000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**22.0139**	**22.0139**	**5.2700e-003**	**0.0000**	**22.1457**

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**

3.7 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	3.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0143**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

Unmitigated Construction Off-Site

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.3100e-003	0.2012	0.1730	2.3000e-004		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	3.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0126**	**0.2012**	**0.1730**	**2.3000e-004**		**1.0000e-003**	**1.0000e-003**		**1.0000e-003**	**1.0000e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

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**

3.8 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5406					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.5427**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

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					
Archit. Coating	0.5406					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1400e-003	0.0235	0.0183	3.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.5417**	**0.0235**	**0.0183**	**3.0000e-005**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

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**

Gilroy - 10th and Chestnut Operational AQ-GHG Model

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	274.00	Space	2.47	109,600.00	0
Fast Food Restaurant with Drive Thru	8.68	1000sqft	0.20	8,681.00	0
Hotel	120.00	Room	4.00	79,641.00	0
User Defined Recreational	2.37	User Defined Unit	0.00	2,365.00	0
Automobile Care Center	4.50	1000sqft	0.10	4,500.00	0
Convenience Market With Gas Pumps	6.00	Pump	0.02	4,103.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	25	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Silicon Valley Clean Energy is the electricity provider for Gilroy. The 2017 rate for the default GreenStart program is <25 lb/MWh

Land Use - Based on 9.8.2020 Project Description. Coffee shop as user defined

Construction Phase - Operational Model no Construction

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Based on Hexagon trip gen rate 9.2.2020. Adjusted trip length based on project VMT of 6,695mi/day = 16.3% of CalEEMod w/o

Vehicle Emission Factors - 2023 EMFAC2017 Santa Clara County

Energy Use -

Water And Wastewater - Assuming 100% of water is aerobic and goes through a wastewater treatment plant

Construction Off-road Equipment Mitigation -

Energy Mitigation - Carbon-free electricty from SVCE

Stationary Sources - Emergency Generators and Fire Pumps - Hotels of this size would typically require emergency generators with a capacity of about

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.61	0.59
tblFleetMix	LDA	0.61	0.59
tblFleetMix	LDA	0.61	0.59
tblFleetMix	LDA	0.61	0.59
tblFleetMix	LDA	0.61	0.59
tblFleetMix	LDA	0.61	0.59
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05

tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.0110e-003	5.2520e-003
tblFleetMix	LHD2	5.0110e-003	5.2520e-003
tblFleetMix	LHD2	5.0110e-003	5.2520e-003
tblFleetMix	LHD2	5.0110e-003	5.2520e-003
tblFleetMix	LHD2	5.0110e-003	5.2520e-003
tblFleetMix	LHD2	5.0110e-003	5.2520e-003
tblFleetMix	MCY	5.2800e-003	5.1320e-003
tblFleetMix	MCY	5.2800e-003	5.1320e-003
tblFleetMix	MCY	5.2800e-003	5.1320e-003
tblFleetMix	MCY	5.2800e-003	5.1320e-003
tblFleetMix	MCY	5.2800e-003	5.1320e-003
tblFleetMix	MCY	5.2800e-003	5.1320e-003
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MDV	0.11	0.11

tblFleetMix	MDV	0.11	0.11
tblFleetMix	MH	7.2000e-004	7.5900e-004
tblFleetMix	MH	7.2000e-004	7.5900e-004
tblFleetMix	MH	7.2000e-004	7.5900e-004
tblFleetMix	MH	7.2000e-004	7.5900e-004
tblFleetMix	MH	7.2000e-004	7.5900e-004
tblFleetMix	MH	7.2000e-004	7.5900e-004
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	2.1680e-003	1.6220e-003
tblFleetMix	OBUS	2.1680e-003	1.6220e-003
tblFleetMix	OBUS	2.1680e-003	1.6220e-003
tblFleetMix	OBUS	2.1680e-003	1.6220e-003
tblFleetMix	OBUS	2.1680e-003	1.6220e-003
tblFleetMix	OBUS	2.1680e-003	1.6220e-003
tblFleetMix	SBUS	6.2900e-004	9.2300e-004
tblFleetMix	SBUS	6.2900e-004	9.2300e-004
tblFleetMix	SBUS	6.2900e-004	9.2300e-004
tblFleetMix	SBUS	6.2900e-004	9.2300e-004
tblFleetMix	SBUS	6.2900e-004	9.2300e-004
tblFleetMix	SBUS	6.2900e-004	9.2300e-004
tblFleetMix	UBUS	1.5290e-003	1.2610e-003
tblFleetMix	UBUS	1.5290e-003	1.2610e-003
tblFleetMix	UBUS	1.5290e-003	1.2610e-003
tblFleetMix	UBUS	1.5290e-003	1.2610e-003
tblFleetMix	UBUS	1.5290e-003	1.2610e-003

tblFleetMix	UBUS	1.5290e-003	1.2610e-003
tblLandUse	LandUseSquareFeet	8,680.00	8,681.00
tblLandUse	LandUseSquareFeet	174,240.00	79,641.00
tblLandUse	LandUseSquareFeet	0.00	2,365.00
tblLandUse	LandUseSquareFeet	847.05	4,103.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	25
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,005.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleEF	HHD	0.34	0.02
tblVehicleEF	HHD	0.05	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.61	6.34
tblVehicleEF	HHD	0.91	0.40
tblVehicleEF	HHD	3.69	5.9190e-003
tblVehicleEF	HHD	4,386.48	1,065.38
tblVehicleEF	HHD	1,557.95	1,436.68
tblVehicleEF	HHD	11.75	0.05
tblVehicleEF	HHD	13.99	5.44
tblVehicleEF	HHD	1.98	2.68
tblVehicleEF	HHD	19.39	2.32
tblVehicleEF	HHD	8.0650e-003	2.6700e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1860e-003	0.02
tblVehicleEF	HHD	1.0500e-004	1.0000e-006
tblVehicleEF	HHD	7.7170e-003	2.5550e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8320e-003	8.8780e-003
tblVehicleEF	HHD	5.9180e-003	0.02

tblVehicleEF	HHD	9.7000e-005	1.0000e-006
tblVehicleEF	HHD	9.8000e-005	3.0000e-006
tblVehicleEF	HHD	5.1360e-003	1.1600e-004
tblVehicleEF	HHD	0.42	0.43
tblVehicleEF	HHD	6.1000e-005	1.0000e-006
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	4.1700e-004	5.9400e-004
tblVehicleEF	HHD	0.09	3.0000e-006
tblVehicleEF	HHD	0.04	9.9140e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.7800e-004	0.00
tblVehicleEF	HHD	9.8000e-005	3.0000e-006
tblVehicleEF	HHD	5.1360e-003	1.1600e-004
tblVehicleEF	HHD	0.48	0.49
tblVehicleEF	HHD	6.1000e-005	1.0000e-006
tblVehicleEF	HHD	0.15	0.08
tblVehicleEF	HHD	4.1700e-004	5.9400e-004
tblVehicleEF	HHD	0.10	3.0000e-006
tblVehicleEF	LDA	3.3580e-003	1.9580e-003
tblVehicleEF	LDA	4.7330e-003	0.05
tblVehicleEF	LDA	0.50	0.56
tblVehicleEF	LDA	1.08	2.16
tblVehicleEF	LDA	234.26	245.28
tblVehicleEF	LDA	55.12	52.02
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.18
tblVehicleEF	LDA	1.6260e-003	1.3560e-003
tblVehicleEF	LDA	2.2310e-003	1.7440e-003
tblVehicleEF	LDA	1.4980e-003	1.2490e-003
tblVehicleEF	LDA	2.0520e-003	1.6040e-003

tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	8.4470e-003	7.4590e-003
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDA	2.3450e-003	9.3000e-005
tblVehicleEF	LDA	5.6900e-004	0.00
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDT1	7.8390e-003	4.1630e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.00	0.95
tblVehicleEF	LDT1	2.29	2.35
tblVehicleEF	LDT1	292.52	292.91
tblVehicleEF	LDT1	68.20	62.87
tblVehicleEF	LDT1	0.10	0.08
tblVehicleEF	LDT1	0.13	0.23
tblVehicleEF	LDT1	2.1830e-003	1.7660e-003
tblVehicleEF	LDT1	2.9190e-003	2.2440e-003
tblVehicleEF	LDT1	2.0100e-003	1.6250e-003
tblVehicleEF	LDT1	2.6840e-003	2.0630e-003
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.21	0.16
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.02	0.02

tblVehicleEF	LDT1	0.15	0.58
tblVehicleEF	LDT1	0.15	0.31
tblVehicleEF	LDT1	2.9360e-003	2.6160e-003
tblVehicleEF	LDT1	7.2200e-004	0.00
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.21	0.16
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.15	0.58
tblVehicleEF	LDT1	0.16	0.34
tblVehicleEF	LDT2	4.9930e-003	3.2450e-003
tblVehicleEF	LDT2	6.4640e-003	0.07
tblVehicleEF	LDT2	0.68	0.79
tblVehicleEF	LDT2	1.42	2.79
tblVehicleEF	LDT2	332.30	316.76
tblVehicleEF	LDT2	77.35	68.58
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.11	0.27
tblVehicleEF	LDT2	1.6420e-003	1.3890e-003
tblVehicleEF	LDT2	2.2820e-003	1.7450e-003
tblVehicleEF	LDT2	1.5110e-003	1.2790e-003
tblVehicleEF	LDT2	2.0990e-003	1.6050e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.42
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LDT2	3.3280e-003	0.01
tblVehicleEF	LDT2	7.9700e-004	9.3000e-005

tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.42
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LHD1	5.3570e-003	5.1620e-003
tblVehicleEF	LHD1	0.02	8.5450e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	1.02	0.77
tblVehicleEF	LHD1	2.58	1.08
tblVehicleEF	LHD1	8.98	8.94
tblVehicleEF	LHD1	687.79	794.16
tblVehicleEF	LHD1	32.26	11.83
tblVehicleEF	LHD1	0.07	0.06
tblVehicleEF	LHD1	1.10	0.73
tblVehicleEF	LHD1	0.99	0.32
tblVehicleEF	LHD1	8.6000e-004	8.2500e-004
tblVehicleEF	LHD1	0.01	9.7470e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.5500e-004	2.5800e-004
tblVehicleEF	LHD1	8.2300e-004	7.9000e-004
tblVehicleEF	LHD1	2.5220e-003	2.4370e-003
tblVehicleEF	LHD1	0.01	9.7200e-003
tblVehicleEF	LHD1	8.7800e-004	2.3700e-004
tblVehicleEF	LHD1	2.6370e-003	2.0240e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.3460e-003	1.0320e-003

tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.32	0.52
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.0000e-005	8.7000e-005
tblVehicleEF	LHD1	6.7510e-003	7.7550e-003
tblVehicleEF	LHD1	3.7100e-004	1.1700e-004
tblVehicleEF	LHD1	2.6370e-003	2.0240e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.3460e-003	1.0320e-003
tblVehicleEF	LHD1	0.15	0.11
tblVehicleEF	LHD1	0.32	0.52
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD2	3.3720e-003	3.1550e-003
tblVehicleEF	LHD2	7.5730e-003	7.0600e-003
tblVehicleEF	LHD2	6.7190e-003	8.4310e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.55	0.62
tblVehicleEF	LHD2	1.16	0.63
tblVehicleEF	LHD2	13.98	14.00
tblVehicleEF	LHD2	705.76	768.73
tblVehicleEF	LHD2	24.06	7.83
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.69	0.88
tblVehicleEF	LHD2	0.44	0.18
tblVehicleEF	LHD2	1.2420e-003	1.4230e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.1600e-004	1.3300e-004
tblVehicleEF	LHD2	1.1880e-003	1.3610e-003

tblVehicleEF	LHD2	2.6910e-003	2.6880e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8300e-004	1.2300e-004
tblVehicleEF	LHD2	8.1500e-004	1.0700e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.3700e-004	5.4700e-004
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.07	0.28
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.3600e-004	1.3400e-004
tblVehicleEF	LHD2	6.8630e-003	7.4240e-003
tblVehicleEF	LHD2	2.6100e-004	7.8000e-005
tblVehicleEF	LHD2	8.1500e-004	1.0700e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.3700e-004	5.4700e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.07	0.28
tblVehicleEF	LHD2	0.10	0.05
tblVehicleEF	MCY	0.45	0.33
tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	18.74	18.87
tblVehicleEF	MCY	10.18	9.03
tblVehicleEF	MCY	169.68	210.17
tblVehicleEF	MCY	45.14	61.04
tblVehicleEF	MCY	1.15	1.15
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	2.0080e-003	1.9690e-003
tblVehicleEF	MCY	3.7340e-003	3.0390e-003

tblVehicleEF	MCY	1.8770e-003	1.8400e-003
tblVehicleEF	MCY	3.5160e-003	2.8590e-003
tblVehicleEF	MCY	0.90	1.81
tblVehicleEF	MCY	0.70	0.69
tblVehicleEF	MCY	0.49	0.99
tblVehicleEF	MCY	2.20	2.21
tblVehicleEF	MCY	0.60	1.97
tblVehicleEF	MCY	2.20	1.94
tblVehicleEF	MCY	2.0680e-003	2.0800e-003
tblVehicleEF	MCY	6.8300e-004	6.0400e-004
tblVehicleEF	MCY	0.90	1.81
tblVehicleEF	MCY	0.70	0.69
tblVehicleEF	MCY	0.49	0.99
tblVehicleEF	MCY	2.73	2.74
tblVehicleEF	MCY	0.60	1.97
tblVehicleEF	MCY	2.39	2.11
tblVehicleEF	MDV	9.4310e-003	3.9100e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.06	0.87
tblVehicleEF	MDV	2.68	3.13
tblVehicleEF	MDV	444.47	383.41
tblVehicleEF	MDV	101.69	82.02
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.23	0.32
tblVehicleEF	MDV	1.8000e-003	1.5110e-003
tblVehicleEF	MDV	2.4830e-003	1.9090e-003
tblVehicleEF	MDV	1.6590e-003	1.3930e-003
tblVehicleEF	MDV	2.2840e-003	1.7560e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.16	0.14

tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.11	0.44
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.4500e-003	3.7430e-003
tblVehicleEF	MDV	1.0640e-003	8.0200e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.44
tblVehicleEF	MDV	0.22	0.42
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.96	1.11
tblVehicleEF	MH	5.58	2.13
tblVehicleEF	MH	1,212.08	1,532.75
tblVehicleEF	MH	58.85	18.68
tblVehicleEF	MH	1.29	1.36
tblVehicleEF	MH	0.81	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1290e-003	2.7400e-004
tblVehicleEF	MH	3.2190e-003	3.2750e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0380e-003	2.5200e-004
tblVehicleEF	MH	0.81	0.71
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.28	0.25
tblVehicleEF	MH	0.09	0.07

tblVehicleEF	MH	0.02	1.44
tblVehicleEF	MH	0.32	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	6.8600e-004	1.8500e-004
tblVehicleEF	MH	0.81	0.71
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.28	0.25
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.02	1.44
tblVehicleEF	MH	0.35	0.11
tblVehicleEF	MHD	0.02	3.5450e-003
tblVehicleEF	MHD	4.5180e-003	1.9320e-003
tblVehicleEF	MHD	0.05	9.4870e-003
tblVehicleEF	MHD	0.38	0.39
tblVehicleEF	MHD	0.36	0.26
tblVehicleEF	MHD	5.92	1.14
tblVehicleEF	MHD	132.71	73.35
tblVehicleEF	MHD	1,189.79	1,095.06
tblVehicleEF	MHD	61.47	9.38
tblVehicleEF	MHD	0.36	0.43
tblVehicleEF	MHD	1.11	1.44
tblVehicleEF	MHD	10.17	1.70
tblVehicleEF	MHD	1.2300e-004	4.2700e-004
tblVehicleEF	MHD	3.1090e-003	6.9550e-003
tblVehicleEF	MHD	9.0500e-004	1.1900e-004
tblVehicleEF	MHD	1.1800e-004	4.0900e-004
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tblVehicleEF	MHD	8.9400e-004	4.1700e-004
tblVehicleEF	MHD	0.04	0.02

tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.6300e-004	2.1100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.35	0.05
tblVehicleEF	MHD	1.2790e-003	6.9600e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.1800e-004	9.3000e-005
tblVehicleEF	MHD	8.9400e-004	4.1700e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	4.6300e-004	2.1100e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.38	0.06
tblVehicleEF	OBUS	0.01	7.0630e-003
tblVehicleEF	OBUS	6.3660e-003	4.0130e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.24	0.57
tblVehicleEF	OBUS	0.44	0.47
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tblVehicleEF	OBUS	1,293.67	1,341.74
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tblVehicleEF	OBUS	1.9000e-005	1.2000e-004
tblVehicleEF	OBUS	2.6550e-003	7.0290e-003
tblVehicleEF	OBUS	8.0900e-004	1.4200e-004

tblVehicleEF	OBUS	1.8000e-005	1.1500e-004
tblVehicleEF	OBUS	2.5210e-003	6.7120e-003
tblVehicleEF	OBUS	7.4400e-004	1.3000e-004
tblVehicleEF	OBUS	1.1720e-003	1.0840e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.1500e-004	4.8000e-004
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.03	0.18
tblVehicleEF	OBUS	0.31	0.09
tblVehicleEF	OBUS	9.6200e-004	8.7300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.5700e-004	1.5300e-004
tblVehicleEF	OBUS	1.1720e-003	1.0840e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	5.1500e-004	4.8000e-004
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tblVehicleEF	OBUS	0.03	0.18
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tblVehicleEF	SBUS	8.17	2.18
tblVehicleEF	SBUS	1.05	0.52
tblVehicleEF	SBUS	9.75	0.70
tblVehicleEF	SBUS	1,109.35	347.39
tblVehicleEF	SBUS	1,051.90	1,060.99
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tblVehicleEF	SBUS	3.71	4.87
tblVehicleEF	SBUS	12.10	0.81
tblVehicleEF	SBUS	8.0590e-003	3.9050e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	9.0100e-004	4.6000e-005
tblVehicleEF	SBUS	7.7100e-003	3.7360e-003
tblVehicleEF	SBUS	2.6280e-003	2.7270e-003
tblVehicleEF	SBUS	0.02	0.03
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tblVehicleEF	SBUS	3.4510e-003	5.3700e-004
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tblVehicleEF	SBUS	0.97	0.24
tblVehicleEF	SBUS	1.4880e-003	2.2700e-004
tblVehicleEF	SBUS	0.11	0.09
tblVehicleEF	SBUS	0.02	0.04
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	7.2900e-004	3.9000e-005
tblVehicleEF	SBUS	3.4510e-003	5.3700e-004
tblVehicleEF	SBUS	0.04	5.2210e-003
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tblVehicleEF	SBUS	0.14	0.10
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tblVehicleEF	UBUS	0.04	1.4170e-003
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tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.21	5.3280e-003
tblVehicleEF	UBUS	1.1460e-003	1.5000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	8.3320e-003
tblVehicleEF	UBUS	0.20	5.0960e-003
tblVehicleEF	UBUS	1.0540e-003	1.4000e-005
tblVehicleEF	UBUS	2.2820e-003	1.9000e-005
tblVehicleEF	UBUS	0.04	1.3300e-004
tblVehicleEF	UBUS	1.1230e-003	8.0000e-006
tblVehicleEF	UBUS	0.58	0.02
tblVehicleEF	UBUS	8.3050e-003	5.9200e-004
tblVehicleEF	UBUS	0.58	5.8830e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.1810e-003	1.4000e-005
tblVehicleEF	UBUS	2.2820e-003	1.9000e-005
tblVehicleEF	UBUS	0.04	1.3300e-004
tblVehicleEF	UBUS	1.1230e-003	8.0000e-006
tblVehicleEF	UBUS	0.90	1.38
tblVehicleEF	UBUS	8.3050e-003	5.9200e-004
tblVehicleEF	UBUS	0.63	6.4410e-003
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TL	7.30	1.20

tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TTP	0.00	78.80
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TTP	0.00	2.20
tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00

tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	23.72	130.00
tblVehicleTrips	ST_TR	204.47	180.66
tblVehicleTrips	ST_TR	722.03	235.46
tblVehicleTrips	ST_TR	8.19	6.96
tblVehicleTrips	ST_TR	0.00	410.15
tblVehicleTrips	SU_TR	11.88	130.00
tblVehicleTrips	SU_TR	166.88	180.66
tblVehicleTrips	SU_TR	542.72	235.46
tblVehicleTrips	SU_TR	5.95	6.96
tblVehicleTrips	SU_TR	0.00	410.15
tblVehicleTrips	WD_TR	23.72	130.00
tblVehicleTrips	WD_TR	542.60	180.66
tblVehicleTrips	WD_TR	496.12	235.46
tblVehicleTrips	WD_TR	8.17	6.96
tblVehicleTrips	WD_TR	0.00	410.15

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	0.4493	3.0000e-005	3.8200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9100e-003
Energy	0.0295	0.2677	0.2249	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	302.9261	302.9261	0.0189	8.0900e-003	305.8098
Mobile	1.7538	1.3497	7.5385	9.3200e-003	0.9164	0.0102	0.9266	0.2452	9.5100e-003	0.2547	0.0000	981.2329	981.2329	0.1265	0.0000	984.3941

Stationary	0.0412	0.1844	0.1051	2.0000e-004		6.0700e-003	6.0700e-003		6.0700e-003	6.0700e-003	0.0000	19.1351	19.1351	2.6800e-003	0.0000	19.2021
Waste						0.0000	0.0000		0.0000	0.0000	37.1210	0.0000	37.1210	2.1938	0.0000	91.9656
Water						0.0000	0.0000		0.0000	0.0000	1.9558	0.4102	2.3660	0.2014	4.8400e-003	8.8427
Total	**2.2738**	**1.8019**	**7.8724**	**0.0111**	**0.9164**	**0.0367**	**0.9530**	**0.2452**	**0.0359**	**0.2811**	**39.0768**	**1,303.7117**	**1,342.7885**	**2.5432**	**0.0129**	**1,410.2222**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4493	3.0000e-005	3.8200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9100e-003
Energy	0.0295	0.2677	0.2249	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	291.4696	291.4696	5.5900e-003	5.3400e-003	293.2016
Mobile	1.7538	1.3497	7.5385	9.3200e-003	0.9164	0.0102	0.9266	0.2452	9.5100e-003	0.2547	0.0000	981.2329	981.2329	0.1265	0.0000	984.3941
Stationary	0.0412	0.1844	0.1051	2.0000e-004		6.0700e-003	6.0700e-003		6.0700e-003	6.0700e-003	0.0000	19.1351	19.1351	2.6800e-003	0.0000	19.2021
Waste						0.0000	0.0000		0.0000	0.0000	37.1210	0.0000	37.1210	2.1938	0.0000	91.9656
Water						0.0000	0.0000		0.0000	0.0000	1.9558	0.4102	2.3660	0.2014	4.8400e-003	8.8427
Total	**2.2738**	**1.8019**	**7.8724**	**0.0111**	**0.9164**	**0.0367**	**0.9530**	**0.2452**	**0.0359**	**0.2811**	**39.0768**	**1,292.2551**	**1,331.3319**	**2.5299**	**0.0102**	**1,397.6140**

	ROG	NOx	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**	**0.88**	**0.85**	**0.52**	**21.27**	**0.89**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7538	1.3497	7.5385	9.3200e-003	0.9164	0.0102	0.9266	0.2452	9.5100e-003	0.2547	0.0000	981.2329	981.2329	0.1265	0.0000	984.3941
Unmitigated	1.7538	1.3497	7.5385	9.3200e-003	0.9164	0.0102	0.9266	0.2452	9.5100e-003	0.2547	0.0000	981.2329	981.2329	0.1265	0.0000	984.3941

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	585.00	585.00	585.00	280,123	280,123
Convenience Market With Gas Pumps	1,083.96	1,083.96	1083.96	474,579	474,579
Fast Food Restaurant with Drive Thru	2,043.79	2,043.79	2043.79	898,457	898,457
Hotel	835.20	835.20	835.20	385,458	385,458
Parking Lot	0.00	0.00	0.00		
User Defined Recreational	972.06	972.06	972.06	427,318	427,318
Total	5,520.01	5,520.01	5,520.01	2,465,934	2,465,934

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	1.55	1.20	1.20	33.00	48.00	19.00	100	0	0
Convenience Market With Gas	1.55	1.20	1.20	0.80	80.20	19.00	100	0	0
Fast Food Restaurant with Drive	1.55	1.20	1.20	2.20	78.80	19.00	100	0	0
Hotel	1.55	1.20	1.20	19.40	61.60	19.00	100	0	0
Parking Lot	1.55	1.20	1.20	0.00	0.00	0.00	0	0	0
User Defined Recreational	1.55	1.20	1.20	2.20	78.80	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.590598	0.052780	0.178080	0.107080	0.021013	0.005252	0.013411	0.022089	0.001622	0.001261	0.005132	0.000923	0.000759
Convenience Market With Gas Pumps	0.590598	0.052780	0.178080	0.107080	0.021013	0.005252	0.013411	0.022089	0.001622	0.001261	0.005132	0.000923	0.000759
Fast Food Restaurant with Drive Thru	0.590598	0.052780	0.178080	0.107080	0.021013	0.005252	0.013411	0.022089	0.001622	0.001261	0.005132	0.000923	0.000759
Hotel	0.590598	0.052780	0.178080	0.107080	0.021013	0.005252	0.013411	0.022089	0.001622	0.001261	0.005132	0.000923	0.000759
Parking Lot	0.590598	0.052780	0.178080	0.107080	0.021013	0.005252	0.013411	0.022089	0.001622	0.001261	0.005132	0.000923	0.000759
User Defined Recreational	0.590598	0.052780	0.178080	0.107080	0.021013	0.005252	0.013411	0.022089	0.001622	0.001261	0.005132	0.000923	0.000759

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	11.4566	11.4566	0.0133	2.7500e-003	12.6082
NaturalGas Mitigated	0.0295	0.2677	0.2249	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	291.4696	291.4696	5.5900e-003	5.3400e-003	293.2016
NaturalGas Unmitigated	0.0295	0.2677	0.2249	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	291.4696	291.4696	5.5900e-003	5.3400e-003	293.2016

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	118710	6.4000e-004	5.8200e-003	4.8900e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3348	6.3348	1.2000e-004	1.2000e-004	6.3725
Convenience Market With Gas [illegible]	9724.11	5.0000e-005	4.8000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5189	0.5189	1.0000e-005	1.0000e-005	0.5220
Fast Food Restaurant with [illegible]	1.80461e+006	9.7300e-003	0.0885	0.0743	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.3007	96.3007	1.8500e-003	1.7700e-003	96.8729
Hotel	3.52889e+006	0.0190	0.1730	0.1453	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	188.3152	188.3152	3.6100e-003	3.4500e-003	189.4342
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
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0295**	**0.2677**	**0.2249**	**1.6000e-003**		**0.0204**	**0.0204**		**0.0204**	**0.0204**	**0.0000**	**291.4696**	**291.4696**	**5.5900e-003**	**5.3500e-003**	**293.2016**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	118710	6.4000e-004	5.8200e-003	4.8900e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3348	6.3348	1.2000e-004	1.2000e-004	6.3725
Convenience Market With Gas [illegible]	9724.11	5.0000e-005	4.8000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5189	0.5189	1.0000e-005	1.0000e-005	0.5220
Fast Food Restaurant with [illegible]	1.80461e+006	9.7300e-003	0.0885	0.0743	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.3007	96.3007	1.8500e-003	1.7700e-003	96.8729
Hotel	3.52889e+006	0.0190	0.1730	0.1453	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	188.3152	188.3152	3.6100e-003	3.4500e-003	189.4342
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
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total		**0.0295**	**0.2677**	**0.2249**	**1.6000e-003**		**0.0204**	**0.0204**		**0.0204**	**0.0204**	**0.0000**	**291.4696**	**291.4696**	**5.5900e-003**	**5.3500e-003**	**293.2016**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	37170	0.4215	4.9000e-004	1.0000e-004	0.4639
Convenience Market With Gas Pumps	43861.1	0.4974	5.8000e-004	1.2000e-004	0.5474
Fast Food Restaurant with Drive Thru	284042	3.2210	3.7400e-003	7.7000e-004	3.5448
Hotel	606864	6.8817	7.9800e-003	1.6500e-003	7.5735
Parking Lot	38360	0.4350	5.0000e-004	1.0000e-004	0.4787
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**11.4566**	**0.0133**	**2.7400e-003**	**12.6082**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000
Convenience Market With Gas Pumps	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant with Drive Thru	0	0.0000	0.0000	0.0000	0.0000

Hotel	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	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	0.4493	3.0000e-005	3.8200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9100e-003
Unmitigated	0.4493	3.0000e-005	3.8200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	0.3949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.8200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9100e-003
Total	**0.4493**	**3.0000e-005**	**3.8200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.4300e-003**	**7.4300e-003**	**2.0000e-005**	**0.0000**	**7.9100e-003**

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	0.0541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.8200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9100e-003
Total	**0.4493**	**3.0000e-005**	**3.8200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.4300e-003**	**7.4300e-003**	**2.0000e-005**	**0.0000**	**7.9100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.3660	0.2014	4.8400e-003	8.8427
Unmitigated	2.3660	0.2014	4.8400e-003	8.8427

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.423365 / 0.259482	0.1706	0.0138	3.3000e-004	0.6162
Convenience Market With Gas	0.0627431 /	0.0253	2.0500e-003	5.0000e-005	0.0913
Fast Food Restaurant with	2.63467 / 0.168171	1.0042	0.0861	2.0700e-003	3.7715
Hotel	3.04401 / 0.338224	1.1659	0.0994	2.3900e-003	4.3637
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.3660**	**0.2014**	**4.8400e-003**	**8.8427**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.423365 / 0.259482	0.1706	0.0138	3.3000e-004	0.6162
Convenience Market With Gas	0.0627431 /	0.0253	2.0500e-003	5.0000e-005	0.0913
Fast Food Restaurant with	2.63467 / 0.168171	1.0042	0.0861	2.0700e-003	3.7715

Hotel	3.04401 / 0.338224	1.1659	0.0994	2.3900e-003	4.3637
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.3660**	**0.2014**	**4.8400e-003**	**8.8427**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	37.1210	2.1938	0.0000	91.9656
Unmitigated	37.1210	2.1938	0.0000	91.9656

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	17.19	3.4894	0.2062	0.0000	8.6449

Fast Food Restaurant with Drive Thru	99.98	20.2950	1.1994	0.0000	50.2801
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**37.1210**	**2.1938**	**0.0000**	**91.9656**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	17.19	3.4894	0.2062	0.0000	8.6449
Fast Food Restaurant with Drive Thru	99.98	20.2950	1.1994	0.0000	50.2801
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**37.1210**	**2.1938**	**0.0000**	**91.9656**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	1005	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0412	0.1844	0.1051	2.0000e-004		6.0700e-003	6.0700e-003		6.0700e-003	6.0700e-003	0.0000	19.1351	19.1351	2.6800e-003	0.0000	19.2021
Total	**0.0412**	**0.1844**	**0.1051**	**2.0000e-004**		**6.0700e-003**	**6.0700e-003**		**6.0700e-003**	**6.0700e-003**	**0.0000**	**19.1351**	**19.1351**	**2.6800e-003**	**0.0000**	**19.2021**

11.0 Vegetation

Gilroy - 10th and Chestnut Operational AQ-GHG Model 2030

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	274.00	Space	2.47	109,600.00	0
Fast Food Restaurant with Drive Thru	8.68	1000sqft	0.20	8,681.00	0
Hotel	120.00	Room	4.00	79,641.00	0
User Defined Recreational	2.37	User Defined Unit	0.00	2,365.00	0
Automobile Care Center	4.50	1000sqft	0.10	4,500.00	0
Convenience Market With Gas Pumps	6.00	Pump	0.02	4,103.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	25	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Silicon Valley Clean Energy is the electricity provider for Gilroy. The 2017 rate for the default GreenStart program is <25 lb/MWh

Land Use - Based on 9.8.2020 Project Description. Coffee shop as user defined

Construction Phase - Operational Model no Construction

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Based on Hexagon trip gen rate 9.2.2020. Adjusted trip length based on project VMT of 6,695mi/day = 16.3% of CalEEMod w/o

Vehicle Emission Factors - 2023 EMFAC2017 Santa Clara County

Energy Use -

Water And Wastewater - Assuming 100% of water is aerobic and goes through a wastewater treatment plant

Construction Off-road Equipment Mitigation -

Energy Mitigation - Carbon-free electricty from SVCE

Stationary Sources - Emergency Generators and Fire Pumps - Hotels of this size would typically require emergency generators with a capacity of about

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05

tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	MCY	5.1220e-003	4.7803e-003
tblFleetMix	MCY	5.1220e-003	4.7803e-003
tblFleetMix	MCY	5.1220e-003	4.7803e-003
tblFleetMix	MCY	5.1220e-003	4.7803e-003
tblFleetMix	MCY	5.1220e-003	4.7803e-003
tblFleetMix	MCY	5.1220e-003	4.7803e-003
tblFleetMix	MDV	0.10	0.11
tblFleetMix	MDV	0.10	0.11
tblFleetMix	MDV	0.10	0.11
tblFleetMix	MDV	0.10	0.11
tblFleetMix	MDV	0.10	0.11

tblFleetMix	MDV	0.10	0.11
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tblFleetMix	MH	6.5100e-004	7.2763e-004
tblFleetMix	MH	6.5100e-004	7.2763e-004
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tblFleetMix	MH	6.5100e-004	7.2763e-004
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tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	OBUS	2.2210e-003	1.4429e-003
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tblFleetMix	OBUS	2.2210e-003	1.4429e-003
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tblFleetMix	SBUS	6.4600e-004	9.0041e-004
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tblFleetMix	SBUS	6.4600e-004	9.0041e-004
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003

tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblLandUse	LandUseSquareFeet	8,680.00	8,681.00
tblLandUse	LandUseSquareFeet	174,240.00	79,641.00
tblLandUse	LandUseSquareFeet	0.00	2,365.00
tblLandUse	LandUseSquareFeet	847.05	4,103.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	25
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,005.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
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tblVehicleEF	HHD	0.06	0.05
tblVehicleEF	HHD	0.06	4.3467e-007
tblVehicleEF	HHD	1.43	6.28
tblVehicleEF	HHD	0.94	0.41
tblVehicleEF	HHD	4.01	6.6853e-003
tblVehicleEF	HHD	4,037.05	930.05
tblVehicleEF	HHD	1,498.85	1,226.35
tblVehicleEF	HHD	12.27	0.05
tblVehicleEF	HHD	12.16	5.20
tblVehicleEF	HHD	1.59	2.52
tblVehicleEF	HHD	19.20	2.31
tblVehicleEF	HHD	3.6830e-003	2.1459e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.6600e-003	0.02
tblVehicleEF	HHD	1.3500e-004	5.8009e-007
tblVehicleEF	HHD	3.5230e-003	2.0531e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8550e-003	8.9053e-003
tblVehicleEF	HHD	5.4140e-003	0.02

tblVehicleEF	HHD	1.2400e-004	5.3337e-007
tblVehicleEF	HHD	1.0100e-004	1.3299e-006
tblVehicleEF	HHD	4.6010e-003	5.7808e-005
tblVehicleEF	HHD	0.37	0.42
tblVehicleEF	HHD	6.4000e-005	7.9763e-007
tblVehicleEF	HHD	0.08	0.02
tblVehicleEF	HHD	4.1900e-004	2.8448e-004
tblVehicleEF	HHD	0.07	2.2699e-006
tblVehicleEF	HHD	0.04	8.6527e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.8800e-004	5.1111e-007
tblVehicleEF	HHD	1.0100e-004	1.3299e-006
tblVehicleEF	HHD	4.6010e-003	5.7808e-005
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tblVehicleEF	HHD	6.4000e-005	7.9763e-007
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tblVehicleEF	LDA	1.8260e-003	1.2750e-003

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tblVehicleEF	LDA	0.02	0.02
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tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.06	0.06
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tblVehicleEF	LDT1	0.06	0.15
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tblVehicleEF	LDT1	2.1870e-003	1.4615e-003

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tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	1.3350e-003	9.8426e-004
tblVehicleEF	LDT1	2.0110e-003	1.3438e-003
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tblVehicleEF	LDT1	0.12	0.09
tblVehicleEF	LDT1	0.04	0.04
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tblVehicleEF	LDT1	0.06	0.15
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tblVehicleEF	LDT1	0.09	0.36
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tblVehicleEF	LDT2	0.05	0.17
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tblVehicleEF	LDT2	2.0190e-003	1.3399e-003

tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.2010e-003	9.4361e-004
tblVehicleEF	LDT2	1.8570e-003	1.2320e-003
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	0.07	0.09
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tblVehicleEF	LDT2	7.4390e-003	6.5534e-003
tblVehicleEF	LDT2	0.06	0.34
tblVehicleEF	LDT2	0.04	0.18
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tblVehicleEF	LDT2	0.05	0.20
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tblVehicleEF	LHD1	0.01	9.0227e-003
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.61	0.47
tblVehicleEF	LHD1	1.67	0.89
tblVehicleEF	LHD1	8.93	8.25
tblVehicleEF	LHD1	641.43	698.55
tblVehicleEF	LHD1	26.94	10.09
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.53	0.30
tblVehicleEF	LHD1	0.67	0.23

tblVehicleEF	LHD1	7.8900e-004	9.1482e-004
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tblVehicleEF	LHD1	0.01	0.02
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tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0210e-003	7.7246e-004
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tblVehicleEF	LHD2	2.5430e-003	2.5046e-003
tblVehicleEF	LHD2	5.3180e-003	5.3393e-003
tblVehicleEF	LHD2	3.2330e-003	4.8112e-003

tblVehicleEF	LHD2	0.12	0.13
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tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.22	0.38
tblVehicleEF	LHD2	0.26	0.12
tblVehicleEF	LHD2	1.0460e-003	1.5018e-003
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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3120e-003	0.01
tblVehicleEF	LHD2	3.7400e-004	1.0610e-004
tblVehicleEF	LHD2	1.0000e-003	1.4368e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7080e-003	2.7109e-003
tblVehicleEF	LHD2	8.8860e-003	0.01
tblVehicleEF	LHD2	3.4400e-004	9.7559e-005
tblVehicleEF	LHD2	5.1500e-004	6.4205e-004
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.0800e-004	3.7383e-004
tblVehicleEF	LHD2	0.09	0.10
tblVehicleEF	LHD2	0.04	0.14
tblVehicleEF	LHD2	0.04	0.02
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tblVehicleEF	LHD2	6.5670e-003	6.5573e-003
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tblVehicleEF	LHD2	5.1500e-004	6.4205e-004

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tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.0800e-004	3.7383e-004
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.04	0.14
tblVehicleEF	LHD2	0.05	0.02
tblVehicleEF	MCY	0.46	0.32
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tblVehicleEF	MCY	17.52	17.61
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tblVehicleEF	MCY	171.38	209.76
tblVehicleEF	MCY	42.85	59.23
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tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	2.1570e-003	2.1383e-003
tblVehicleEF	MCY	3.3210e-003	2.8616e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	2.0120e-003	1.9944e-003
tblVehicleEF	MCY	3.1070e-003	2.6764e-003
tblVehicleEF	MCY	0.88	1.79
tblVehicleEF	MCY	0.61	0.63
tblVehicleEF	MCY	0.46	0.95
tblVehicleEF	MCY	2.12	2.13
tblVehicleEF	MCY	0.46	1.49
tblVehicleEF	MCY	2.11	1.88
tblVehicleEF	MCY	2.0640e-003	2.0757e-003
tblVehicleEF	MCY	6.5900e-004	5.8609e-004

tblVehicleEF	MCY	0.88	1.79
tblVehicleEF	MCY	0.61	0.63
tblVehicleEF	MCY	0.46	0.95
tblVehicleEF	MCY	2.66	2.67
tblVehicleEF	MCY	0.46	1.49
tblVehicleEF	MCY	2.30	2.04
tblVehicleEF	MDV	5.1180e-003	1.7719e-003
tblVehicleEF	MDV	7.2260e-003	0.04
tblVehicleEF	MDV	0.68	0.55
tblVehicleEF	MDV	1.51	2.32
tblVehicleEF	MDV	358.67	322.27
tblVehicleEF	MDV	82.28	67.92
tblVehicleEF	MDV	0.07	0.04
tblVehicleEF	MDV	0.11	0.18
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.3880e-003	1.0344e-003
tblVehicleEF	MDV	2.0820e-003	1.3439e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.2780e-003	9.5360e-004
tblVehicleEF	MDV	1.9150e-003	1.2356e-003
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.13	0.10
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.01	6.8870e-003
tblVehicleEF	MDV	0.09	0.34
tblVehicleEF	MDV	0.10	0.20
tblVehicleEF	MDV	3.5870e-003	2.9757e-003
tblVehicleEF	MDV	8.4800e-004	6.2800e-004

tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.13	0.10
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.02	9.9832e-003
tblVehicleEF	MDV	0.09	0.34
tblVehicleEF	MDV	0.11	0.22
tblVehicleEF	MH	8.2310e-003	5.0270e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.45	0.31
tblVehicleEF	MH	3.72	1.64
tblVehicleEF	MH	1,184.19	1,350.27
tblVehicleEF	MH	56.79	15.54
tblVehicleEF	MH	0.84	1.06
tblVehicleEF	MH	0.62	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	8.8300e-004	2.1213e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2971e-003
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	8.1200e-004	1.9505e-004
tblVehicleEF	MH	0.46	0.35
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	0.18	0.14
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	0.01	0.54
tblVehicleEF	MH	0.22	0.07
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.3200e-004	1.5379e-004

tblVehicleEF	MH	0.46	0.35
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	0.18	0.14
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.01	0.54
tblVehicleEF	MH	0.24	0.08
tblVehicleEF	MHD	0.02	3.8322e-003
tblVehicleEF	MHD	2.7470e-003	1.0338e-003
tblVehicleEF	MHD	0.03	8.3828e-003
tblVehicleEF	MHD	0.37	0.41
tblVehicleEF	MHD	0.25	0.15
tblVehicleEF	MHD	3.74	0.87
tblVehicleEF	MHD	131.96	65.10
tblVehicleEF	MHD	1,167.79	993.45
tblVehicleEF	MHD	59.45	8.55
tblVehicleEF	MHD	0.34	0.34
tblVehicleEF	MHD	1.04	1.43
tblVehicleEF	MHD	9.99	1.69
tblVehicleEF	MHD	5.2000e-005	1.6197e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	3.0080e-003	7.0059e-003
tblVehicleEF	MHD	8.2100e-004	1.1182e-004
tblVehicleEF	MHD	5.0000e-005	1.5497e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	2.8710e-003	6.6957e-003
tblVehicleEF	MHD	7.5400e-004	1.0282e-004
tblVehicleEF	MHD	6.4300e-004	2.8933e-004
tblVehicleEF	MHD	0.03	0.01

tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.8200e-004	1.6833e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.23	0.04
tblVehicleEF	MHD	1.2710e-003	6.1778e-004
tblVehicleEF	MHD	0.01	9.4796e-003
tblVehicleEF	MHD	6.6000e-004	8.4616e-005
tblVehicleEF	MHD	6.4300e-004	2.8933e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	3.8200e-004	1.6833e-004
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.25	0.05
tblVehicleEF	OBUS	0.01	7.0977e-003
tblVehicleEF	OBUS	4.0840e-003	2.1965e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.24	0.64
tblVehicleEF	OBUS	0.30	0.26
tblVehicleEF	OBUS	4.08	1.58
tblVehicleEF	OBUS	110.55	97.36
tblVehicleEF	OBUS	1,272.30	1,210.85
tblVehicleEF	OBUS	64.94	13.46
tblVehicleEF	OBUS	0.24	0.43
tblVehicleEF	OBUS	0.85	1.45
tblVehicleEF	OBUS	2.74	1.13
tblVehicleEF	OBUS	2.2000e-005	1.4242e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	0.01	0.01

tblVehicleEF	OBUS	2.8340e-003	7.8816e-003
tblVehicleEF	OBUS	9.3800e-004	1.5608e-004
tblVehicleEF	OBUS	2.1000e-005	1.3626e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	2.6900e-003	7.5260e-003
tblVehicleEF	OBUS	8.6200e-004	1.4351e-004
tblVehicleEF	OBUS	1.1660e-003	1.0619e-003
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.3200e-004	4.8664e-004
tblVehicleEF	OBUS	0.04	0.02
tblVehicleEF	OBUS	0.03	0.18
tblVehicleEF	OBUS	0.26	0.08
tblVehicleEF	OBUS	1.0660e-003	9.2423e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.2100e-004	1.3322e-004
tblVehicleEF	OBUS	1.1660e-003	1.0619e-003
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	5.3200e-004	4.8664e-004
tblVehicleEF	OBUS	0.05	0.02
tblVehicleEF	OBUS	0.03	0.18
tblVehicleEF	OBUS	0.28	0.08
tblVehicleEF	SBUS	0.81	0.07
tblVehicleEF	SBUS	7.6490e-003	4.4039e-003
tblVehicleEF	SBUS	0.06	6.3377e-003
tblVehicleEF	SBUS	8.87	2.93
tblVehicleEF	SBUS	0.48	0.37
tblVehicleEF	SBUS	7.57	0.86

tblVehicleEF	SBUS	1,023.58	337.48
tblVehicleEF	SBUS	1,008.60	970.50
tblVehicleEF	SBUS	61.81	5.06
tblVehicleEF	SBUS	4.35	2.71
tblVehicleEF	SBUS	1.72	3.09
tblVehicleEF	SBUS	10.76	1.18
tblVehicleEF	SBUS	2.1870e-003	2.0483e-003
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	8.4940e-003	0.02
tblVehicleEF	SBUS	1.1020e-003	6.7596e-005
tblVehicleEF	SBUS	2.0920e-003	1.9597e-003
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.5880e-003	2.6690e-003
tblVehicleEF	SBUS	8.1060e-003	0.02
tblVehicleEF	SBUS	1.0130e-003	6.2152e-005
tblVehicleEF	SBUS	3.7080e-003	8.6957e-004
tblVehicleEF	SBUS	0.03	8.3043e-003
tblVehicleEF	SBUS	1.05	0.32
tblVehicleEF	SBUS	1.7580e-003	4.1393e-004
tblVehicleEF	SBUS	0.07	0.06
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.01	3.2190e-003
tblVehicleEF	SBUS	9.7440e-003	9.2881e-003
tblVehicleEF	SBUS	7.4900e-004	5.0069e-005
tblVehicleEF	SBUS	3.7080e-003	8.6957e-004
tblVehicleEF	SBUS	0.03	8.3043e-003
tblVehicleEF	SBUS	1.53	0.46
tblVehicleEF	SBUS	1.7580e-003	4.1393e-004

tblVehicleEF	SBUS	0.08	0.07
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.43	0.04
tblVehicleEF	UBUS	0.23	1.86
tblVehicleEF	UBUS	0.05	2.1857e-003
tblVehicleEF	UBUS	3.04	14.11
tblVehicleEF	UBUS	7.59	0.14
tblVehicleEF	UBUS	1,937.16	1,668.67
tblVehicleEF	UBUS	126.43	1.40
tblVehicleEF	UBUS	4.75	0.71
tblVehicleEF	UBUS	13.02	0.02
tblVehicleEF	UBUS	0.54	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.10	5.1160e-003
tblVehicleEF	UBUS	1.3960e-003	1.5176e-005
tblVehicleEF	UBUS	0.23	0.03
tblVehicleEF	UBUS	3.0000e-003	8.3315e-003
tblVehicleEF	UBUS	0.10	4.8931e-003
tblVehicleEF	UBUS	1.2840e-003	1.3953e-005
tblVehicleEF	UBUS	2.5990e-003	6.1448e-005
tblVehicleEF	UBUS	0.04	8.1446e-004
tblVehicleEF	UBUS	1.5170e-003	3.5792e-005
tblVehicleEF	UBUS	0.23	0.03
tblVehicleEF	UBUS	9.4350e-003	4.9280e-003
tblVehicleEF	UBUS	0.65	9.2613e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.4020e-003	1.3873e-005
tblVehicleEF	UBUS	2.5990e-003	6.1448e-005
tblVehicleEF	UBUS	0.04	8.1446e-004
tblVehicleEF	UBUS	1.5170e-003	3.5792e-005

tblVehicleEF	UBUS	0.48	1.90
tblVehicleEF	UBUS	9.4350e-003	4.9280e-003
tblVehicleEF	UBUS	0.71	0.01
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TL	7.30	1.20
tblVehicleTrips	CC_TTP	0.00	78.80
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TL	7.30	1.20
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TL	9.50	1.55
tblVehicleTrips	CW_TTP	0.00	2.20
tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00

tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	23.72	130.00
tblVehicleTrips	ST_TR	204.47	180.66
tblVehicleTrips	ST_TR	722.03	235.46
tblVehicleTrips	ST_TR	8.19	6.96
tblVehicleTrips	ST_TR	0.00	410.15
tblVehicleTrips	SU_TR	11.88	130.00
tblVehicleTrips	SU_TR	166.88	180.66
tblVehicleTrips	SU_TR	542.72	235.46
tblVehicleTrips	SU_TR	5.95	6.96
tblVehicleTrips	SU_TR	0.00	410.15
tblVehicleTrips	WD_TR	23.72	130.00
tblVehicleTrips	WD_TR	542.60	180.66
tblVehicleTrips	WD_TR	496.12	235.46
tblVehicleTrips	WD_TR	8.17	6.96
tblVehicleTrips	WD_TR	0.00	410.15

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	0.4493	3.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9000e-003
Energy	0.0295	0.2677	0.2249	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	302.9261	302.9261	0.0189	8.0900e-003	305.8098
Mobile	1.2311	1.1016	5.9400	8.1800e-003	0.9166	7.8800e-003	0.9245	0.2452	7.3500e-003	0.2526	0.0000	853.7359	853.7359	0.0819	0.0000	855.7828
Stationary	0.0412	0.1844	0.1051	2.0000e-004		6.0700e-003	6.0700e-003		6.0700e-003	6.0700e-003	0.0000	19.1351	19.1351	2.6800e-003	0.0000	19.2021
Waste						0.0000	0.0000		0.0000	0.0000	37.1210	0.0000	37.1210	2.1938	0.0000	91.9656
Water						0.0000	0.0000		0.0000	0.0000	1.9558	0.4102	2.3660	0.2014	4.8400e-003	8.8427
Total	**1.7511**	**1.5538**	**6.2738**	**9.9900e-003**	**0.9166**	**0.0343**	**0.9509**	**0.2452**	**0.0338**	**0.2790**	**39.0768**	**1,176.2147**	**1,215.2915**	**2.4986**	**0.0129**	**1,281.6109**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4493	3.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9000e-003
Energy	0.0295	0.2677	0.2249	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	291.4696	291.4696	5.5900e-003	5.3400e-003	293.2016
Mobile	1.2311	1.1016	5.9400	8.1800e-003	0.9166	7.8800e-003	0.9245	0.2452	7.3500e-003	0.2526	0.0000	853.7359	853.7359	0.0819	0.0000	855.7828
Stationary	0.0412	0.1844	0.1051	2.0000e-004		6.0700e-003	6.0700e-003		6.0700e-003	6.0700e-003	0.0000	19.1351	19.1351	2.6800e-003	0.0000	19.2021
Waste						0.0000	0.0000		0.0000	0.0000	37.1210	0.0000	37.1210	2.1938	0.0000	91.9656
Water						0.0000	0.0000		0.0000	0.0000	1.9558	0.4102	2.3660	0.2014	4.8400e-003	8.8427
Total	**1.7511**	**1.5538**	**6.2738**	**9.9900e-003**	**0.9166**	**0.0343**	**0.9509**	**0.2452**	**0.0338**	**0.2790**	**39.0768**	**1,164.7582**	**1,203.8349**	**2.4853**	**0.0102**	**1,269.0027**

	ROG	NOx	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**	**0.97**	**0.94**	**0.53**	**21.27**	**0.98**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2311	1.1016	5.9400	8.1800e-003	0.9166	7.8800e-003	0.9245	0.2452	7.3500e-003	0.2526	0.0000	853.7359	853.7359	0.0819	0.0000	855.7828
Unmitigated	1.2311	1.1016	5.9400	8.1800e-003	0.9166	7.8800e-003	0.9245	0.2452	7.3500e-003	0.2526	0.0000	853.7359	853.7359	0.0819	0.0000	855.7828

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	585.00	585.00	585.00	280,123	280,123
Convenience Market With Gas Pumps	1,083.96	1,083.96	1083.96	474,579	474,579
Fast Food Restaurant with Drive Thru	2,043.79	2,043.79	2043.79	898,457	898,457
Hotel	835.20	835.20	835.20	385,458	385,458
Parking Lot	0.00	0.00	0.00		
User Defined Recreational	972.06	972.06	972.06	427,318	427,318
Total	5,520.01	5,520.01	5,520.01	2,465,934	2,465,934

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
Automobile Care Center	1.55	1.20	1.20	33.00	48.00	19.00	100	0	0
Convenience Market With Gas Pumps	1.55	1.20	1.20	0.80	80.20	19.00	100	0	0
Fast Food Restaurant with Drive Thru	1.55	1.20	1.20	2.20	78.80	19.00	100	0	0
Hotel	1.55	1.20	1.20	19.40	61.60	19.00	100	0	0
Parking Lot	1.55	1.20	1.20	0.00	0.00	0.00	0	0	0
User Defined Recreational	1.55	1.20	1.20	2.20	78.80	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
Convenience Market With Gas Pumps	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
Fast Food Restaurant with Drive Thru	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
Hotel	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
Parking Lot	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
User Defined Recreational	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	11.4566	11.4566	0.0133	2.7500e-003	12.6082
NaturalGas Mitigated	0.0295	0.2677	0.2249	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	291.4696	291.4696	5.5900e-003	5.3400e-003	293.2016
NaturalGas Unmitigated	0.0295	0.2677	0.2249	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	291.4696	291.4696	5.5900e-003	5.3400e-003	293.2016

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	118710	6.4000e-004	5.8200e-003	4.8900e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3348	6.3348	1.2000e-004	1.2000e-004	6.3725
Convenience Market With Gas Pumps	9724.11	5.0000e-005	4.8000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5189	0.5189	1.0000e-005	1.0000e-005	0.5220
Fast Food Restaurant with Drive Thru	1.80461e+006	9.7300e-003	0.0885	0.0743	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.3007	96.3007	1.8500e-003	1.7700e-003	96.8729
Hotel	3.52889e+006	0.0190	0.1730	0.1453	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	188.3152	188.3152	3.6100e-003	3.4500e-003	189.4342
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
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0295**	**0.2677**	**0.2249**	**1.6000e-003**		**0.0204**	**0.0204**		**0.0204**	**0.0204**	**0.0000**	**291.4696**	**291.4696**	**5.5900e-003**	**5.3500e-003**	**293.2016**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	118710	6.4000e-004	5.8200e-003	4.8900e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3348	6.3348	1.2000e-004	1.2000e-004	6.3725

Convenience Market With Gas Pumps	9724.11	5.0000e-005	4.8000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5189	0.5189	1.0000e-005	1.0000e-005	0.5220
Fast Food Restaurant with Drive Thru	1.80461e+006	9.7300e-003	0.0885	0.0743	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.3007	96.3007	1.8500e-003	1.7700e-003	96.8729
Hotel	3.52889e+006	0.0190	0.1730	0.1453	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	188.3152	188.3152	3.6100e-003	3.4500e-003	189.4342
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
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0295**	**0.2677**	**0.2249**	**1.6000e-003**		**0.0204**	**0.0204**		**0.0204**	**0.0204**	**0.0000**	**291.4696**	**291.4696**	**5.5900e-003**	**5.3500e-003**	**293.2016**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	37170	0.4215	4.9000e-004	1.0000e-004	0.4639
Convenience Market With Gas Pumps	43861.1	0.4974	5.8000e-004	1.2000e-004	0.5474
Fast Food Restaurant with Drive Thru	284042	3.2210	3.7400e-003	7.7000e-004	3.5448
Hotel	606864	6.8817	7.9800e-003	1.6500e-003	7.5735
Parking Lot	38360	0.4350	5.0000e-004	1.0000e-004	0.4787
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**11.4566**	**0.0133**	**2.7400e-003**	**12.6082**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000
Convenience Market With Gas Pumps	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant with Drive Thru	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	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	0.4493	3.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9000e-003
Unmitigated	0.4493	3.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9000e-003
Total	**0.4493**	**3.0000e-005**	**3.8000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.4300e-003**	**7.4300e-003**	**2.0000e-005**	**0.0000**	**7.9000e-003**

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	0.0541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.4300e-003	7.4300e-003	2.0000e-005	0.0000	7.9000e-003
Total	**0.4493**	**3.0000e-005**	**3.8000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.4300e-003**	**7.4300e-003**	**2.0000e-005**	**0.0000**	**7.9000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.3660	0.2014	4.8400e-003	8.8427
Unmitigated	2.3660	0.2014	4.8400e-003	8.8427

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.423365 / 0.259482	0.1706	0.0138	3.3000e-004	0.6162
Convenience Market With Gas Pumps	0.0627431 / 0.038455	0.0253	2.0500e-003	5.0000e-005	0.0913
Fast Food Restaurant with Drive Thru	2.63467 / 0.168171	1.0042	0.0861	2.0700e-003	3.7715
Hotel	3.04401 / 0.338224	1.1659	0.0994	2.3900e-003	4.3637
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.3660**	**0.2014**	**4.8400e-003**	**8.8427**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.423365 / 0.259482	0.1706	0.0138	3.3000e-004	0.6162
Convenience Market With Gas Pumps	0.0627431 / 0.038454	0.0253	2.0500e-003	5.0000e-005	0.0913
Fast Food Restaurant with Drive Thru	2.63467 / 0.168171	1.0042	0.0861	2.0700e-003	3.7715
Hotel	3.04401 / 0.338224	1.1659	0.0994	2.3900e-003	4.3637
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.3660**	**0.2014**	**4.8400e-003**	**8.8427**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	37.1210	2.1938	0.0000	91.9656
Unmitigated	37.1210	2.1938	0.0000	91.9656

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	17.19	3.4894	0.2062	0.0000	8.6449
Fast Food Restaurant with Drive Thru	99.98	20.2950	1.1994	0.0000	50.2801
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**37.1210**	**2.1938**	**0.0000**	**91.9656**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	17.19	3.4894	0.2062	0.0000	8.6449
Fast Food Restaurant with Drive Thru	99.98	20.2950	1.1994	0.0000	50.2801
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000

Total		**37.1210**	**2.1938**	**0.0000**	**91.9656**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	1005	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0412	0.1844	0.1051	2.0000e-004		6.0700e-003	6.0700e-003		6.0700e-003	6.0700e-003	0.0000	19.1351	19.1351	2.6800e-003	0.0000	19.2021
Total	**0.0412**	**0.1844**	**0.1051**	**2.0000e-004**		**6.0700e-003**	**6.0700e-003**		**6.0700e-003**	**6.0700e-003**	**0.0000**	**19.1351**	**19.1351**	**2.6800e-003**	**0.0000**	**19.2021**

11.0 Vegetation

10th and Chestnut Gilroy - Existing Land Use AQ-GHG - Santa Clara County, Annual

10th and Chestnut Gilroy - Existing Land Use AQ-GHG

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	22.55	1000sqft	0.52	22,550.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	25	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Silicon Valley Clean Energy is the electricity provider for Gilroy. The 2017 rate for the default GreenStart program is <25 lb/MWh

Land Use - 22,550 square feet of commercial and office uses

Construction Phase - Operation Model no Construction

Vehicle Trips - Weekday trip rate based on the total weekday trips and adjusted for same trip length as project (24.35% of CalEEMod default for primary

Vehicle Emission Factors - 2020 EMFAC2017 Santa Clara County

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Water And Wastewater - 100% WTP

Energy Mitigation - 100% carbon free electricity

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	0.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.60	0.59
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.19	0.18
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	4.9810e-003	5.0270e-003
tblFleetMix	MCY	5.3630e-003	5.3070e-003
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MH	7.8500e-004	7.7900e-004
tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	2.0830e-003	1.7470e-003
tblFleetMix	SBUS	6.2000e-004	9.2600e-004
tblFleetMix	UBUS	1.5710e-003	1.3020e-003
tblProjectCharacteristics	CO2IntensityFactor	641.35	25
tblVehicleEF	HHD	0.52	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	2.70	5.38
tblVehicleEF	HHD	1.02	0.76
tblVehicleEF	HHD	3.82	6.2050e-003
tblVehicleEF	HHD	4,650.35	1,078.53
tblVehicleEF	HHD	1,665.34	1,581.53
tblVehicleEF	HHD	11.77	0.06
tblVehicleEF	HHD	22.38	6.03
tblVehicleEF	HHD	4.47	4.62
tblVehicleEF	HHD	19.49	1.73
tblVehicleEF	HHD	0.02	0.01

tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.07
tblVehicleEF	HHD	1.1700e-004	1.0000e-006
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8180e-003	8.8630e-003
tblVehicleEF	HHD	0.02	0.07
tblVehicleEF	HHD	1.0800e-004	1.0000e-006
tblVehicleEF	HHD	1.1200e-004	5.0000e-006
tblVehicleEF	HHD	6.3600e-003	2.2500e-004
tblVehicleEF	HHD	0.69	0.44
tblVehicleEF	HHD	6.8000e-005	3.0000e-006
tblVehicleEF	HHD	0.15	0.17
tblVehicleEF	HHD	5.5200e-004	1.4070e-003
tblVehicleEF	HHD	0.13	3.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	1.8200e-004	1.0000e-006
tblVehicleEF	HHD	1.1200e-004	5.0000e-006
tblVehicleEF	HHD	6.3600e-003	2.2500e-004
tblVehicleEF	HHD	0.80	0.50
tblVehicleEF	HHD	6.8000e-005	3.0000e-006
tblVehicleEF	HHD	0.22	0.24
tblVehicleEF	HHD	5.5200e-004	1.4070e-003
tblVehicleEF	HHD	0.14	3.0000e-006
tblVehicleEF	LDA	4.5620e-003	3.0610e-003
tblVehicleEF	LDA	7.2750e-003	0.06
tblVehicleEF	LDA	0.61	0.74
tblVehicleEF	LDA	1.49	2.36

tblVehicleEF	LDA	265.03	264.68
tblVehicleEF	LDA	61.46	56.07
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.10	0.22
tblVehicleEF	LDA	1.7250e-003	1.5660e-003
tblVehicleEF	LDA	2.2880e-003	1.9810e-003
tblVehicleEF	LDA	1.5900e-003	1.4430e-003
tblVehicleEF	LDA	2.1040e-003	1.8220e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.23
tblVehicleEF	LDA	0.10	0.29
tblVehicleEF	LDA	2.6540e-003	8.7000e-005
tblVehicleEF	LDA	6.4000e-004	0.00
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.23
tblVehicleEF	LDA	0.11	0.31
tblVehicleEF	LDT1	0.01	6.5560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.36	1.35
tblVehicleEF	LDT1	3.24	2.61
tblVehicleEF	LDT1	322.57	314.05
tblVehicleEF	LDT1	74.06	67.50
tblVehicleEF	LDT1	0.14	0.12
tblVehicleEF	LDT1	0.18	0.29

tblVehicleEF	LDT1	2.5170e-003	2.2460e-003
tblVehicleEF	LDT1	3.3150e-003	2.7710e-003
tblVehicleEF	LDT1	2.3180e-003	2.0680e-003
tblVehicleEF	LDT1	3.0490e-003	2.5480e-003
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.26	0.21
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.18	0.74
tblVehicleEF	LDT1	0.22	0.43
tblVehicleEF	LDT1	3.2420e-003	2.5610e-003
tblVehicleEF	LDT1	7.9800e-004	0.00
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.26	0.21
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.18	0.74
tblVehicleEF	LDT1	0.24	0.47
tblVehicleEF	LDT2	6.4900e-003	4.4900e-003
tblVehicleEF	LDT2	9.3170e-003	0.08
tblVehicleEF	LDT2	0.83	1.00
tblVehicleEF	LDT2	1.92	3.07
tblVehicleEF	LDT2	369.46	346.93
tblVehicleEF	LDT2	85.12	75.00
tblVehicleEF	LDT2	0.09	0.10
tblVehicleEF	LDT2	0.16	0.35
tblVehicleEF	LDT2	1.6360e-003	1.5510e-003
tblVehicleEF	LDT2	2.2210e-003	1.9310e-003
tblVehicleEF	LDT2	1.5040e-003	1.4280e-003
tblVehicleEF	LDT2	2.0430e-003	1.7760e-003

tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.45
tblVehicleEF	LDT2	0.13	0.39
tblVehicleEF	LDT2	3.7010e-003	0.01
tblVehicleEF	LDT2	8.8400e-004	9.1000e-005
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.45
tblVehicleEF	LDT2	0.14	0.43
tblVehicleEF	LHD1	6.2340e-003	5.6860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.16	0.19
tblVehicleEF	LHD1	1.31	1.02
tblVehicleEF	LHD1	3.15	1.23
tblVehicleEF	LHD1	8.98	9.13
tblVehicleEF	LHD1	713.46	837.42
tblVehicleEF	LHD1	34.78	12.75
tblVehicleEF	LHD1	0.07	0.06
tblVehicleEF	LHD1	1.42	1.05
tblVehicleEF	LHD1	1.13	0.37
tblVehicleEF	LHD1	8.5300e-004	7.7000e-004
tblVehicleEF	LHD1	9.8970e-003	9.6220e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.1500e-003	3.0500e-004

tblVehicleEF	LHD1	8.1600e-004	7.3700e-004
tblVehicleEF	LHD1	2.4740e-003	2.4060e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0590e-003	2.8100e-004
tblVehicleEF	LHD1	2.9040e-003	2.4030e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.4230e-003	1.1790e-003
tblVehicleEF	LHD1	0.14	0.11
tblVehicleEF	LHD1	0.34	0.62
tblVehicleEF	LHD1	0.33	0.10
tblVehicleEF	LHD1	9.0000e-005	8.9000e-005
tblVehicleEF	LHD1	7.0210e-003	8.1860e-003
tblVehicleEF	LHD1	4.0800e-004	1.2600e-004
tblVehicleEF	LHD1	2.9040e-003	2.4030e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.4230e-003	1.1790e-003
tblVehicleEF	LHD1	0.17	0.14
tblVehicleEF	LHD1	0.34	0.62
tblVehicleEF	LHD1	0.36	0.11
tblVehicleEF	LHD2	4.0630e-003	3.5440e-003
tblVehicleEF	LHD2	0.01	8.7930e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.68	0.77
tblVehicleEF	LHD2	1.50	0.75
tblVehicleEF	LHD2	14.10	14.26
tblVehicleEF	LHD2	728.87	809.32
tblVehicleEF	LHD2	25.76	8.63

tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	1.10	1.29
tblVehicleEF	LHD2	0.57	0.22
tblVehicleEF	LHD2	1.3170e-003	1.3780e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.0900e-004	1.6100e-004
tblVehicleEF	LHD2	1.2600e-003	1.3190e-003
tblVehicleEF	LHD2	2.6740e-003	2.6690e-003
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.6800e-004	1.4800e-004
tblVehicleEF	LHD2	1.1000e-003	1.3640e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	5.4900e-004	6.5500e-004
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	0.10	0.37
tblVehicleEF	LHD2	0.14	0.06
tblVehicleEF	LHD2	1.3800e-004	1.3600e-004
tblVehicleEF	LHD2	7.0950e-003	7.8220e-003
tblVehicleEF	LHD2	2.8500e-004	8.5000e-005
tblVehicleEF	LHD2	1.1000e-003	1.3640e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.4900e-004	6.5500e-004
tblVehicleEF	LHD2	0.14	0.15
tblVehicleEF	LHD2	0.10	0.37
tblVehicleEF	LHD2	0.15	0.06
tblVehicleEF	MCY	0.44	0.33
tblVehicleEF	MCY	0.16	0.26

tblVehicleEF	MCY	19.82	20.00
tblVehicleEF	MCY	10.12	8.95
tblVehicleEF	MCY	168.14	210.53
tblVehicleEF	MCY	46.41	62.15
tblVehicleEF	MCY	1.16	1.16
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	1.8900e-003	1.8410e-003
tblVehicleEF	MCY	4.0800e-003	3.2620e-003
tblVehicleEF	MCY	1.7710e-003	1.7250e-003
tblVehicleEF	MCY	3.8550e-003	3.0800e-003
tblVehicleEF	MCY	0.91	1.83
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	0.50	1.01
tblVehicleEF	MCY	2.27	2.28
tblVehicleEF	MCY	0.64	2.21
tblVehicleEF	MCY	2.25	1.98
tblVehicleEF	MCY	2.0710e-003	2.0830e-003
tblVehicleEF	MCY	6.9600e-004	6.1500e-004
tblVehicleEF	MCY	0.91	1.83
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	0.50	1.01
tblVehicleEF	MCY	2.79	2.80
tblVehicleEF	MCY	0.64	2.21
tblVehicleEF	MCY	2.44	2.16
tblVehicleEF	MDV	0.01	6.1720e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.23
tblVehicleEF	MDV	3.59	3.68
tblVehicleEF	MDV	487.26	420.60
tblVehicleEF	MDV	110.36	90.34

tblVehicleEF	MDV	0.19	0.14
tblVehicleEF	MDV	0.33	0.44
tblVehicleEF	MDV	1.9100e-003	1.7670e-003
tblVehicleEF	MDV	2.6380e-003	2.2440e-003
tblVehicleEF	MDV	1.7630e-003	1.6310e-003
tblVehicleEF	MDV	2.4290e-003	2.0650e-003
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.18	0.16
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.29	0.52
tblVehicleEF	MDV	4.8850e-003	4.1580e-003
tblVehicleEF	MDV	1.1670e-003	8.9400e-004
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.18	0.16
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.31	0.57
tblVehicleEF	MH	0.05	0.02
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	3.56	2.05
tblVehicleEF	MH	7.30	2.50
tblVehicleEF	MH	1,229.07	1,611.87
tblVehicleEF	MH	61.91	20.50
tblVehicleEF	MH	1.59	1.60
tblVehicleEF	MH	0.96	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03

tblVehicleEF	MH	1.5660e-003	3.5200e-004
tblVehicleEF	MH	3.2120e-003	3.2600e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4480e-003	3.2500e-004
tblVehicleEF	MH	1.05	0.96
tblVehicleEF	MH	0.09	0.08
tblVehicleEF	MH	0.36	0.32
tblVehicleEF	MH	0.15	0.10
tblVehicleEF	MH	0.02	1.93
tblVehicleEF	MH	0.44	0.12
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	7.4700e-004	2.0300e-004
tblVehicleEF	MH	1.05	0.96
tblVehicleEF	MH	0.09	0.08
tblVehicleEF	MH	0.36	0.32
tblVehicleEF	MH	0.20	0.14
tblVehicleEF	MH	0.02	1.93
tblVehicleEF	MH	0.48	0.13
tblVehicleEF	MHD	0.02	3.3020e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.06	9.8030e-003
tblVehicleEF	MHD	0.46	0.36
tblVehicleEF	MHD	0.68	0.93
tblVehicleEF	MHD	8.00	1.27
tblVehicleEF	MHD	140.29	78.16
tblVehicleEF	MHD	1,210.30	1,180.29
tblVehicleEF	MHD	62.15	9.18
tblVehicleEF	MHD	0.89	0.73
tblVehicleEF	MHD	2.30	3.39
tblVehicleEF	MHD	10.47	1.06

tblVehicleEF	MHD	2.8510e-003	2.6060e-003
tblVehicleEF	MHD	0.05	0.09
tblVehicleEF	MHD	1.0450e-003	1.3000e-004
tblVehicleEF	MHD	2.7280e-003	2.4930e-003
tblVehicleEF	MHD	0.04	0.09
tblVehicleEF	MHD	9.6100e-004	1.1900e-004
tblVehicleEF	MHD	1.1800e-003	5.4800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	5.7100e-004	2.6100e-004
tblVehicleEF	MHD	0.12	0.24
tblVehicleEF	MHD	0.03	0.14
tblVehicleEF	MHD	0.47	0.06
tblVehicleEF	MHD	1.3510e-003	7.4100e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.6200e-004	9.1000e-005
tblVehicleEF	MHD	1.1800e-003	5.4800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	5.7100e-004	2.6100e-004
tblVehicleEF	MHD	0.15	0.28
tblVehicleEF	MHD	0.03	0.14
tblVehicleEF	MHD	0.52	0.06
tblVehicleEF	OBUS	0.01	7.6010e-003
tblVehicleEF	OBUS	0.01	9.9430e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.29	0.57
tblVehicleEF	OBUS	0.65	0.90
tblVehicleEF	OBUS	5.78	2.02
tblVehicleEF	OBUS	110.21	99.74

tblVehicleEF	OBUS	1,322.53	1,402.55
tblVehicleEF	OBUS	67.52	15.98
tblVehicleEF	OBUS	0.66	0.69
tblVehicleEF	OBUS	2.30	2.31
tblVehicleEF	OBUS	2.92	0.92
tblVehicleEF	OBUS	3.1200e-004	2.9700e-003
tblVehicleEF	OBUS	0.01	0.04
tblVehicleEF	OBUS	7.2600e-004	1.4400e-004
tblVehicleEF	OBUS	2.9900e-004	2.8410e-003
tblVehicleEF	OBUS	0.01	0.04
tblVehicleEF	OBUS	6.6800e-004	1.3300e-004
tblVehicleEF	OBUS	1.1970e-003	1.0920e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	5.1100e-004	4.7000e-004
tblVehicleEF	OBUS	0.08	0.13
tblVehicleEF	OBUS	0.03	0.17
tblVehicleEF	OBUS	0.36	0.10
tblVehicleEF	OBUS	1.0630e-003	9.4700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7700e-004	1.5800e-004
tblVehicleEF	OBUS	1.1970e-003	1.0920e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	5.1100e-004	4.7000e-004
tblVehicleEF	OBUS	0.10	0.15
tblVehicleEF	OBUS	0.03	0.17
tblVehicleEF	OBUS	0.40	0.11
tblVehicleEF	SBUS	0.87	0.04
tblVehicleEF	SBUS	0.02	7.1250e-003

tblVehicleEF	SBUS	0.10	4.2090e-003
tblVehicleEF	SBUS	7.94	1.89
tblVehicleEF	SBUS	1.35	0.58
tblVehicleEF	SBUS	11.03	0.64
tblVehicleEF	SBUS	1,147.37	347.29
tblVehicleEF	SBUS	1,074.56	1,091.13
tblVehicleEF	SBUS	53.01	3.52
tblVehicleEF	SBUS	10.41	3.76
tblVehicleEF	SBUS	4.78	5.50
tblVehicleEF	SBUS	12.80	0.69
tblVehicleEF	SBUS	0.01	4.8070e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	8.5500e-004	3.8000e-005
tblVehicleEF	SBUS	0.01	4.5990e-003
tblVehicleEF	SBUS	2.6490e-003	2.7520e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.8600e-004	3.5000e-005
tblVehicleEF	SBUS	3.8820e-003	4.4100e-004
tblVehicleEF	SBUS	0.04	4.2270e-003
tblVehicleEF	SBUS	0.96	0.21
tblVehicleEF	SBUS	1.4980e-003	1.7000e-004
tblVehicleEF	SBUS	0.13	0.10
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.55	0.02
tblVehicleEF	SBUS	0.01	3.3020e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	7.2000e-004	3.5000e-005
tblVehicleEF	SBUS	3.8820e-003	4.4100e-004
tblVehicleEF	SBUS	0.04	4.2270e-003

tblVehicleEF	SBUS	1.38	0.30
tblVehicleEF	SBUS	1.4980e-003	1.7000e-004
tblVehicleEF	SBUS	0.17	0.11
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.60	0.03
tblVehicleEF	UBUS	0.28	1.38
tblVehicleEF	UBUS	0.04	2.5800e-003
tblVehicleEF	UBUS	5.74	10.36
tblVehicleEF	UBUS	7.96	0.14
tblVehicleEF	UBUS	2,147.22	1,606.71
tblVehicleEF	UBUS	88.39	1.64
tblVehicleEF	UBUS	12.54	0.73
tblVehicleEF	UBUS	15.64	0.02
tblVehicleEF	UBUS	0.63	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.29	5.2780e-003
tblVehicleEF	UBUS	9.6700e-004	2.0000e-006
tblVehicleEF	UBUS	0.27	0.03
tblVehicleEF	UBUS	3.0000e-003	8.3320e-003
tblVehicleEF	UBUS	0.27	5.0490e-003
tblVehicleEF	UBUS	8.8900e-004	2.0000e-006
tblVehicleEF	UBUS	2.2470e-003	1.5400e-004
tblVehicleEF	UBUS	0.04	2.3510e-003
tblVehicleEF	UBUS	1.0240e-003	9.7000e-005
tblVehicleEF	UBUS	0.79	0.02
tblVehicleEF	UBUS	7.8890e-003	0.02
tblVehicleEF	UBUS	0.54	0.01
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.0250e-003	1.6000e-005
tblVehicleEF	UBUS	2.2470e-003	1.5400e-004

tblVehicleEF	UBUS	0.04	2.3510e-003
tblVehicleEF	UBUS	1.0240e-003	9.7000e-005
tblVehicleEF	UBUS	1.13	1.41
tblVehicleEF	UBUS	7.8890e-003	0.02
tblVehicleEF	UBUS	0.59	0.01
tblVehicleTrips	CC_TL	7.30	1.80
tblVehicleTrips	CNW_TL	7.30	1.80
tblVehicleTrips	CW_TL	9.50	2.32
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	42.04	32.77
tblVehicleTrips	SU_TR	20.43	32.77
tblVehicleTrips	WD_TR	44.32	32.77
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0999	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004
Energy	2.9000e-004	2.6200e-003	2.2000e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	5.5855	5.5855	3.2300e-003	7.1000e-004	5.8772

Mobile	0.2970	0.2818	1.3588	2.0300e-003	0.1885	3.3400e-003	0.1919	0.0504	3.1500e-003	0.0536	0.0000	205.1312	205.1312	0.0231	0.0000	205.7087
Waste						0.0000	0.0000		0.0000	0.0000	4.8068	0.0000	4.8068	0.2841	0.0000	11.9087
Water						0.0000	0.0000		0.0000	0.0000	0.5910	0.1431	0.7341	2.2000e-003	1.3200e-003	1.1823
Total	**0.3972**	**0.2844**	**1.3612**	**2.0500e-003**	**0.1885**	**3.5400e-003**	**0.1921**	**0.0504**	**3.3500e-003**	**0.0538**	**5.3978**	**210.8602**	**216.2580**	**0.3126**	**2.0300e-003**	**224.6774**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0999	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004
Energy	2.9000e-004	2.6200e-003	2.2000e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8520	2.8520	5.0000e-005	5.0000e-005	2.8689
Mobile	0.2970	0.2818	1.3588	2.0300e-003	0.1885	3.3400e-003	0.1919	0.0504	3.1500e-003	0.0536	0.0000	205.1312	205.1312	0.0231	0.0000	205.7087
Waste						0.0000	0.0000		0.0000	0.0000	4.8068	0.0000	4.8068	0.2841	0.0000	11.9087
Water						0.0000	0.0000		0.0000	0.0000	0.5910	0.1431	0.7341	2.2000e-003	1.3200e-003	1.1823
Total	**0.3972**	**0.2844**	**1.3612**	**2.0500e-003**	**0.1885**	**3.5400e-003**	**0.1921**	**0.0504**	**3.3500e-003**	**0.0538**	**5.3978**	**208.1267**	**213.5245**	**0.3094**	**1.3700e-003**	**221.6690**

	ROG	NOx	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**	**1.30**	**1.26**	**1.02**	**32.51**	**1.34**

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	0.2970	0.2818	1.3588	2.0300e-003	0.1885	3.3400e-003	0.1919	0.0504	3.1500e-003	0.0536	0.0000	205.1312	205.1312	0.0231	0.0000	205.7087
Unmitigated	0.2970	0.2818	1.3588	2.0300e-003	0.1885	3.3400e-003	0.1919	0.0504	3.1500e-003	0.0536	0.0000	205.1312	205.1312	0.0231	0.0000	205.7087

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	738.96	738.96	738.96	507,387	507,387
Total	738.96	738.96	738.96	507,387	507,387

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
Strip Mall	2.32	1.80	1.80	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.585494	0.052026	0.183432	0.108306	0.021147	0.005027	0.013218	0.021288	0.001747	0.001302	0.005307	0.000926	0.000779

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	2.7336	2.7336	3.1700e-003	6.6000e-004	3.0084
NaturalGas Mitigated	2.9000e-004	2.6200e-003	2.2000e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8520	2.8520	5.0000e-005	5.0000e-005	2.8689
NaturalGas Unmitigated	2.9000e-004	2.6200e-003	2.2000e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8520	2.8520	5.0000e-005	5.0000e-005	2.8689

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					
Strip Mall	53443.5	2.9000e-004	2.6200e-003	2.2000e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8520	2.8520	5.0000e-005	5.0000e-005	2.8689
Total		**2.9000e-004**	**2.6200e-003**	**2.2000e-003**	**2.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.8520**	**2.8520**	**5.0000e-005**	**5.0000e-005**	**2.8689**

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					
Strip Mall	53443.5	2.9000e-004	2.6200e-003	2.2000e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8520	2.8520	5.0000e-005	5.0000e-005	2.8689
Total		**2.9000e-004**	**2.6200e-003**	**2.2000e-003**	**2.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.8520**	**2.8520**	**5.0000e-005**	**5.0000e-005**	**2.8689**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	241060	2.7336	3.1700e-003	6.6000e-004	3.0084
Total		**2.7336**	**3.1700e-003**	**6.6000e-004**	**3.0084**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	0	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	0.0999	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004
Unmitigated	0.0999	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0118					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0881					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004
Total	**0.0999**	**0.0000**	**2.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-004**	**4.0000e-004**	**0.0000**	**0.0000**	**4.3000e-004**

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	0.0118					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0881					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.3000e-004
Total	**0.0999**	**0.0000**	**2.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-004**	**4.0000e-004**	**0.0000**	**0.0000**	**4.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.7341	2.2000e-003	1.3200e-003	1.1823
Unmitigated	0.7341	2.2000e-003	1.3200e-003	1.1823

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	1.67034 / 1.02375	0.7341	2.2000e-003	1.3200e-003	1.1823
Total		**0.7341**	**2.2000e-003**	**1.3200e-003**	**1.1823**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	1.67034 / 1.02375	0.7341	2.2000e-003	1.3200e-003	1.1823
Total		**0.7341**	**2.2000e-003**	**1.3200e-003**	**1.1823**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	4.8068	0.2841	0.0000	11.9087
Unmitigated	4.8068	0.2841	0.0000	11.9087

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	23.68	4.8068	0.2841	0.0000	11.9087
Total		**4.8068**	**0.2841**	**0.0000**	**11.9087**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	23.68	4.8068	0.2841	0.0000	11.9087
Total		**4.8068**	**0.2841**	**0.0000**	**11.9087**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 3: EMFAC2017 Emissions and CARB SAFE Off-Model Adjustment Factors

Summary of Construction Traffic Emissions (EMFAC2017)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2
					Grams						
Hauling	1,037.70	27,825.07	7,064.10	86.56	1,694.97	894.58	2,589.55	255.04	531.57	786.61	9,422,059
Vendor	11,825.89	251,685.70	72,354.85	795.28	17,068.71	10,319.81	27,388.53	2,568.30	6,169.63	8,737.93	85,601,166
Worker	20,246.83	18,164.62	226,303.01	614.69	68,749.67	10,682.26	79,431.93	10,344.64	4,443.02	14,787.67	65,117,820
Total (g)	33,110.42	297,675.38	305,721.96	1,496.53	87,513.35	21,896.65	109,410.01	13,167.98	11,144.23	24,312.20	160,141,044
Total (lbs)	73.00	656.26	674.00	3.30	192.93	48.27	241.21	29.03	24.57	53.60	353,051
Total (tons)	0.04	0.33	0.34	0.00	0.10	0.02	0.12	0.01	0.01	0.03	177
Total (MT)											160

YEAR											
						Tons					
	2021	0.0297	0.2673	0.2746	0.0013	0.0786	0.0197	0.0983	0.0118	0.0100	0.0218	130.4721

		Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust PM10	PM10_PMBW	PM10_PMTW	PM10_IDLEX	PM10_RUNEX	PM10_STREX	Road Dust PM25	PM25_PMBW	PM25_PMTW	PM25_IDLEX	PM25_RUNEX	PM25_STREX	CO2_NBIO_IDLEX	CO2_NBIO_RUNEX	CO2_NBIO_STREX
Category																													19	22	23	8	9	10
Hauling	HHDT	100.0	1	4.16173E-06	0.000184922	0.434467644	2.29522E-06	0.13900353	0.00114182	2.55505E-06	5.9660776	4.11760691	1.857963365	5.630239	0.67643733	0.0059162	0.01013772	0.014245597	5.51426E-07		0.06085	0.035473	0.008566	0.060619	1.05485E-06		0.026078	0.008868	0.0081958	0.0579964	9.699E-07	1088.7861	1552.0308	0.0557231
	MHD	0.0	0	0.000487808	0.021812603	0.021034603	0.000236584	0.19015319	0.12779685	0.052960704	0.6687192	2.890356527	1.169875105	0.370014	0.75814415	1.203259	0.00073142	0.011054821	9.01407E-05	0.299	0.13034	0.012	0.002134	0.074904	0.000122619	0.04499	0.05586	0.003	0.0020414	0.0716576	0.0001127	77.128984	1160.4052	9.1089764
Vendor	HHDT	61.9	0.61874	2.57503E-06	0.000114418	0.268822304	1.42015E-06	0.08600698	0.00070649	1.58091E-06	3.691448	2.547726142	1.14959537	3.483651	0.41853851	0.0036606	0.00627261	0.008814314	3.41189E-07		0.03765	0.021949	0.0053	0.037507	6.5268E-07		0.016136	0.005487	0.0050711	0.0358847	6.001E-07	673.67502	960.30282	0.0344781
	MHD	38.1	0.38126	0.000185982	0.008316283	0.008019663	9.02002E-05	0.0724979	0.04872389	0.020191823	0.2549562	1.101978703	0.446027139	0.141072	0.2890504	0.4587551	0.00027886	0.004214766	3.43671E-05		0.049694	0.004575	0.000814	0.028558	4.67497E-05		0.021297	0.001144	0.0007783	0.0273202	4.298E-05	29.406233	442.41664	3.4728927
			1	0.000188557	0.008430702	0.276841966	9.16203E-05	0.15850488	0.04943038	0.020193404	3.9464042	3.649704846	1.595622508	3.624723	0.70758891	0.4624157	0.00655147	0.01302908	3.47083E-05	0.299	0.087344	0.026524	0.006114	0.066065	4.74024E-05	0.04499	0.037433	0.006631	0.0058494	0.0632049	4.358E-05	703.08125	1402.7195	3.5073708
Worker	LDA	71.5	0.71531	0.032353757	0.07453011	0	0.027922217	0.00741436	0.15784932	0.184493323	0	0.031178221	0.144921296	0	0.47467043	1.6383666	0	6.40185E-05	0		0.026288	0.005723	0	0.001066	0.00135696		0.011266	0.001431	0	0.0009824	0.0012477	0	184.0284	38.986808
	LDT1	6.4	0.0637	0.006311884	0.011962571	0	0.004903994	0.00157875	0.04309138	0.024334071	0	0.006711833	0.017202894	0	0.07589222	0.1603984	0	0.000164506	0		0.002341	0.00051	0	0.000131	0.000163964		0.001003	0.000127	0	0.0001209	0.0001508	0	19.484322	4.1849723
	LDT2	22.1	0.22098	0.014377143	0.029013557	0	0.013333578	0.00366559	0.09717782	0.079833534	0	0.019171835	0.071082548	0	0.20276103	0.6556867	0	0.002442948	1.99197E-05		0.008121	0.001768	0	0.000329	0.000410964		0.003481	0.000442	0	0.0003028	0.0003779	0	74.122482	16.033067
			1	0.053042784	0.115506238	0	0.046159789	0.0126587	0.29811852	0.288660928	0	0.057061889	0.233206738	0	0.75332369	2.4544517	0	0.002671473	1.99197E-05	0.299	0.03675	0.008	0	0.001527	0.001931888	0.04499	0.01575	0.002	0	0.0014061	0.0017764	0	277.63521	59.204847

Adjustment Factors for EMFAC2017 Gasoline Light Duty Vehicles						
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust	CO2 Exhaust
NA	1	1	1	1	1	1
2021	1.0002	1.0001	1.0002	1.0009	1.0005	1.0023
2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065
2023	1.0007	1.0006	1.0007	1.0032	1.0027	1.0126
2024	1.0012	1.0010	1.0011	1.0051	1.0044	1.0207
2025	1.0018	1.0016	1.0016	1.0074	1.0065	1.0309
2026	1.0023	1.0022	1.0020	1.0091	1.0083	1.0394
2027	1.0028	1.0028	1.0024	1.0105	1.0102	1.0475
2028	1.0034	1.0035	1.0028	1.0117	1.0120	1.0554
2029	1.0040	1.0042	1.0032	1.0129	1.0138	1.0629
2030	1.0047	1.0051	1.0037	1.0142	1.0156	1.0702
2031	1.0054	1.0061	1.0042	1.0155	1.0173	1.0770
2032	1.0061	1.0072	1.0047	1.0169	1.0189	1.0834
2033	1.0068	1.0083	1.0052	1.0182	1.0204	1.0893
2034	1.0075	1.0095	1.0058	1.0196	1.0218	1.0947
2035	1.0081	1.0108	1.0063	1.0210	1.0232	1.0997
2036	1.0088	1.0121	1.0069	1.0223	1.0244	1.1041
2037	1.0094	1.0134	1.0074	1.0236	1.0255	1.1080
2038	1.0099	1.0148	1.0079	1.0248	1.0265	1.1114
2039	1.0104	1.0161	1.0085	1.0259	1.0274	1.1143
2040	1.0109	1.0174	1.0090	1.0270	1.0281	1.1168
2041	1.0113	1.0186	1.0095	1.0279	1.0288	1.1189
2042	1.0116	1.0198	1.0099	1.0286	1.0294	1.1207
2043	1.0119	1.0207	1.0103	1.0293	1.0299	1.1221
2044	1.0122	1.0216	1.0106	1.0299	1.0303	1.1233
2045	1.0124	1.0225	1.0109	1.0303	1.0306	1.1243
2046	1.0125	1.0233	1.0111	1.0308	1.0309	1.1251
2047	1.0127	1.0240	1.0113	1.0311	1.0311	1.1258
2048	1.0128	1.0246	1.0115	1.0314	1.0313	1.1263
2049	1.0128	1.0252	1.0116	1.0316	1.0315	1.1268
2050	1.0129	1.0257	1.0117	1.0318	1.0316	1.1272
Enter Year: **NA**	**1**	**1**	**1**	**1**	**1**	**1**

*PM Exhaust off model factor is only applied to the PM Exhaust emissions not start/idle

The off-model adjustment factors need to be applied only to emissions from gasoline light duty vehicles (LDA, LDT1, LDT2 and MDV). Please note that the adjustment factors are by calendar year and includes all model years.

Enter NA in the date field if adjustments do not apply

Adjustment Factors

Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
HHDT	GAS	5.16284452	5.88865E-05	484.6824242	0.0004835	103.2981931	0.001178
HHDT	DSL	8105.74856	0.092452681	988266.7063	0.9858436	86260.08333	0.983867
HHDT	NG	336.20087	0.003834645	13706.5448	0.0136729	1311.183392	0.014955
		8447.11227		1002457.933		87674.56491	
LDA	GAS	715693.333	0.203383812	26189161.18	0.9588129	3369391.829	0.957505
LDA	DSL	6670.99857	0.001895746	255156.3961	0.0093415	31695.33585	0.009007
LDA	ELEC	24022.2737	0.006826585	869835.6575	0.0318456	117842.5205	0.033488
		746386.605		27314153.24		3518929.685	
LDT1	GAS	71628.1516	0.214597814	2413667.723	0.9922854	331256.0399	0.992443
LDT1	DSL	39.8937445	0.000119522	725.5581592	0.0002983	131.2284046	0.000393
LDT1	ELEC	483.88067	0.001449706	18039.75638	0.0074163	2391.302869	0.007164
		72151.926		2432433.037		333778.5712	
LDT2	GAS	246759.88	0.211129747	8311704.136	0.985	1150424.758	0.984313
LDT2	DSL	1518.21831	0.001299	59025.65402	0.006995	7458.416256	0.006381
LDT2	ELEC	2166.54623	0.001853714	67548.48679	0.008005	10876.24084	0.009306
		250444.645		8438278.277		1168759.415	
LHDT1	GAS	16540.6072	0.043541751	571642.7233	0.5826905	246430.4014	0.648707
LHDT1	DSL	10609.0763	0.027927497	409397.2662	0.4173095	133448.8335	0.351293
		27149.6835	0.071469249	981039.9895		379879.2349	
LHDT2	GAS	2219.57501	0.025784318	77018.28883	0.324042	33068.36042	0.384148
LHDT2	DSL	4214.57115	0.048959752	160661.6364	0.675958	53014.00308	0.615852
		6434.14615	0.074744069	237679.9253		86082.3635	
MCY	GAS	32119.629	1	243796.974	1	68862.74135	1
MDV	GAS	149542.914	0.210426485	4865312.486	0.9699211	690430.3337	0.971526
MDV	DSL	3426.38868	0.004821378	128241.968	0.0255656	16726.02912	0.023536
MDV	ELEC	687.544597	0.000967465	22639.77893	0.0045133	3509.471008	0.004938
		153656.847		5016194.233		710665.8338	
MH	GAS	2931.22046	7.483637918	26378.99882	0.7351199	293.2392951	0.748663
MH	DSL	984.446018	2.513368627	9504.940662	0.2648801	98.44460184	0.251337
		3915.66648		35883.93948		391.683897	
MHDT	GAS	1410.13442	0.011343156	72248.38534	0.1169629	28213.9694	0.226954
MHDT	DSL	9487.14764	0.076314852	545455.1439	0.8830371	96101.90575	0.773046
		10897.2821		617703.5293		124315.8751	
OBUS	GAS	502.212708	0.029373467	24696.47411	0.3120598	10048.27186	0.587704
OBUS	DSL	767.972857	0.044917273	54443.72504	0.6879402	7049.223278	0.412296
		1270.18556		79140.19916		17097.49514	
SBUS	GAS	235.345624	0.018628358	11037.57349	0.2564261	941.3824964	0.074513
SBUS	DSL	1013.21374	0.080199106	32006.30897	0.7435739	11692.34604	0.925487
		1248.55936		43043.88246		12633.72854	
UBUS	GAS	8.41556894	0.003929273	1059.36752	0.0177031	33.66227577	0.015717
UBUS	DSL	423.065115	0.197531312	46463.11854	0.7764467	1692.260461	0.790125
UBUS	NG	103.95989	0.048539415	12318.21749	0.2058501	415.8395591	0.194158
		535.440574		59840.70356		2141.762296	

Source: EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2021
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLI	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNE	N2O_IDLEX	N2O_STRE	ROG_RUNI	ROG_IDLEX	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_REST	ROG_DIUR	TOG_RUNI	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_REST	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2021	HHDT	Aggregate	Aggregate	Gasoline	5.162845	484.6824	103.2982	4.062598	0	0.407731	0.001311	0	0.000823	0.005	0.02646	0.001426	0	0.000895	0.02	0.06174	2025.269	0	47.29512	0.112325	0	0.000414	0.149526	0	0.012575	0.585782	0	0.002169	0.156953	0.96912	0.038977	0.070674	0.854771	0	0.002374	0.156953	0.96912	0.038977	0.070674	32.05552	0	5.02137	0.020042	0	0.000468
Santa Clara	2021	HHDT	Aggregate	Aggregate	Diesel	8105.749	988266.7	86260.08	4.147844	63.6365	1.887942	0.058758	0.087222	0	0.008868	0.026073	0.061415	0.091165	0	0.035473	0.060837	1528.481	11606.57	0	0.006422	0.218177	0	0.240256	1.824391	0	0.138263	4.697294	0	0	0	0	0.157402	5.347512	0	0	0	0	0	0.5229	60.00634	0	0.01444	0.109653	0
Santa Clara	2021	HHDT	Aggregate	Aggregate	Natural Ga	336.2009	13706.54	1311.183	1.939434	21.5699	0	0.005088	0.034407	0	0	0.009	0.02646	0.005318	0.035962	0	0.036	0.06174	3233.282	4101.533	0	3.57235	1.261083	0	0.659126	0.836124	0	0.176593	0.0496	0	0	0	3.788896	1.323011	0	0	0	0	0	10.63714	21.51231	0	0	0	0
Santa Clara	2021	LDA	Aggregate	Aggregate	Gasoline	715693.3	26189161	3369392	0.044609	0	0.21159	0.001358	0	0.001822	0.002	0.01575	0.001477	0	0.001981	0.008	0.03675	266.3197	0	56.92202	0.002711	0	0.058853	0.004863	0	0.027764	0.010662	0	0.269366	0.108645	0.230465	0.191774	0.221801	0.015551	0	0.294921	0.108645	0.230465	0.191774	0.221801	0.690036	0	2.392069	0.002635	0	0.000563
Santa Clara	2021	LDA	Aggregate	Aggregate	Diesel	6670.999	255156.4	31695.34	0.087271	0	0	0.007648	0	0	0.002	0.01575	0.007994	0	0	0.008	0.03675	205.4073	0	0	0.000708	0	0	0.032287	0	0	0.015244	0	0	0	0	0	0.017354	0	0	0	0	0	0	0.210705	0	0	0.001942	0	0
Santa Clara	2021	LDA	Aggregate	Aggregate	Electricity	24022.27	869835.7	117842.5	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2021	LDT1	Aggregate	Aggregate	Gasoline	71628.15	2413668	331256	0.105802	0	0.272111	0.001862	0	0.002385	0.002	0.01575	0.002025	0	0.002594	0.008	0.03675	308.1227	0	66.19689	0.005661	0	0.076866	0.008066	0	0.03002	0.024911	0	0.384911	0.189186	0.681609	0.358705	0.461608	0.036311	0	0.421425	0.189186	0.681609	0.358705	0.461608	1.200263	0	2.537143	0.003049	0	0.000655
Santa Clara	2021	LDT1	Aggregate	Aggregate	Diesel	39.89374	725.5582	131.2284	1.268412	0	0	0.168474	0	0	0.002	0.01575	0.176091	0	0	0.008	0.03675	413.9966	0	0	0.010139	0	0	0.065074	0	0	0.218297	0	0	0	0	0	0.248517	0	0	0	0	0	0	1.237222	0	0	0.003914	0	0
Santa Clara	2021	LDT1	Aggregate	Aggregate	Electricity	483.8807	18039.76	2391.303	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2021	LDT2	Aggregate	Aggregate	Gasoline	246759.9	8311704	1150425	0.087782	0	0.326789	0.001356	0	0.001737	0.002	0.01575	0.001475	0	0.001889	0.008	0.03675	338.518	0	73.70907	0.004072	0	0.077467	0.007118	0	0.035187	0.01674	0	0.36702	0.133338	0.446757	0.285742	0.307995	0.024414	0	0.40184	0.133338	0.446757	0.285742	0.307995	0.930639	0	3.014399	0.00335	0	0.000729
Santa Clara	2021	LDT2	Aggregate	Aggregate	Diesel	1518.218	59025.65	7458.416	0.041668	0	0	0.004904	0	0	0.002	0.01575	0.005126	0	0	0.008	0.03675	282.8504	0	0	0.000657	0	0	0.04446	0	0	0.01415	0	0	0	0	0	0.016109	0	0	0	0	0	0	0.12212	0	0	0.002674	0	0
Santa Clara	2021	LDT2	Aggregate	Aggregate	Electricity	2166.546	67548.49	10876.24	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2021	LHDT1	Aggregate	Aggregate	Gasoline	16540.61	571642.7	246430.4	0.262338	0.03949	0.549198	0.002191	0	0.000401	0.002	0.03276	0.002383	0	0.000436	0.008	0.07644	1017.255	122.0379	19.14342	0.012124	0.123606	0.02716	0.015765	0.003154	0.042297	0.059375	0.45228	0.137987	0.130258	0.89758	0.02599	0.052227	0.08664	0.659966	0.151079	0.130258	0.89758	0.02599	0.052227	1.086844	3.748723	1.811769	0.010067	0.001208	0.000189
Santa Clara	2021	LHDT1	Aggregate	Aggregate	Diesel	10609.08	409397.3	133448.8	1.862203	2.152154	0	0.023297	0.02704	0	0.003	0.03276	0.02435	0.028263	0	0.012	0.07644	552.5074	134.745	0	0.007585	0.005098	0	0.086846	0.02118	0	0.163311	0.10976	0	0	0	0	0.185919	0.124954	0	0	0	0	0	0.686231	0.909745	0	0.005223	0.001274	0
Santa Clara	2021	LHDT2	Aggregate	Aggregate	Gasoline	2219.575	77018.29	33068.36	0.272207	0.039035	0.535592	0.002122	0	0.00036	0.002	0.03822	0.002307	0	0.000392	0.008	0.08918	1160.22	140.2323	21.7453	0.010038	0.122897	0.026292	0.016913	0.003077	0.040901	0.045762	0.447168	0.133103	0.127611	0.884759	0.023996	0.048928	0.066776	0.652507	0.145731	0.127611	0.884759	0.023996	0.048928	0.835401	3.750559	1.839341	0.011481	0.001388	0.000215
Santa Clara	2021	LHDT2	Aggregate	Aggregate	Diesel	4214.571	160661.6	53014	1.542154	2.158821	0	0.022944	0.027219	0	0.003	0.03822	0.023981	0.02845	0	0.012	0.08918	621.5562	215.9968	0	0.007204	0.005098	0	0.0977	0.033952	0	0.155094	0.10976	0	0	0	0	0.176564	0.124954	0	0	0	0	0	0.650931	0.909745	0	0.005876	0.002042	0
Santa Clara	2021	MCY	Aggregate	Aggregate	Gasoline	32119.63	239436.8	64239.26	1.15497	0	0.270443	0.001772	0	0.00303	0.001	0.00504	0.001893	0	0.003213	0.004	0.01176	210.3906	0	61.75755	0.33122	0	0.25818	0.066438	0	0.015338	2.253066	0	1.967635	0.716612	2.132348	1.002545	1.822873	2.774349	0	2.14098	0.716612	2.132348	1.002545	1.822873	19.56337	0	8.976601	0.002082	0	0.000611
Santa Clara	2021	MDV	Aggregate	Aggregate	Gasoline	149542.9	4865312	690430.3	0.11839	0	0.410054	0.001476	0	0.002019	0.002	0.01575	0.001604	0	0.002194	0.008	0.03675	409.4409	0	89.81723	0.005494	0	0.095775	0.008922	0	0.03884	0.024634	0	0.48393	0.15482	0.49034	0.340146	0.361645	0.034949	0	0.529797	0.15482	0.49034	0.340146	0.361645	1.127252	0	3.59329	0.004052	0	0.000889
Santa Clara	2021	MDV	Aggregate	Aggregate	Diesel	3426.389	128242	16726.03	0.044109	0	0	0.004602	0	0	0.002	0.01575	0.00481	0	0	0.008	0.03675	370.3019	0	0	0.000514	0	0	0.058206	0	0	0.011068	0	0	0	0	0	0.0126	0	0	0	0	0	0	0.188966	0	0	0.003501	0	0
Santa Clara	2021	MDV	Aggregate	Aggregate	Electricity	687.5446	22639.78	3509.471	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2021	MH	Aggregate	Aggregate	Gasoline	2931.22	26379	293.2393	0.474084	0	0.332292	0.001724	0	0.000381	0.003	0.05586	0.001875	0	0.000414	0.012	0.13034	1782.907	0	26.40751	0.017557	0	0.033119	0.028008	0	0.03399	0.078746	0	0.143103	0.096257	2.347589	0.039223	0.115979	0.114906	0	0.15668	0.096257	2.347589	0.039223	0.115979	2.065959	0	3.165436	0.017643	0	0.000261
Santa Clara	2021	MH	Aggregate	Aggregate	Diesel	984.446	9504.941	98.4446	4.382014	0	0	0.092722	0	0	0.004	0.05586	0.096914	0	0	0.016	0.13034	1031.304	0	0	0.005198	0	0	0.162107	0	0	0.111901	0	0	0	0	0	0.127391	0	0	0	0	0	0	0.400207	0	0	0.00975	0	0
Santa Clara	2021	MHDT	Aggregate	Aggregate	Gasoline	1410.134	72248.39	28213.97	0.591018	0.088168	0.389628	0.001358	0	0.000497	0.003	0.05586	0.001477	0	0.00054	0.012	0.13034	1752.404	539.4334	40.1358	0.018696	0.257865	0.042095	0.027833	0.0072	0.028931	0.092815	1.007984	0.233354	0.09611	0.563096	0.020857	0.043005	0.135436	1.470848	0.255494	0.09611	0.563096	0.020857	0.043005	2.155492	15.06152	5.301778	0.017341	0.005338	0.000397
Santa Clara	2021	MHDT	Aggregate	Aggregate	Diesel	9487.148	545455.1	96101.91	3.194916	8.74953	1.398943	0.080969	0.02675	0	0.003	0.05586	0.08463	0.02796	0	0.012	0.13034	1081.992	930.4887	0	0.009431	0.005843	0	0.170074	0.14626	0	0.203046	0.125806	0	0	0	0	0.231153	0.143221	0	0	0	0	0	0.573058	2.609835	0	0.010222	0.008791	0
Santa Clara	2021	OBUS	Aggregate	Aggregate	Gasoline	502.2127	24696.47	10048.27	0.501682	0.065104	0.329488	0.000916	0	0.000212	0.003	0.05586	0.000996	0	0.00023	0.012	0.13034	1793.018	381.4064	26.74037	0.014791	0.200187	0.030949	0.025044	0.005583	0.026445	0.070359	0.746923	0.159737	0.026848	0.294072	0.016083	0.036997	0.102667	1.089908	0.174892	0.026848	0.294072	0.016083	0.036997	1.576822	5.778528	3.351004	0.017743	0.003774	0.000265
Santa Clara	2021	OBUS	Aggregate	Aggregate	Diesel	767.9729	54443.73	7049.223	2.779706	13.63199	1.84	0.044765	0.045778	0	0.003	0.05586	0.046789	0.047848	0	0.012	0.13034	1202.163	1945.083	0	0.005321	0.035079	0	0.188963	0.30574	0	0.114561	0.755235	0	0	0	0	0.130419	0.859777	0	0	0	0	0	0.397353	8.822131	0	0.011357	0.018376	0
Santa Clara	2021	SBUS	Aggregate	Aggregate	Gasoline	235.3456	11037.57	941.3825	0.448701	0.923977	0.560273	0.001205	0	0.000494	0.002	0.3192	0.001311	0	0.000537	0.008	0.7448	872.735	2601.946	49.24562	0.012804	2.443216	0.058897	0.025163	0.088108	0.05292	0.063019	10.60409	0.336056	0.060254	0.423958	0.009983	0.025	0.091957	15.47346	0.367939	0.060254	0.423958	0.009983	0.025	1.371308	82.01386	8.8054	0.008636	0.025748	0.000487
Santa Clara	2021	SBUS	Aggregate	Aggregate	Diesel	1013.214	32006.31	11692.35	6.970742	45.79682	0.74176	0.043352	0.053733	0	0.003	0.3192	0.045313	0.056163	0	0.012	0.7448	1153.149	3727.733	0	0.004763	0.013307	0	0.181259	0.585948	0	0.102551	0.286497	0	0	0	0	0.116746	0.326154	0	0	0	0	0	0.279558	5.707206	0	0.010894	0.035218	0
Santa Clara	2021	UBUS	Aggregate	Aggregate	Gasoline	8.415569	1059.368	33.66228	0.456042	0	1.173674	0.000327	0	9.66E-05	0.003	0.05586	0.000355	0	0.000105	0.012	0.13034	2351.957	0	104.4673	0.006811	0	0.169572	0.0345	0	0.088962	0.022728	0	0.727258	0.171351	1.189018	0.028073	0.044636	0.033164	0	0.796256	0.171351	1.189018	0.028073	0.044636	0.499495	0	8.852622	0.023275	0	0.001034
Santa Clara	2021	UBUS	Aggregate	Aggregate	Diesel	423.0651	46463.12	1692.26	0.803452	0	0	0.005651	0	0	0.008415	0.029326	0.005907	0	0	0.03366	0.068427	1481.161	0	0	0.077358	0	0	0.232818	0	0	0.001105	0	0	0	0	0	0.078949	0	0	0	0	0	0	0.131304	0	0	0.014002	0	0
Santa Clara	2021	UBUS	Aggregate	Aggregate	Natural Ga	103.9599	12318.22	415.8396	0.489341	0	0	0.003183	0	0	0.008475	0.029034	0.003327	0	0	0.033899	0.067745	2016.304	0	0	6.413624	0	0	0.411037	0	0	0.091638	0	0	0	0	0	6.545574	0	0	0	0	0	0	49.80412	0	0	0	0	0

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	15		300	-	117	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3,240	-	2,340
Site Preparation	18		180	-	-	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1,944	-	-
Grading	15		300	-	-	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3,240	-	-
Trenching	10		200	-	-	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	2,160	-	-
Building Construction	87	34	20,010	7,820	400	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	216,108	57,086	2,920
Paving	15		300	-	56	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	3,240	-	409
Architectural Coating	17		340	-		10.8	7.3	20	LD_Mix	HDT_Mix	HHDT			

Number of Days Per Year					
2021	1/1/21	12/31/21	365	**261**	
2022	1/1/22	3/24/22	83	**59**	
			448	**320**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/1/2021	1/28/2021	5	20
Site Preparation	1/29/2021	2/11/2021	5	10
Grading	2/12/2021	3/11/2021	5	20
Trenching	2/12/2021	3/11/2021	5	20
Building Construction	3/12/2021	1/27/2022	5	230
Paving	1/28/2022	2/24/2022	5	20
Architectural Coating	2/25/2022	3/24/2022	5	20

Summary of Construction Traffic Emissions (EMFAC2017)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2
					Grams						
Hauling	730.05	24,465.85	6,383.11	84.43	1,694.97	746.93	2,441.90	255.04	390.13	645.16	9,197,208
Vendor	7,722.98	213,428.64	62,500.81	776.63	17,068.71	8,556.07	25,624.78	2,568.30	4,483.12	7,051.42	83,638,397
Worker	18,660.30	16,049.74	209,582.26	596.14	68,749.67	10,663.41	79,413.08	10,344.64	4,425.64	14,770.28	63,119,192
Total (g)	27,113.34	253,944.22	278,466.18	1,457.19	87,513.35	19,966.41	107,479.76	13,167.98	9,298.88	22,466.86	155,954,796
Total (lbs)	59.77	559.85	613.91	3.21	192.93	44.02	236.95	29.03	20.50	49.53	343,821
Total (tons)	0.03	0.28	0.31	0.00	0.10	0.02	0.12	0.01	0.01	0.02	172
Total (MT)											156

YEAR											
						Tons					
	2022	0.0055	0.0519	0.0569	0.0003	0.0179	0.0041	0.0219	0.0027	0.0019	0.0046	28.8934

		Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust PM10	PM10_PMBW	PM10_PMTW	PM10_IDLEX	PM10_RUNEX	PM10_STREX	Road Dust PM25	PM25_PMBW	PM25_PMTW	PM25_IDLEX	PM25_RUNEX	PM25_STREX	CO2_NBIO_IDLEX	CO2_NBIO_RUNEX	CO2_NBIO_STREX
Category																													19	22	23	8	9	10
Hauling	HHDT	100.0	1	3.39912E-06	0.000152206	0.429371666	1.88626E-06	0.08527405	0.00092348	2.55882E-06	5.9173485	3.510881156	2.046637573	5.939213	0.52508074	0.0058678	0.01029663	0.013852696	5.15679E-07		0.060884	0.035493	0.003362	0.035044	9.00263E-07		0.026093	0.008873	0.0032166	0.033528	8.278E-07	1105.7031	1510.6566	0.0521109
	MHD	0.0	0	0.00044818	0.02058451	0.019512587	0.000221882	0.09170637	0.11899793	0.05147655	0.5645581	2.060753772	1.380182496	0.373927	0.48464994	1.1601125	0.00071898	0.010780743	9.08684E-05	0.299	0.13034	0.012	0.001235	0.03679	0.000119776	0.04499	0.05586	0.003	0.0011811	0.0351917	0.0001101	75.80618	1131.3081	9.182511
Vendor	HHDT	62.1	0.62055	2.10934E-06	9.44524E-05	0.266448661	1.17053E-06	0.05291722	0.00057307	1.58789E-06	3.6720392	2.178694258	1.270050831	3.685607	0.32584139	0.0036413	0.00638963	0.008596358	3.20007E-07		0.037782	0.022025	0.002086	0.021747	5.58663E-07		0.016192	0.005506	0.0019961	0.0208059	5.137E-07	686.14938	937.44524	0.0323377
	MHD	37.9	0.37945	0.00017006	0.007810693	0.007403957	8.41922E-05	0.03479754	0.04515319	0.019532528	0.2142188	0.781943066	0.523703582	0.141885	0.18389808	0.4401991	0.00027281	0.004090701	3.44796E-05		0.049457	0.004553	0.000468	0.01396	4.54485E-05		0.021196	0.001138	0.0004482	0.0133533	4.179E-05	28.764289	429.2694	3.4842594
			1	0.000172169	0.007905145	0.273852618	8.53627E-05	0.08771476	0.04572626	0.019534116	3.8862581	2.960637324	1.793754413	3.827492	0.50973947	0.4438404	0.00666244	0.012687058	3.47996E-05	0.299	0.087239	0.026579	0.002555	0.035706	4.60072E-05	0.04499	0.037388	0.006645	0.0024442	0.0341593	4.23E-05	714.91367	1366.7146	3.5165971
Worker	LDA	71.7	0.71721	0.029671033	0.069267116	0	0.025940935	0.00627624	0.15137995	0.167051963	0	0.027051876	0.135181243	0	0.43493276	1.5937602	0	6.55844E-05	0		0.026358	0.005738	0	0.001017	0.001303368		0.011296	0.001434	0	0.0009369	0.0011984	0	179.16263	37.967338
	LDT1	6.4	0.06398	0.005757648	0.011006531	0	0.004554352	0.00134858	0.0398569	0.021853718	0	0.005794229	0.015927064	0	0.06769103	0.1553356	0	0.000166314	0		0.002351	0.000512	0	0.000122	0.000153462		0.001008	0.000128	0	0.0001119	0.0001411	0	19.042084	4.0877315
	LDT2	21.9	0.21881	0.013812138	0.027546337	0	0.012975589	0.00322831	0.0937708	0.072888339	0	0.016682604	0.064402681	0	0.18524597	0.6281116	0	0.002358898	1.98826E-05		0.008041	0.00175	0	0.000314	0.000393391		0.003446	0.000438	0	0.0002887	0.0003617	0	70.908094	15.344186
			1	0.049240819	0.107819983	0	0.043470876	0.01085313	0.28500766	0.26179402	0	0.049528709	0.215510989	0	0.68786976	2.3772074	0	0.002590796	1.98826E-05	0.299	0.03675	0.008	0	0.001452	0.001850221	0.04499	0.01575	0.002	0	0.0013375	0.0017013	0	269.11281	57.399256

Adjustment Factors

Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
HHDT	GAS	4.973172	5.55717E-05	516.9337951	0.000504	99.50322533	0.001112
HHDT	DSL	8277.46332	0.092494875	1011013.237	0.98563	88031.26312	0.983688
HHDT	NG	348.790157	0.003897487	14223.1379	0.013866	1360.281611	0.0152
		8631.22665		1025753.309		89491.04796	
LDA	GAS	733557.695	0.202806099	26455303.53	0.956207	3456648.544	0.955657
LDA	DSL	7146.66761	0.001975833	268335.1014	0.0096988	33963.02434	0.00939
LDA	ELEC	25894.6084	0.007159061	943282.8126	0.0340942	126428.0465	0.034953
		766598.971		27666921.44		3617039.615	
LDT1	GAS	73556.9159	0.213850423	2443329.481	0.9899812	340743.7941	0.990637
LDT1	DSL	36.8387989	0.000107101	667.9121032	0.0002706	121.0603114	0.000352
LDT1	ELEC	624.877132	0.001816692	24059.06824	0.0097482	3099.468736	0.009011
		74218.6318		2468056.461		343964.3232	
LDT2	GAS	250455.374	0.210629786	8295824.493	0.9828491	1167439.23	0.981802
LDT2	DSL	1663.51269	0.001398993	62652.21286	0.0074227	8136.946529	0.006843
LDT2	ELEC	2695.96042	0.002267268	82111.52239	0.0097282	13502.43635	0.011355
		254814.847		8440588.228		1189078.613	
LHDT1	GAS	16536.9032	0.042835608	566343.7683	0.5722898	246375.2176	0.638187
LHDT1	DSL	11104.4362	0.028763867	423266.3697	0.4277102	139679.8374	0.361813
		27641.3393	0.071599475	989610.138		386055.055	
LHDT2	GAS	2253.29966	0.025202537	77523.95545	0.3179251	33570.8075	0.37548
LHDT2	DSL	4438.98491	0.049648825	166319.5005	0.6820749	55836.84587	0.62452
		6692.28456	0.074851361	243843.4559		89407.65337	
MCY	GAS	32925.3571	1	243796.974	1	68862.74135	1
MDV	GAS	151961.055	0.209348791	4876240.398	0.9662516	702265.7233	0.967475
MDV	DSL	3721.22459	0.005126536	135478.7608	0.0268458	18101.22476	0.024937
MDV	ELEC	1080.16696	0.001488089	34834.40687	0.0069026	5508.057389	0.007588
		156762.446		5046553.566		725875.0054	
MH	GAS	2891.83477	7.391564061	26265.32654	0.7300457	289.29915	0.739452
MH	DSL	1019.35336	2.605479314	9712.320006	0.2699543	101.935336	0.260548
		3911.18813		35977.64654		391.2344859	
MHDT	GAS	1456.11161	0.011737939	75284.47702	0.1200311	29133.88114	0.234853
MHDT	DSL	9430.02377	0.076016866	551923.8216	0.8799689	94917.84867	0.765147
		10886.1354		627208.2986		124051.7298	
OBUS	GAS	501.965542	0.02946728	24150.24818	0.3096605	10043.32656	0.589581
OBUS	DSL	762.396385	0.044755558	53839.186	0.6903395	6991.348292	0.410419
		1264.36193		77989.43418		17034.67485	
SBUS	GAS	249.313359	0.019631483	11500.83332	0.2645889	997.2534368	0.078526
SBUS	DSL	1014.08642	0.079851398	31965.9607	0.7354111	11702.41665	0.921474
		1263.39978		43466.79403		12699.67009	
UBUS	GAS	8.41939574	0.003929273	1059.849245	0.0177031	33.67758298	0.015717
UBUS	DSL	423.235801	0.197521187	46482.15589	0.7764118	1692.943206	0.790085
UBUS	NG	104.028857	0.04854954	12325.90971	0.2058851	416.1154282	0.194198
		535.684054		59867.91485		2142.736217	

Adjustment Factors for EMFAC2017 Gasoline Light Duty Vehicles						
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust	CO2 Exhaust
NA	1	1	1	1	1	1
2021	1.0002	1.0001	1.0002	1.0009	1.0005	1.0023
2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065
2023	1.0007	1.0006	1.0007	1.0032	1.0027	1.0126
2024	1.0012	1.0010	1.0011	1.0051	1.0044	1.0207
2025	1.0018	1.0016	1.0016	1.0074	1.0065	1.0309
2026	1.0023	1.0022	1.0020	1.0091	1.0083	1.0394
2027	1.0028	1.0028	1.0024	1.0105	1.0102	1.0475
2028	1.0034	1.0035	1.0028	1.0117	1.0120	1.0554
2029	1.0040	1.0042	1.0032	1.0129	1.0138	1.0629
2030	1.0047	1.0051	1.0037	1.0142	1.0156	1.0702
2031	1.0054	1.0061	1.0042	1.0155	1.0173	1.0770
2032	1.0061	1.0072	1.0047	1.0169	1.0189	1.0834
2033	1.0068	1.0083	1.0052	1.0182	1.0204	1.0893
2034	1.0075	1.0095	1.0058	1.0196	1.0218	1.0947
2035	1.0081	1.0108	1.0063	1.0210	1.0232	1.0997
2036	1.0088	1.0121	1.0069	1.0223	1.0244	1.1041
2037	1.0094	1.0134	1.0074	1.0236	1.0255	1.1080
2038	1.0099	1.0148	1.0079	1.0248	1.0265	1.1114
2039	1.0104	1.0161	1.0085	1.0259	1.0274	1.1143
2040	1.0109	1.0174	1.0090	1.0270	1.0281	1.1168
2041	1.0113	1.0186	1.0095	1.0279	1.0288	1.1189
2042	1.0116	1.0198	1.0099	1.0286	1.0294	1.1207
2043	1.0119	1.0207	1.0103	1.0293	1.0299	1.1221
2044	1.0122	1.0216	1.0106	1.0299	1.0303	1.1233
2045	1.0124	1.0225	1.0109	1.0303	1.0306	1.1243
2046	1.0125	1.0233	1.0111	1.0308	1.0309	1.1251
2047	1.0127	1.0240	1.0113	1.0311	1.0311	1.1258
2048	1.0128	1.0246	1.0115	1.0314	1.0313	1.1263
2049	1.0128	1.0252	1.0116	1.0316	1.0315	1.1268
2050	1.0129	1.0257	1.0117	1.0318	1.0316	1.1272
Enter Year: **NA**	**1**	**1**	**1**	**1**	**1**	**1**

*PM Exhaust off model factor is only applied to the PM Exhaust emissions not start/idle

The off-model adjustment factors need to be applied only to emissions from gasoline light duty vehicles (LDA, LDT1, LDT2 and MDV). Please note that the adjustment factors are by calendar year and includes all model years.

Enter NA in the date field if adjustments do not apply

Source: EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLI	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNE	CO2_IDLEX	CO2_STRE	CH4_RUNE	CH4_IDLEX	CH4_STRE	N2O_RUNI	N2O_IDLE	N2O_STRE	ROG_RUNI	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_REST	ROG_DIUR	TOG_RUNI	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_REST	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2022	HHDT	Aggregate	Aggregate	Gasoline	4.973172	516.9338	99.50323	3.654204	0	0.338391	0.001236	0	0.000744	0.005	0.02646	0.001344	0	0.00081	0.02	0.06174	1964.961	0	46.86739	0.097725	0	0.00044	0.140899	0	0.010576	0.494672	0	0.002301	0.136891	0.830556	0.033943	0.061166	0.721824	0	0.00252	0.136891	0.830556	0.033943	0.061166	30.00648	0	5.27737	0.019445	0	0.000464
Santa Clara	2022	HHDT	Aggregate	Aggregate	Diesel	8277.463	1011.013	88031.26	3.535499	63.08378	2.080194	0.033949	0.03347	0	0.008873	0.026088	0.035484	0.034983	0	0.035494	0.060872	1486.606	11783.13	0	0.003901	0.215524	0	0.233674	1.852143	0	0.08399	4.640183	0	0	0	0	0.095616	5.282495	0	0	0	0	0	0	0.366847	63.30293	0	0.014045	0.111321	0
Santa Clara	2022	HHDT	Aggregate	Aggregate	Natural Ga	348.7902	14223.14	1360.282	1.755776	21.14752	0	0.004789	0.030991	0	0.009	0.02646	0.005006	0.032392	0	0.036	0.06174	3203.692	4060.116	0	3.511574	1.248503	0	0.653093	0.827681	0	0.161697	0.045805	0	0	0	0	3.710887	1.306054	0	0	0	0	0	0	10.70122	21.55662	0	0	0	0
Santa Clara	2022	LDA	Aggregate	Aggregate	Gasoline	733557.7	26455304	3456649	0.03872	0	0.197227	0.001299	0	0.001748	0.002	0.01575	0.001413	0	0.001902	0.008	0.03675	259.2126	0	55.39361	0.002345	0	0.054199	0.004449	0	0.026685	0.009015	0	0.243726	0.100881	0.22086	0.178182	0.20337	0.013151	0	0.266848	0.100881	0.22086	0.178182	0.20337	0.63218	0	2.325265	0.002565	0	0.000548
Santa Clara	2022	LDA	Aggregate	Aggregate	Diesel	7146.668	268335.1	33963.02	0.071556	0	0	0.006579	0	0	0.002	0.01575	0.006877	0	0	0.008	0.03675	200.3149	0	0	0.000626	0	0	0.031487	0	0	0.013485	0	0	0	0	0	0.015352	0	0	0	0	0	0	0.198488	0	0	0.001894	0	0
Santa Clara	2022	LDA	Aggregate	Aggregate	Electricity	25894.61	943282.8	126428	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2022	LDT1	Aggregate	Aggregate	Gasoline	73556.92	2443329	340743.8	0.091156	0	0.251292	0.001724	0	0.002226	0.002	0.01575	0.001875	0	0.002421	0.008	0.03675	300.527	0	64.49485	0.004882	0	0.070027	0.007217	0	0.028775	0.021236	0	0.344801	0.173613	0.628849	0.332831	0.420667	0.030964	0	0.377511	0.173613	0.628849	0.332831	0.420667	1.068397	0	2.450832	0.002974	0	0.000638
Santa Clara	2022	LDT1	Aggregate	Aggregate	Diesel	36.8388	667.9121	121.0603	1.185315	0	0	0.157566	0	0	0.002	0.01575	0.164691	0	0	0.008	0.03675	408.3259	0	0	0.009501	0	0	0.064183	0	0	0	0	0	0	0	0	0.232879	0	0	0	0	0	0	1.159574	0	0	0.00386	0	0
Santa Clara	2022	LDT1	Aggregate	Aggregate	Electricity	624.8771	24059.07	3099.469	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2022	LDT2	Aggregate	Aggregate	Gasoline	250455.4	8295824	1167439	0.077278	0	0.299792	0.001307	0	0.001684	0.002	0.01575	0.001421	0	0.001831	0.008	0.03675	327.6413	0	71.42656	0.003665	0	0.072415	0.006473	0	0.033384	0.014906	0	0.339292	0.128171	0.436499	0.281495	0.299507	0.021744	0	0.371482	0.128171	0.436499	0.281495	0.299507	0.860463	0	2.923834	0.003242	0	0.000707
Santa Clara	2022	LDT2	Aggregate	Aggregate	Diesel	1663.513	62652.21	8136.947	0.039252	0	0	0.004754	0	0	0.002	0.01575	0.004969	0	0	0.008	0.03675	275.5741	0	0	0.000647	0	0	0.043316	0	0	0.013935	0	0	0	0	0	0.015864	0	0	0	0	0	0	0.123161	0	0	0.002605	0	0
Santa Clara	2022	LDT2	Aggregate	Aggregate	Electricity	2695.96	82111.52	13502.44	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2022	LHDT1	Aggregate	Aggregate	Gasoline	16536.9	566343.8	246375.2	0.235238	0.038471	0.530556	0.002161	0	0.000388	0.002	0.03276	0.00235	0	0.000422	0.008	0.07644	1006.569	121.1222	18.98971	0.01086	0.121305	0.025473	0.014262	0.003125	0.041267	0.052874	0.440699	0.129054	0.125369	0.861898	0.025267	0.050121	0.077153	0.643067	0.141298	0.125369	0.861898	0.025267	0.050121	0.97349	3.751848	1.764958	0.009961	0.001199	0.000188
Santa Clara	2022	LHDT1	Aggregate	Aggregate	Diesel	11104.44	423266.4	139679.8	1.613919	2.033114	0	0.021273	0.026869	0	0.003	0.03276	0.022235	0.028084	0	0.012	0.07644	544.3042	133.047	0	0.007318	0.005098	0	0.085557	0.020913	0	0.157544	0.10976	0	0	0	0	0.179353	0.124954	0	0	0	0	0	0	0.661457	0.909745	0	0.005146	0.001258	0
Santa Clara	2022	LHDT2	Aggregate	Aggregate	Gasoline	2253.3	77523.96	33570.81	0.240034	0.037891	0.516259	0.002078	0	0.000346	0.002	0.03822	0.00226	0	0.000377	0.008	0.08918	1147.291	139.0737	21.54397	0.008737	0.120275	0.024583	0.015135	0.003045	0.039911	0.039365	0.434196	0.123837	0.121118	0.819863	0.023133	0.046225	0.057441	0.633578	0.135586	0.121118	0.819863	0.023133	0.046225	0.722025	3.75488	1.776904	0.011353	0.001376	0.000213
Santa Clara	2022	LHDT2	Aggregate	Aggregate	Diesel	4438.985	166319.5	55836.85	1.346918	2.041795	0	0.021771	0.027131	0	0.003	0.03822	0.022756	0.028358	0	0.012	0.08918	612.5422	213.4891	0	0.007003	0.005098	0	0.096283	0.033558	0	0.150761	0.10976	0	0	0	0	0.171631	0.124954	0	0	0	0	0	0	0.634383	0.909745	0	0.005791	0.002018	0
Santa Clara	2022	MCY	Aggregate	Aggregate	Gasoline	32925.36	241011	65850.71	1.151611	0	0.270649	0.001812	0	0.002978	0.001	0.00504	0.001937	0	0.003161	0.004	0.01176	210.2729	0	61.39967	0.328946	0	0.256691	0.06628	0	0.015352	2.228751	0	1.954835	0.704215	2.060677	0.995009	1.817765	2.753726	0	2.127328	0.704215	2.060677	0.995009	1.817765	19.18808	0	9.0045	0.002081	0	0.000608
Santa Clara	2022	MDV	Aggregate	Aggregate	Gasoline	151961.1	4876240	702265.7	0.099589	0	0.371177	0.001397	0	0.001912	0.002	0.01575	0.001519	0	0.002079	0.008	0.03675	396.236	0	86.90417	0.004621	0	0.087878	0.007887	0	0.036541	0.019446	0	0.437645	0.147462	0.472734	0.331376	0.347901	0.028322	0	0.479161	0.147462	0.472734	0.331376	0.347901	0.980018	0	3.406111	0.003921	0	0.00086
Santa Clara	2022	MDV	Aggregate	Aggregate	Diesel	3721.225	135478.8	18101.22	0.038775	0	0	0.004203	0	0	0.002	0.01575	0.004393	0	0	0.008	0.03675	360.3121	0	0	0.000478	0	0	0.056636	0	0	0.010285	0	0	0	0	0	0.011709	0	0	0	0	0	0	0.184421	0	0	0.003406	0	0
Santa Clara	2022	MDV	Aggregate	Aggregate	Electricity	1080.167	34834.41	5508.057	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2022	MH	Aggregate	Aggregate	Gasoline	2891.835	26265.33	289.2991	0.413359	0	0.334516	0.001633	0	0.000362	0.003	0.05586	0.001776	0	0.000394	0.012	0.13034	1756.095	0	25.97914	0.015124	0	0.032419	0.025426	0	0.034963	0.066433	0	0.137518	0.088945	2.156488	0.036513	0.106238	0.096939	0	0.150564	0.088945	2.156488	0.036513	0.106238	1.697423	0	3.037213	0.017378	0	0.000257
Santa Clara	2022	MH	Aggregate	Aggregate	Diesel	1019.353	9712.32	101.9353	4.184918	0	0	0.085576	0	0	0.004	0.05586	0.089445	0	0	0.016	0.13034	1018.587	0	0	0.005027	0	0	0.160108	0	0	0.108225	0	0	0	0	0	0.123206	0	0	0	0	0	0	0.382773	0	0	0.009629	0	0
Santa Clara	2022	MHDT	Aggregate	Aggregate	Gasoline	1456.112	75284.48	29133.88	0.474932	0.088412	0.377896	0.001319	0	0.000469	0.003	0.05586	0.001435	0	0.00051	0.012	0.13034	1722.789	532.6547	39.09003	0.014881	0.262553	0.04023	0.023376	0.007484	0.029181	0.072945	1.011617	0.219187	0.087649	0.506692	0.018903	0.038182	0.106442	1.47615	0.239982	0.087649	0.506692	0.018903	0.038182	1.680953	15.10368	4.939745	0.017048	0.005271	0.000387
Santa Clara	2022	MHDT	Aggregate	Aggregate	Diesel	9430.024	551923.8	94917.85	2.277066	7.413096	1.687822	0.039812	0.015538	0	0.003	0.05586	0.041612	0.01624	0	0.012	0.13034	1050.628	914.98	0	0.004378	0.004667	0	0.165144	0.143822	0	0.094265	0.100481	0	0	0	0	0.107314	0.11439	0	0	0	0	0	0	0.32147	2.58681	0	0.009926	0.008644	0
Santa Clara	2022	OBUS	Aggregate	Aggregate	Gasoline	501.9655	24150.25	10043.33	0.443255	0.065137	0.32561	0.000952	0	0.000213	0.003	0.05586	0.001035	0	0.000232	0.012	0.13034	1767.375	377.9272	26.38965	0.013022	0.200837	0.030332	0.022732	0.005646	0.026387	0.061436	0.747416	0.156088	0.026802	0.295531	0.015889	0.036065	0.089647	1.090627	0.170897	0.026802	0.295531	0.015889	0.036065	1.365657	5.781487	3.261978	0.01749	0.00374	0.000261
Santa Clara	2022	OBUS	Aggregate	Aggregate	Diesel	762.3964	53839.19	6991.348	2.314382	10.4182	2.005848	0.021086	0.015288	0	0.003	0.05586	0.02204	0.015979	0	0.012	0.13034	1185.916	1892.098	0	0.002538	0.027964	0	0.18641	0.297411	0	0.054653	0.602048	0	0	0	0	0.062218	0.685386	0	0	0	0	0	0	0.239321	8.657847	0	0.011204	0.017876	0
Santa Clara	2022	SBUS	Aggregate	Aggregate	Gasoline	249.3134	11500.83	997.2534	0.430325	0.924415	0.566946	0.001196	0	0.000498	0.002	0.3192	0.001301	0	0.000541	0.008	0.7448	865.5448	2582.545	48.67377	0.011856	2.442701	0.058309	0.024366	0.088243	0.053528	0.058325	10.61061	0.332747	0.061157	0.415506	0.010413	0.025261	0.085108	15.48298	0.364316	0.061157	0.415506	0.010413	0.025261	1.259002	82.05319	8.624782	0.008565	0.025556	0.000482
Santa Clara	2022	SBUS	Aggregate	Aggregate	Diesel	1014.086	31965.96	11702.42	6.765334	45.00081	0.786274	0.042018	0.05033	0	0.003	0.3192	0.043917	0.052605	0	0.012	0.7448	1145.085	3716.49	0	0.004669	0.013069	0	0.179991	0.584181	0	0.100532	0.281366	0	0	0	0	0.114448	0.320314	0	0	0	0	0	0	0.27746	5.867721	0	0.010818	0.035112	0
Santa Clara	2022	UBUS	Aggregate	Aggregate	Gasoline	8.419396	1059.849	33.67758	0.491737	0	1.236285	0.000328	0	9.7E-05	0.003	0.05586	0.000356	0	0.000105	0.012	0.13034	2351.817	0	104.599	0.006789	0	0.178596	0.036386	0	0.091633	0.022728	0	0.768536	0.190076	1.35875	0.031079	0.049249	0.033164	0	0.84145	0.190076	1.35875	0.031079	0.049249	0.527722	0	8.852622	0.023273	0	0.001035
Santa Clara	2022	UBUS	Aggregate	Aggregate	Diesel	423.2358	46482.16	1692.943	0.803453	0	0	0.005651	0	0	0.008415	0.029326	0.005907	0	0	0.033661	0.068427	1481.178	0	0	0.077358	0	0	0.232821	0	0	0.001105	0	0	0	0	0	0.078949	0	0	0	0	0	0	0.131304	0	0	0.014002	0	0
Santa Clara	2022	UBUS	Aggregate	Aggregate	Natural Ga	104.0289	12325.91	416.1154	0.48934	0	0	0.003183	0	0	0.008475	0.029034	0.003327	0	0	0.033899	0.067746	2016.3	0	0	6.413607	0	0	0.411036	0	0	0.091638	0	0	0	0	0	6.545556	0	0	0	0	0	0	49.80397	0	0	0	0	0

CalEEMod EMFAC2017 Emission Factors Input 2020

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.005686	0.003544	0.003302	0.025130628	0.007601	0	0	0.044219	0
A	CH4_RUNEX	0.003061	0.006556	0.00449	0.006172	0.011225	0.008793	0.013196	0.056648183	0.009943	1.380213	0.333827	0.007125	0.016859
A	CH4_STREX	0.06158	0.084069	0.081711	0.101413	0.019191	0.01103	0.009803	4.87779E-07	0.018855	0.00258	0.259776	0.004209	0.026132
A	CO_IDLEX	0	0	0	0	0.19047	0.142792	0.364797	5.381310661	0.565144	0	0	1.894787	0
A	CO_RUNEX	0.736561	1.351241	1.003501	1.232214	1.023891	0.771004	0.928211	0.756605562	0.900725	10.36097	19.99611	0.582408	2.050114
A	CO_STREX	2.362649	2.614037	3.074408	3.678815	1.229225	0.750524	1.267857	0.006205206	2.017869	0.139137	8.946242	0.637133	2.498592
A	CO2_NBIO_IDLEX	0	0	0	0	9.126201	14.25716	78.16002	1078.526034	99.74072	0	0	347.2943	0
A	CO2_NBIO_RUNEX	264.6828	314.0482	346.9281	420.5959	837.4163	809.3153	1180.288	1581.525685	1402.55	1606.707	210.5269	1091.129	1611.867
A	CO2_NBIO_STREX	56.06856	67.50385	74.99767	90.34237	12.75434	8.627124	9.18131	0.061222853	15.97991	1.640734	62.14697	3.524483	20.50394
A	NOX_IDLEX	0	0	0	0	0.062989	0.110446	0.732466	6.026695246	0.693057	0	0	3.763152	0
A	NOX_RUNEX	0.051168	0.123207	0.099387	0.135628	1.045086	1.287405	3.388912	4.619755776	2.309783	0.732277	1.158904	5.497143	1.598227
A	NOX_STREX	0.218867	0.293938	0.352075	0.440057	0.373271	0.217312	1.058606	1.728993809	0.915821	0.01786	0.270251	0.6899	0.250367
A	PM10_IDLEX	0	0	0	0	0.00077	0.001378	0.002606	0.012264788	0.00297	0	0	0.004807	0
A	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.060814617	0.13034	0.069383	0.01176	0.7448	0.13034
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009622	0.010676	0.012	0.035452864	0.012	0.033326	0.004	0.011007	0.013038
A	PM10_RUNEX	0.001566	0.002246	0.001551	0.001767	0.012284	0.017883	0.093391	0.072838445	0.04036	0.005278	0.001841	0.035337	0.028863
A	PM10_STREX	0.001981	0.002771	0.001931	0.002244	0.000305	0.000161	0.00013	1.28049E-06	0.000144	1.65E-06	0.003262	3.77E-05	0.000352
A	PM25_IDLEX	0	0	0	0	0.000737	0.001319	0.002493	0.011734219	0.002841	0	0	0.004599	0
A	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026063407	0.05586	0.029736	0.00504	0.3192	0.05586
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002406	0.002669	0.003	0.008863216	0.003	0.008332	0.001	0.002752	0.00326
A	PM25_RUNEX	0.001443	0.002068	0.001428	0.001631	0.011699	0.01708	0.089345	0.069687459	0.038603	0.005049	0.001725	0.033796	0.027559
A	PM25_STREX	0.001822	0.002548	0.001776	0.002065	0.000281	0.000148	0.000119	1.17737E-06	0.000133	1.51E-06	0.00308	3.46E-05	0.000325
A	ROG_DIURN	0.049788	0.109352	0.067169	0.078959	0.002403	0.001364	0.000548	5.09091E-06	0.001092	0.000154	1.82709	0.000441	0.958556
A	ROG_HTSK	0.113332	0.205466	0.136978	0.157961	0.08972	0.05265	0.023627	0.000224773	0.016019	0.002351	0.72916	0.004227	0.078921
A	ROG_IDLEX	0	0	0	0	0.023424	0.017391	0.021795	0.437617719	0.059533	0	0	0.21059	0
A	ROG_RESTL	0.042322	0.083358	0.061386	0.073262	0.001179	0.000655	0.000261	2.79696E-06	0.00047	9.66E-05	1.008845	0.00017	0.31908
A	ROG_RUNEX	0.012439	0.02921	0.018746	0.028566	0.108818	0.124819	0.239523	0.171746984	0.126474	0.020121	2.281256	0.095562	0.102406
A	ROG_RUNLS	0.23231	0.741356	0.453224	0.497231	0.61609	0.372566	0.139895	0.001407463	0.170318	0.016034	2.208467	0.031837	1.931362
A	ROG_STREX	0.287314	0.428129	0.391793	0.518852	0.098309	0.05613	0.055312	2.55603E-06	0.098741	0.011044	1.981452	0.024031	0.116998
A	SO2_IDLEX	0	0	0	0	8.87E-05	0.000136	0.000741	0.01004173	0.000947	0	0	0.003302	0
A	SO2_RUNEX	8.68E-05	0.002561	0.011242	0.004158	0.008186	0.007822	0.011242	0.014529534	0.013507	0.011284	0.002083	0.010406	0.015831
A	SO2_STREX	0	0	9.09E-05	0.000894	0.000126	8.54E-05	9.09E-05	6.0585E-07	0.000158	1.62E-05	0.000615	3.49E-05	0.000203
A	TOG_DIURN	0.049788	0.109352	0.067169	0.078959	0.002403	0.001364	0.000548	5.09091E-06	0.001092	0.000154	1.82709	0.000441	0.958556
A	TOG_HTSK	0.113332	0.205466	0.136978	0.157961	0.08972	0.05265	0.023627	0.000224773	0.016019	0.002351	0.72916	0.004227	0.078921
A	TOG_IDLEX	0	0	0	0	0.033219	0.02368	0.028395	0.503029188	0.074788	0	0	0.299749	0
A	TOG_RESTL	0.042322	0.083358	0.061386	0.073262	0.001179	0.000655	0.000261	2.79696E-06	0.00047	9.66E-05	1.008845	0.00017	0.31908
A	TOG_RUNEX	0.018091	0.042541	0.027303	0.040142	0.136216	0.14774	0.277027	0.244583604	0.151881	1.409072	2.798146	0.114307	0.138289
A	TOG_RUNLS	0.23231	0.741356	0.453224	0.497231	0.61609	0.372566	0.139895	0.001407463	0.170318	0.016034	2.208467	0.031837	1.931362
A	TOG_STREX	0.31457	0.468743	0.428962	0.568013	0.107621	0.061456	0.06056	2.79853E-06	0.108081	0.012092	2.155713	0.026311	0.128055

CalEEMod EMFAC2017 Fleet Mix Input 2020

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.585494	0.052026	0.183432	0.108306	0.021147	0.005027	0.013218	0.021288	0.001747	0.001302	0.005307	0.000926	0.000779

Adjustment Factors for EMFAC2017 Gasoline Light Duty Vehicles						
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust	CO2 Exhaust
NA	1	1	1	1	1	1
2021	1.0002	1.0001	1.0002	1.0009	1.0005	1.0023
2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065
2023	1.0007	1.0006	1.0007	1.0032	1.0027	1.0126
2024	1.0012	1.0010	1.0011	1.0051	1.0044	1.0207
2025	1.0018	1.0016	1.0016	1.0074	1.0065	1.0309
2026	1.0023	1.0022	1.0020	1.0091	1.0083	1.0394
2027	1.0028	1.0028	1.0024	1.0105	1.0102	1.0475
2028	1.0034	1.0035	1.0028	1.0117	1.0120	1.0554
2029	1.0040	1.0042	1.0032	1.0129	1.0138	1.0629
2030	1.0047	1.0051	1.0037	1.0142	1.0156	1.0702
2031	1.0054	1.0061	1.0042	1.0155	1.0173	1.0770
2032	1.0061	1.0072	1.0047	1.0169	1.0189	1.0834
2033	1.0068	1.0083	1.0052	1.0182	1.0204	1.0893
2034	1.0075	1.0095	1.0058	1.0196	1.0218	1.0947
2035	1.0081	1.0108	1.0063	1.0210	1.0232	1.0997
2036	1.0088	1.0121	1.0069	1.0223	1.0244	1.1041
2037	1.0094	1.0134	1.0074	1.0236	1.0255	1.1080
2038	1.0099	1.0148	1.0079	1.0248	1.0265	1.1114
2039	1.0104	1.0161	1.0085	1.0259	1.0274	1.1143
2040	1.0109	1.0174	1.0090	1.0270	1.0281	1.1168
2041	1.0113	1.0186	1.0095	1.0279	1.0288	1.1189
2042	1.0116	1.0198	1.0099	1.0286	1.0294	1.1207
2043	1.0119	1.0207	1.0103	1.0293	1.0299	1.1221
2044	1.0122	1.0216	1.0106	1.0299	1.0303	1.1233
2045	1.0124	1.0225	1.0109	1.0303	1.0306	1.1243
2046	1.0125	1.0233	1.0111	1.0308	1.0309	1.1251
2047	1.0127	1.0240	1.0113	1.0311	1.0311	1.1258
2048	1.0128	1.0246	1.0115	1.0314	1.0313	1.1263
2049	1.0128	1.0252	1.0116	1.0316	1.0315	1.1268
2050	1.0129	1.0257	1.0117	1.0318	1.0316	1.1272
Enter Year: **NA**	**1**	**1**	**1**	**1**	**1**	**1**

*PM Exhaust off model factor is only applied to the PM Exhaust emissions not start/idle

The off-model adjustment factors need to be applied only to emissions from gasoline light duty vehicles (LDA, LDT1, LDT2 and MDV). Please note that the adjustment factors are by calendar year and includes all model years.

Enter NA in the date field if adjustments do not apply

Source: EMFAC2017 (v1.0.3) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLE	NOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLI	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNE	CO2_IDLE	CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE	N2O_RUNI	N2O_IDLE	N2O_STRE	ROG_RUNI	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_REST	ROG_DIUR	TOG_RUNI	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_REST	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2020	HHDT	Aggregate	Aggregate	Gasoline	5.454157	461.7244	109.1268	4.595106	0	0.461846	0.001415	0	0.000918	0.005	0.02646	0.001538	0	0.000998	0.02	0.06174	2099.2	0	47.72822	0.130924	0	0.00038	0.160224	0	0.014885	0.701269	0	0.001993	0.175229	1.097232	0.043627	0.079407	1.02329	0	0.002182	0.175229	1.097232	0.043627	0.079407	34.94003	0	4.837466	0.020773	0	0.000472
Santa Clara	2020	HHDT	Aggregate	Aggregate	Diesel	7877.582	964354.9	83712.03	4.653326	64.18689	1.756506	0.070592	0.125161	0	0.008863	0.026058	0.073784	0.13082	0	0.035453	0.060802	1558.482	11478.67	0	0.007952	0.219409	0	0.244972	1.804287	0	0.1712	4.723818	0	0	0	0	0	0.194899	5.377707	0	0	0	0	0	0.607093	57.23999	0	0.014724	0.108445	0
Santa Clara	2020	HHDT	Aggregate	Aggregate	Natural Ga	321.0495	13089.69	1252.093	2.147438	22.03115	0	0.00544	0.03832	0	0.009	0.02646	0.005686	0.040052	0	0.036	0.06174	3260.989	4141.271	0	3.641629	1.2756	0	0.664774	0.844225	0	0.193344	0.053875	0	0	0	0	0	3.877558	1.342462	0	0	0	0	0	10.5658	21.46988	0	0	0	0
Santa Clara	2020	LDA	Aggregate	Aggregate	Gasoline	698042.7	25845511	3282091	0.052251	0	0.228221	0.001418	0	0.0019	0.002	0.01575	0.001542	0	0.002066	0.008	0.03675	273.4802	0	58.46482	0.003178	0	0.064212	0.005385	0	0.028913	0.012784	0	0.299593	0.11801	0.242238	0.207351	0.243537	0.018643	0	0.328014	0.11801	0.242238	0.207351	0.243537	0.764393	0	2.463624	0.002706	0	0.000579
Santa Clara	2020	LDA	Aggregate	Aggregate	Diesel	6184.557	240044.1	29354.99	0.107242	0	0	0.008955	0	0	0.002	0.01575	0.00936	0	0	0.008	0.03675	210.6156	0	0	0.000806	0	0	0.033106	0	0	0.017356	0	0	0	0	0	0.019759	0	0	0	0	0	0	0.225399	0	0	0.001991	0	0
Santa Clara	2020	LDA	Aggregate	Aggregate	Electricity	22473.42	810004.1	110915.4	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2020	LDT1	Aggregate	Aggregate	Gasoline	69721.49	2375892	321741.7	0.123478	0	0.295728	0.002019	0	0.002564	0.002	0.01575	0.002196	0	0.002788	0.008	0.03675	315.7555	0	67.91493	0.006591	0	0.084581	0.009083	0	0.031348	0.029304	0	0.430736	0.20669	0.74587	0.386988	0.507605	0.042703	0	0.471597	0.20669	0.74587	0.386988	0.507605	1.358752	0	2.629956	0.003125	0	0.000672
Santa Clara	2020	LDT1	Aggregate	Aggregate	Diesel	43.66329	798.9465	144.0473	1.349075	0	0	0.17911	0	0	0.002	0.01575	0.187208	0	0	0.008	0.03675	418.8885	0	0	0.010742	0	0	0.065843	0	0	0.231262	0	0	0	0	0	0.263276	0	0	0	0	0	0	1.310548	0	0	0.00396	0	0
Santa Clara	2020	LDT1	Aggregate	Aggregate	Electricity	369.4975	13183.41	1815.271	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2020	LDT2	Aggregate	Aggregate	Gasoline	243220.6	8316073	1134014	0.100404	0	0.356877	0.001412	0	0.0018	0.002	0.01575	0.001536	0	0.001957	0.008	0.03675	349.609	0	76.02052	0.004545	0	0.082826	0.007876	0	0.037051	0.018898	0	0.397136	0.138809	0.459405	0.290082	0.317324	0.027555	0	0.434812	0.138809	0.459405	0.290082	0.317324	1.01599	0	3.116338	0.00346	0	0.000752
Santa Clara	2020	LDT2	Aggregate	Aggregate	Diesel	1369.793	54854.29	6755.454	0.045407	0	0	0.005269	0	0	0.002	0.01575	0.005508	0	0	0.008	0.03675	290.3292	0	0	0.000681	0	0	0.045636	0	0	0.014666	0	0	0	0	0	0.016696	0	0	0	0	0	0	0.121994	0	0	0.002745	0	0
Santa Clara	2020	LDT2	Aggregate	Aggregate	Electricity	1730.361	55312.35	8710.739	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2020	LHDT1	Aggregate	Aggregate	Gasoline	16555.41	577439.5	246650.9	0.290892	0.040327	0.565743	0.002241	0	0.000426	0.002	0.03276	0.002437	0	0.000462	0.008	0.07644	1026.458	122.8059	19.33092	0.013497	0.125286	0.029087	0.01735	0.003165	0.04316	0.067069	0.461894	0.149	0.135983	0.933768	0.026613	0.054263	0.097103	0.673796	0.163115	0.135983	0.933768	0.026613	0.054263	1.233256	3.745335	1.863056	0.010158	0.001215	0.000191
Santa Clara	2020	LHDT1	Aggregate	Aggregate	Diesel	10110.85	393973.1	127181.7	2.150496	2.262878	0	0.02556	0.027243	0	0.003	0.03276	0.026716	0.028474	0	0.012	0.07644	560.3418	136.3456	0	0.007897	0.005098	0	0.088078	0.021432	0	0.170009	0.10976	0	0	0	0	0.193544	0.124954	0	0	0	0	0	0.717028	0.909745	0	0.005297	0.001289	0
Santa Clara	2020	LHDT2	Aggregate	Aggregate	Gasoline	2187.183	76423.21	32585.77	0.307728	0.040005	0.552323	0.002171	0	0.000376	0.002	0.03822	0.002362	0	0.000408	0.008	0.08918	1171.483	141.2238	21.9268	0.01152	0.124887	0.028035	0.018823	0.003093	0.04168	0.053155	0.458136	0.142662	0.133816	0.946919	0.024806	0.051632	0.077563	0.66851	0.156197	0.133816	0.946919	0.024806	0.051632	0.970066	3.74589	1.907541	0.011593	0.001398	0.000217
Santa Clara	2020	LHDT2	Aggregate	Aggregate	Diesel	3993.611	154520.5	50234.6	1.771936	2.268541	0	0.024454	0.02735	0	0.003	0.03822	0.02556	0.028587	0	0.012	0.08918	630.1933	218.324	0	0.007444	0.005098	0	0.099058	0.034317	0	0.160263	0.10976	0	0	0	0	0.182448	0.124954	0	0	0	0	0	0.672552	0.909745	0	0.005958	0.002064	0
Santa Clara	2020	MCY	Aggregate	Aggregate	Gasoline	31290.02	237504.4	62580.05	1.158904	0	0.270251	0.001725	0	0.00308	0.001	0.00504	0.001841	0	0.003262	0.004	0.01176	210.5269	0	62.14697	0.333827	0	0.259776	0.066618	0	0.015324	2.281256	0	1.981452	0.72916	2.208467	1.008845	1.82709	2.798146	0	2.155713	0.72916	2.208467	1.008845	1.82709	19.99611	0	8.946242	0.002083	0	0.000615
Santa Clara	2020	MDV	Aggregate	Aggregate	Gasoline	147007.3	4842885	678227.2	0.138086	0	0.451213	0.001551	0	0.002118	0.002	0.01575	0.001686	0	0.002301	0.008	0.03675	422.6557	0	92.63264	0.006327	0	0.103984	0.010054	0	0.041175	0.029052	0	0.532005	0.161952	0.509836	0.346558	0.373474	0.040904	0	0.582412	0.161952	0.509836	0.346558	0.373474	1.261079	0	3.772077	0.004183	0	0.000917
Santa Clara	2020	MDV	Aggregate	Aggregate	Diesel	3125.67	120041.7	15311.38	0.050338	0	0	0.00501	0	0	0.002	0.01575	0.005237	0	0	0.008	0.03675	380.532	0	0	0.000552	0	0	0.059814	0	0	0.011886	0	0	0	0	0	0.013531	0	0	0	0	0	0	0.19376	0	0	0.003597	0	0
Santa Clara	2020	MDV	Aggregate	Aggregate	Electricity	370.1586	12282.83	1882.383	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0.002088	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2020	MH	Aggregate	Aggregate	Gasoline	2976.086	26488.39	297.7276	0.544993	0	0.330219	0.001864	0	0.000428	0.003	0.05586	0.002026	0	0.000465	0.012	0.13034	1811.031	0	27.04347	0.02088	0	0.034467	0.030991	0	0.032948	0.097652	0	0.154313	0.104092	2.547352	0.042102	0.126478	0.140485	0	0.168896	0.104092	2.547352	0.042102	0.126478	2.621629	0	3.295495	0.017922	0	0.000268
Santa Clara	2020	MH	Aggregate	Aggregate	Diesel	949.5743	9283.956	94.95743	4.603246	0	0	0.100871	0	0	0.004	0.05586	0.105432	0	0	0.016	0.13034	1043.624	0	0	0.005387	0	0	0.164043	0	0	0.11597	0	0	0	0	0	0.132024	0	0	0	0	0	0	0.419503	0	0	0.009866	0	0
Santa Clara	2020	MHDT	Aggregate	Aggregate	Gasoline	1370.703	69099.33	27425.03	0.740158	0.087871	0.401862	0.001419	0	0.000535	0.003	0.05586	0.001543	0	0.000582	0.012	0.13034	1784.26	546.1591	41.21744	0.023732	0.252237	0.044009	0.033549	0.006868	0.028526	0.119137	1.003541	0.248311	0.10607	0.628029	0.023455	0.049258	0.173844	1.464365	0.27187	0.10607	0.628029	0.023455	0.049258	2.780775	15.01001	5.691764	0.017657	0.005405	0.000408
Santa Clara	2020	MHDT	Aggregate	Aggregate	Diesel	9404.156	538077.2	95693.52	3.729062	9.576591	1.246823	0.100636	0.032642	0	0.003	0.05586	0.105186	0.034118	0	0.012	0.13034	1102.727	943.66	0	0.011843	0.006459	0	0.173333	0.14833	0	0.254982	0.139062	0	0	0	0	0.290278	0.158311	0	0	0	0	0	0.690307	2.588109	0	0.010418	0.008915	0
Santa Clara	2020	OBUS	Aggregate	Aggregate	Gasoline	501.5159	25277.35	10034.33	0.560046	0.065077	0.335277	0.000884	0	0.000227	0.003	0.05586	0.000961	0	0.000246	0.012	0.13034	1816.323	384.4828	27.22532	0.016639	0.199522	0.032123	0.027436	0.00552	0.026549	0.08007	0.746829	0.168227	0.027292	0.290175	0.016007	0.037216	0.116238	1.089302	0.18414	0.027292	0.290175	0.016007	0.037216	1.820912	5.776085	3.437889	0.017974	0.003805	0.000269
Santa Clara	2020	OBUS	Aggregate	Aggregate	Diesel	769.5105	54989.62	7061.383	3.114093	15.35477	1.740784	0.055941	0.063126	0	0.003	0.05586	0.05847	0.065981	0	0.012	0.13034	1212.348	1965.294	0	0.006865	0.038824	0	0.190564	0.308917	0	0.147805	0.835877	0	0	0	0	0.168265	0.951582	0	0	0	0	0	0.477737	8.79096	0	0.011454	0.018567	0
Santa Clara	2020	SBUS	Aggregate	Aggregate	Gasoline	221.419	10559.16	885.676	0.478212	0.923504	0.556173	0.001216	0	0.00049	0.002	0.3192	0.001322	0	0.000533	0.008	0.7448	880.8126	2623.742	49.91302	0.014043	2.443005	0.059604	0.026286	0.087927	0.052384	0.069301	10.59704	0.340318	0.059859	0.450864	0.009627	0.024964	0.101124	15.46317	0.372605	0.059859	0.450864	0.009627	0.024964	1.495719	81.97134	9.022951	0.008716	0.025964	0.000494
Santa Clara	2020	SBUS	Aggregate	Aggregate	Diesel	1010.158	31993.5	11657.09	7.153595	46.52324	0.700061	0.044549	0.057105	0	0.003	0.3192	0.046563	0.059687	0	0.012	0.7448	1160.542	3737.121	0	0.004841	0.013564	0	0.182421	0.587423	0	0.10423	0.292035	0	0	0	0	0.118658	0.332459	0	0	0	0	0	0.280978	5.559383	0	0.010964	0.035306	0
Santa Clara	2020	UBUS	Aggregate	Aggregate	Gasoline	8.411742	1058.886	33.64697	0.434773	0	1.136366	0.000326	0	9.63E-05	0.003	0.05586	0.000354	0	0.000105	0.012	0.13034	2352.115	0	104.3917	0.006825	0	0.164166	0.033346	0	0.087368	0.022728	0	0.702663	0.149587	1.020187	0.024585	0.039313	0.033164	0	0.769327	0.149587	1.020187	0.024585	0.039313	0.482676	0	8.852622	0.023276	0	0.001033
Santa Clara	2020	UBUS	Aggregate	Aggregate	Diesel	422.8944	46444.08	1691.578	0.803452	0	0	0.005651	0	0	0.008415	0.029326	0.005907	0	0	0.03366	0.068427	1481.144	0	0	0.077358	0	0	0.232815	0	0	0.001105	0	0	0	0	0	0.078949	0	0	0	0	0	0	0.131304	0	0	0.014002	0	0
Santa Clara	2020	UBUS	Aggregate	Aggregate	Natural Ga	103.8909	12310.53	415.5637	0.489342	0	0	0.003183	0	0	0.008475	0.029034	0.003327	0	0	0.033899	0.067745	2016.307	0	0	6.413641	0	0	0.411037	0	0	0.091638	0	0	0	0	0	6.545591	0	0	0	0	0	0	49.80427	0	0	0	0	0

CalEEMod EMFAC2017 Emission Factors Input 2023

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.005162	0.003155	0.003545	0.024833819	0.007063	0	0	0.051479	0
A	CH4_RUNEX	0.001958	0.004163	0.003245	0.00391	0.008545	0.00706	0.001932	0.049536467	0.004013	1.348781	0.326994	0.006356	0.0108
A	CH4_STREX	0.047744	0.063181	0.066279	0.077681	0.015	0.008431	0.009487	4.90854E-07	0.017607	0.001417	0.255241	0.004783	0.023194
A	CO_IDLEX	0	0	0	0	0.185249	0.138442	0.388783	6.342287544	0.573374	0	0	2.176398	0
A	CO_RUNEX	0.56207	0.946438	0.787567	0.865358	0.768919	0.621061	0.261063	0.395696608	0.470154	10.11652	18.86893	0.51865	1.109312
A	CO_STREX	2.160562	2.346256	2.785419	3.129575	1.083381	0.63132	1.136225	0.005919328	1.895072	0.139137	9.034026	0.699825	2.132057
A	CO2_NBIO_IDLEX	0	0	0	0	8.942095	14.00074	73.35401	1065.376459	91.92835	0	0	347.3949	0
A	CO2_NBIO_RUNEX	245.2799	292.9084	316.762	383.4057	794.1566	768.7296	1095.065	1436.676046	1341.742	1597.13	210.1672	1060.994	1532.749
A	CO2_NBIO_STREX	52.01687	62.87067	68.57931	82.01676	11.82811	7.832833	9.380273	0.049284883	15.47806	1.390925	61.03922	3.981795	18.67936
A	NOX_IDLEX	0	0	0	0	0.058295	0.098034	0.431519	5.438234036	0.369473	0	0	3.527869	0
A	NOX_RUNEX	0.033072	0.078073	0.067378	0.083492	0.730308	0.876464	1.444056	2.680938629	1.441249	0.728908	1.148719	4.873886	1.363761
A	NOX_STREX	0.176158	0.230265	0.270417	0.324369	0.321259	0.182356	1.696526	2.321334599	1.089647	0.010032	0.270672	0.811844	0.245583
A	PM10_IDLEX	0	0	0	0	0.000825	0.001423	0.000427	0.00267045	0.00012	0	0	0.003905	0
A	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.060919337	0.13034	0.069383	0.01176	0.7448	0.13034
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009747	0.01075	0.012	0.03551304	0.012	0.033326	0.004	0.010909	0.013099
A	PM10_RUNEX	0.001356	0.001766	0.001389	0.001511	0.01021	0.015665	0.006955	0.024670765	0.007029	0.005328	0.001969	0.031247	0.023972
A	PM10_STREX	0.001744	0.002244	0.001745	0.001909	0.000258	0.000133	0.000119	7.19411E-07	0.000142	1.52E-05	0.003039	4.55E-05	0.000274
A	PM25_IDLEX	0	0	0	0	0.00079	0.001361	0.000409	0.002554927	0.000115	0	0	0.003736	0
A	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026108287	0.05586	0.029736	0.00504	0.3192	0.05586
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002437	0.002688	0.003	0.00887826	0.003	0.008332	0.001	0.002727	0.003275
A	PM25_RUNEX	0.001249	0.001625	0.001279	0.001393	0.00972	0.014962	0.006648	0.023603494	0.006712	0.005096	0.00184	0.029882	0.022889
A	PM25_STREX	0.001604	0.002063	0.001605	0.001756	0.000237	0.000123	0.00011	6.61472E-07	0.00013	1.4E-05	0.002859	4.18E-05	0.000252
A	ROG_DIURN	0.038084	0.081984	0.061288	0.070174	0.002024	0.00107	0.000417	2.53874E-06	0.001084	1.94E-05	1.809555	0.000537	0.707189
A	ROG_HTSK	0.09006	0.15803	0.120816	0.135544	0.075635	0.041911	0.019674	0.00011586	0.016051	0.000133	0.689105	0.005221	0.05968
A	ROG_IDLEX	0	0	0	0	0.021316	0.015901	0.018316	0.428946297	0.045786	0	0	0.241386	0
A	ROG_RESTL	0.033665	0.06596	0.058242	0.067485	0.001032	0.000547	0.000211	1.40536E-06	0.00048	7.82E-06	0.985054	0.000227	0.247171
A	ROG_RUNEX	0.007459	0.017917	0.013146	0.016466	0.092959	0.111603	0.017071	0.025760254	0.025484	0.019672	2.208057	0.086453	0.06941
A	ROG_RUNLS	0.202838	0.577726	0.418479	0.440788	0.521043	0.276429	0.112019	0.000593596	0.177971	0.000592	1.969445	0.035286	1.439379
A	ROG_STREX	0.211356	0.306088	0.307495	0.382282	0.075776	0.042231	0.050853	2.56712E-06	0.090401	0.005883	1.941958	0.027318	0.096685
A	SO2_IDLEX	0	0	0	0	8.68E-05	0.000134	0.000696	0.009914298	0.000873	0	0	0.003306	0
A	SO2_RUNEX	9.26E-05	0.002616	0.010439	0.003743	0.007755	0.007424	0.010439	0.013153522	0.012917	0.011293	0.00208	0.010129	0.015045
A	SO2_STREX	0	0	9.28E-05	0.000802	0.000117	7.75E-05	9.28E-05	4.87714E-07	0.000153	1.38E-05	0.000604	3.94E-05	0.000185
A	TOG_DIURN	0.038084	0.081984	0.061288	0.070174	0.002024	0.00107	0.000417	2.53874E-06	0.001084	1.94E-05	1.809555	0.000537	0.707189
A	TOG_HTSK	0.09006	0.15803	0.120816	0.135544	0.075635	0.041911	0.019674	0.00011586	0.016051	0.000133	0.689105	0.005221	0.05968
A	TOG_IDLEX	0	0	0	0	0.030064	0.021432	0.02485	0.493262188	0.059237	0	0	0.345172	0
A	TOG_RESTL	0.033665	0.06596	0.058242	0.067485	0.001032	0.000547	0.000211	1.40536E-06	0.00048	7.82E-06	0.985054	0.000227	0.247171
A	TOG_RUNEX	0.010845	0.026122	0.019145	0.023909	0.114266	0.130419	0.021706	0.078007034	0.034475	1.37699	2.736079	0.103211	0.092037
A	TOG_RUNLS	0.202838	0.577726	0.418479	0.440788	0.521043	0.276429	0.112019	0.000593596	0.177971	0.000592	1.969445	0.035286	1.439379
A	TOG_STREX	0.231408	0.335127	0.336668	0.418547	0.082966	0.046238	0.055677	2.81067E-06	0.098977	0.006441	2.11358	0.02991	0.105858

CalEEMod EMFAC2017 Fleet Mix Input 2023

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.590598	0.05278	0.17808	0.10708	0.021013	0.005252	0.013411	0.022089	0.001622	0.001261	0.005132	0.000923	0.000759

Adjustment Factors for EMFAC2017 Gasoline Light Duty Vehicles						
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust	CO2 Exhaust
NA	1	1	1	1	1	1
2021	1.0002	1.0001	1.0002	1.0009	1.0005	1.0023
2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065
2023	1.0007	1.0006	1.0007	1.0032	1.0027	1.0126
2024	1.0012	1.0010	1.0011	1.0051	1.0044	1.0207
2025	1.0018	1.0016	1.0016	1.0074	1.0065	1.0309
2026	1.0023	1.0022	1.0020	1.0091	1.0083	1.0394
2027	1.0028	1.0028	1.0024	1.0105	1.0102	1.0475
2028	1.0034	1.0035	1.0028	1.0117	1.0120	1.0554
2029	1.0040	1.0042	1.0032	1.0129	1.0138	1.0629
2030	1.0047	1.0051	1.0037	1.0142	1.0156	1.0702
2031	1.0054	1.0061	1.0042	1.0155	1.0173	1.0770
2032	1.0061	1.0072	1.0047	1.0169	1.0189	1.0834
2033	1.0068	1.0083	1.0052	1.0182	1.0204	1.0893
2034	1.0075	1.0095	1.0058	1.0196	1.0218	1.0947
2035	1.0081	1.0108	1.0063	1.0210	1.0232	1.0997
2036	1.0088	1.0121	1.0069	1.0223	1.0244	1.1041
2037	1.0094	1.0134	1.0074	1.0236	1.0255	1.1080
2038	1.0099	1.0148	1.0079	1.0248	1.0265	1.1114
2039	1.0104	1.0161	1.0085	1.0259	1.0274	1.1143
2040	1.0109	1.0174	1.0090	1.0270	1.0281	1.1168
2041	1.0113	1.0186	1.0095	1.0279	1.0288	1.1189
2042	1.0116	1.0198	1.0099	1.0286	1.0294	1.1207
2043	1.0119	1.0207	1.0103	1.0293	1.0299	1.1221
2044	1.0122	1.0216	1.0106	1.0299	1.0303	1.1233
2045	1.0124	1.0225	1.0109	1.0303	1.0306	1.1243
2046	1.0125	1.0233	1.0111	1.0308	1.0309	1.1251
2047	1.0127	1.0240	1.0113	1.0311	1.0311	1.1258
2048	1.0128	1.0246	1.0115	1.0314	1.0313	1.1263
2049	1.0128	1.0252	1.0116	1.0316	1.0315	1.1268
2050	1.0129	1.0257	1.0117	1.0318	1.0316	1.1272
Enter Year: **2023**	**1.0007**	**1.0006**	**1.0007**	**1.0032**	**1.0027**	**1.0126**

*PM Exhaust off model factor is only applied to the PM Exhaust emissions not start/idle

The off-model adjustment factors need to be applied only to emissions from gasoline light duty vehicles (LDA, LDT1, LDT2 and MDV). Please note that the adjustment factors are by calendar year and includes all model years.

Enter NA in the date field if adjustments do not apply

Source: EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLE	NOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLI	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNE	CO2_IDLE	CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE	N2O_RUNI	N2O_IDLE	N2O_STRE	ROG_RUNI	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_REST	ROG_DIUR	TOG_RUNI	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_REST	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2023	HHDT	Aggregate	Aggregate	Gasoline	4.815448	553.4124	96.34748	3.178298	0	0.254165	0.001157	0	0.000623	0.005	0.02646	0.001259	0	0.000677	0.02	0.06174	1915.642	0	46.38676	0.084318	0	0.000462	0.130889	0	0.008571	0.409676	0	0.002416	0.109047	0.558691	0.026465	0.047808	0.597798	0	0.002645	0.109047	0.558691	0.026465	0.047808	27.8207	0	5.57125	0.018957	0	0.000459
Santa Clara	2023	HHDT	Aggregate	Aggregate	Diesel	8401.79	1034051	89180.29	2.696198	57.80539	2.360147	0.023887	0.026373	0	0.008879	0.026103	0.024967	0.027565	0	0.035514	0.060907	1411.729	11326.45	0	0.001106	0.214953	0	0.221904	1.78036	0	0.023817	4.627869	0	0	0	0	0	0.027114	5.268477	0	0	0	0	0	0.233741	67.52667	0	0.013337	0.107007	0
Santa Clara	2023	HHDT	Aggregate	Aggregate	Natural Ga	360.3246	14693.25	1405.266	1.588314	20.76108	0	0.004529	0.028055	0	0.009	0.02646	0.004734	0.029323	0	0.036	0.06174	3174.275	4018.428	0	3.456549	1.237751	0	0.647097	0.819183	0	0.148044	0.042416	0	0	0	0	0	3.64007	1.291393	0	0	0	0	0	10.76049	21.60789	0	0	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Gasoline	751359.6	26739811	3542534	0.034059	0	0.184615	0.001247	0	0.001682	0.002	0.01575	0.001356	0	0.001829	0.008	0.03675	252.091	0	53.87356	0.002048	0	0.050071	0.004113	0	0.025656	0.007696	0	0.221504	0.094205	0.212597	0.166193	0.187545	0.011228	0	0.242518	0.094205	0.212597	0.166193	0.187545	0.586148	0	2.259775	0.002495	0	0.000533
Santa Clara	2023	LDA	Aggregate	Aggregate	Diesel	7591.987	280497.7	36090.42	0.058679	0	0	0.005598	0	0	0.002	0.01575	0.005851	0	0	0.008	0.03675	195.1926	0	0	0.000552	0	0	0.030682	0	0	0.011887	0	0	0	0	0	0	0.013532	0	0	0	0	0	0.188023	0	0	0.001845	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Electricity	28074.67	1034348	136585.9	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2023	LDT1	Aggregate	Aggregate	Gasoline	75517.84	2475367	350251	0.078745	0	0.232751	0.001604	0	0.002087	0.002	0.01575	0.001745	0	0.00227	0.008	0.03675	292.8794	0	62.80265	0.004214	0	0.063907	0.006493	0	0.02759	0.018087	0	0.309393	0.159698	0.584022	0.309209	0.384203	0.026384	0	0.338746	0.159698	0.584022	0.309209	0.384203	0.955745	0	2.366858	0.002898	0	0.000621
Santa Clara	2023	LDT1	Aggregate	Aggregate	Diesel	34.1777	620.5176	112.4335	1.098891	0	0	0.146297	0	0	0.002	0.01575	0.152912	0	0	0.008	0.03675	401.6268	0	0	0.008837	0	0	0.06313	0	0	0.190256	0	0	0	0	0	0	0.216594	0	0	0	0	0	1.080107	0	0	0.003797	0	0
Santa Clara	2023	LDT1	Aggregate	Aggregate	Electricity	788.4144	31182.48	3917.01	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2023	LDT2	Aggregate	Aggregate	Gasoline	254167.5	8294772	1184412	0.06837	0	0.275999	0.001263	0	0.001639	0.002	0.01575	0.001374	0	0.001783	0.008	0.03675	316.8848	0	69.17216	0.003305	0	0.067695	0.00592	0	0.031692	0.013288	0	0.313842	0.123254	0.427158	0.276975	0.291298	0.019387	0	0.343617	0.123254	0.427158	0.276975	0.291298	0.800025	0	2.837237	0.003136	0	0.000685
Santa Clara	2023	LDT2	Aggregate	Aggregate	Diesel	1802.688	66004.69	8781.203	0.037098	0	0	0.004581	0	0	0.002	0.01575	0.004788	0	0	0.008	0.03675	268.3329	0	0	0.000636	0	0	0.042178	0	0	0.01369	0	0	0	0	0	0	0.015585	0	0	0	0	0	0.124122	0	0	0.002537	0	0
Santa Clara	2023	LDT2	Aggregate	Aggregate	Electricity	3304.555	98384.64	16510.28	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Gasoline	16555.13	562142	246646.7	0.210457	0.037398	0.511224	0.002137	0	0.000377	0.002	0.03276	0.002324	0	0.00041	0.008	0.07644	994.5276	120.0678	18.82225	0.009676	0.118805	0.02387	0.012895	0.003089	0.040194	0.046707	0.428491	0.120584	0.120359	0.829144	0.024473	0.047994	0.068155	0.625253	0.132025	0.120359	0.829144	0.024473	0.047994	0.867722	3.754766	1.724	0.009842	0.001188	0.000186
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Diesel	11594.64	435998.6	145846	1.400562	1.919948	0	0.019496	0.026734	0	0.003	0.03276	0.020378	0.027943	0	0.012	0.07644	535.8142	131.265	0	0.007088	0.005098	0	0.084223	0.020633	0	0.152594	0.10976	0	0	0	0	0	0.173718	0.124954	0	0	0	0	0.641529	0.909745	0	0.005065	0.001241	0
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Gasoline	2285.018	77947.41	34043.37	0.21093	0.036728	0.496392	0.002042	0	0.000334	0.002	0.03822	0.00222	0	0.000363	0.008	0.08918	1132.921	137.76	21.32176	0.007566	0.117557	0.022949	0.013529	0.00301	0.038884	0.03359	0.420989	0.114958	0.114086	0.752468	0.022171	0.043386	0.049014	0.614306	0.125864	0.114086	0.752468	0.022171	0.043386	0.620201	3.758932	1.718516	0.011211	0.001363	0.000211
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Diesel	4660.728	171541.4	58626.09	1.17888	1.93121	0	0.020832	0.02707	0	0.003	0.03822	0.021774	0.028294	0	0.012	0.08918	603.2432	210.8377	0	0.00683	0.005098	0	0.094821	0.033141	0	0.147052	0.10976	0	0	0	0	0	0.167409	0.124954	0	0	0	0	0.621451	0.909745	0	0.005703	0.001993	0
Santa Clara	2023	MCY	Aggregate	Aggregate	Gasoline	33683.49	242470.7	67366.97	1.148719	0	0.270672	0.00184	0	0.002859	0.001	0.00504	0.001969	0	0.003039	0.004	0.01176	210.1672	0	61.03922	0.326994	0	0.255241	0.066143	0	0.01536	2.208057	0	1.941958	0.689105	1.969445	0.985054	1.809555	0.736079	0	2.11358	0.689105	1.969445	0.985054	1.809555	18.86893	0	9.034026	0.00208	0	0.000604
Santa Clara	2023	MDV	Aggregate	Aggregate	Gasoline	154431.4	4896063	714241.1	0.085683	0	0.336488	0.001332	0	0.001823	0.002	0.01575	0.001448	0	0.001982	0.008	0.03675	383.1839	0	84.08131	0.004049	0	0.08064	0.007039	0	0.034344	0.016817	0	0.396565	0.140569	0.457303	0.323766	0.336538	0.024505	0	0.434185	0.140569	0.457303	0.323766	0.336538	0.891357	0	3.240031	0.003792	0	0.000832
Santa Clara	2023	MDV	Aggregate	Aggregate	Diesel	4004.429	142223.9	19410.39	0.034292	0	0	0.003829	0	0	0.002	0.01575	0.004002	0	0	0.008	0.03675	350.448	0	0	0.000445	0	0	0.055086	0	0	0.009578	0	0	0	0	0	0	0.010904	0	0	0	0	0	0.180483	0	0	0.003313	0	0
Santa Clara	2023	MDV	Aggregate	Aggregate	Electricity	1532.638	48234.63	7794.674	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2023	MH	Aggregate	Aggregate	Gasoline	2857.04	26157.03	285.8182	0.361451	0	0.336127	0.001555	0	0.000345	0.003	0.05586	0.001691	0	0.000375	0.012	0.13034	1731.827	0	25.56622	0.013045	0	0.031746	0.02323	0	0.035777	0.05596	0	0.132332	0.081683	1.97006	0.033844	0.096831	0.081657	0	0.144887	0.081683	1.97006	0.033844	0.096831	1.390474	0	2.91812	0.017138	0	0.000253
Santa Clara	2023	MH	Aggregate	Aggregate	Diesel	1053.778	9907.819	105.3778	4.0099	0	0	0.079211	0	0	0.004	0.05586	0.082793	0	0	0.016	0.13034	1007.175	0	0	0.004873	0	0	0.158314	0	0	0.104917	0	0	0	0	0	0	0.119441	0	0	0	0	0	0.367033	0	0	0.009521	0	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Gasoline	1507.68	78317.15	30165.67	0.385258	0.088623	0.367592	0.001293	0	0.000446	0.003	0.05586	0.001406	0	0.000485	0.012	0.13034	1697.438	526.34	38.16999	0.011942	0.266499	0.038604	0.019927	0.007724	0.029367	0.057622	1.014767	0.206928	0.080059	0.455824	0.017154	0.033931	0.084081	1.480746	0.22656	0.080059	0.455824	0.017154	0.033931	1.316681	15.14023	4.623501	0.016798	0.005209	0.000378
Santa Clara	2023	MHDT	Aggregate	Aggregate	Diesel	9262.822	558718.8	92583.75	1.59247	5.703996	2.12952	0.007398	0.005414	0	0.003	0.05586	0.007733	0.005658	0	0.012	0.13034	1010.629	886.4048	0	0.000529	0.003602	0	0.158857	0.13933	0	0.011387	0.077551	0	0	0	0	0	0.012963	0.088286	0	0	0	0	0.113094	2.687765	0	0.009548	0.008374	0
Santa Clara	2023	OBUS	Aggregate	Aggregate	Gasoline	503.4572	23697.77	10073.17	0.401971	0.065148	0.321785	0.000992	0	0.000219	0.003	0.05586	0.001079	0	0.000239	0.012	0.13034	1743.614	374.6133	26.08015	0.011771	0.201157	0.029667	0.020963	0.005691	0.026276	0.05538	0.74759	0.152323	0.027045	0.299878	0.01619	0.03654	0.080811	1.090882	0.166775	0.027045	0.299878	0.01619	0.03654	1.211154	5.782545	3.193149	0.017254	0.003707	0.000258
Santa Clara	2023	OBUS	Aggregate	Aggregate	Diesel	753.4001	53354.33	6899.877	1.902854	8.28017	2.210652	0.009253	0.002588	0	0.003	0.05586	0.009671	0.002705	0	0.012	0.13034	1163.247	1820.683	0	0.000567	0.024706	0	0.182846	0.286186	0	0.012205	0.531913	0	0	0	0	0	0.013895	0.605542	0	0	0	0	0.141032	9.053135	0	0.01099	0.017201	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Gasoline	263.5229	11968.77	1054.092	0.420713	0.924728	0.578334	0.001201	0	0.000506	0.002	0.3192	0.001307	0	0.00055	0.008	0.7448	859.0893	2565.057	48.16666	0.011122	2.441451	0.057864	0.023879	0.088232	0.054355	0.054742	10.61517	0.330464	0.063152	0.426847	0.010977	0.026004	0.07988	15.48964	0.361817	0.063152	0.426847	0.010977	0.026004	1.167899	82.08092	8.465591	0.008501	0.025383	0.000477
Santa Clara	2023	SBUS	Aggregate	Aggregate	Diesel	1013.614	31894.7	11696.96	6.544978	44.13946	0.832887	0.040645	0.046993	0	0.003	0.3192	0.042483	0.049118	0	0.012	0.7448	1136.76	3703.284	0	0.004568	0.012858	0	0.178683	0.582105	0	0.098352	0.27682	0	0	0	0	0	0.111967	0.315138	0	0	0	0	0.275014	6.038953	0	0.01074	0.034987	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Gasoline	8.423223	1060.331	33.69289	0.150806	0	0.638272	0.002209	0	0.000888	0.003	0.05586	0.002402	0	0.000966	0.012	0.13034	1956.542	0	88.49758	0.007038	0	0.09018	0.015696	0	0.066738	0.022728	0	0.374288	0.008476	0.037646	0.001991	0.00493	0.033164	0	0.409798	0.008476	0.037646	0.001991	0.00493	0.258128	0	8.852622	0.019362	0	0.000876
Santa Clara	2023	UBUS	Aggregate	Aggregate	Diesel	430.5287	46874.38	1722.115	0.802545	0	0	0.005646	0	0	0.008399	0.029403	0.005901	0	0	0.033598	0.068607	1480.062	0	0	0.077245	0	0	0.232645	0	0	0.001104	0	0	0	0	0	0	0.078834	0	0	0	0	0	0.131094	0	0	0.013992	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Natural Ga	96.97562	11960.41	387.9025	0.491564	0	0	0.003197	0	0	0.008538	0.028723	0.003341	0	0	0.034153	0.06702	2024.074	0	0	6.451045	0	0	0.412621	0	0	0.092173	0	0	0	0	0	0	6.583765	0	0	0	0	0	50.12464	0	0	0	0	0

CalEEMod EMFAC2017 Emission Factors Input 2030

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004148	0.002505	0.003832	0.024231453	0.007098	0	0	0.070082	0
A	CH4_RUNEX	0.000959	0.001671	0.001726	0.001772	0.005195	0.005339	0.001034	0.04518098	0.002197	1.859484	0.319087	0.004404	0.005027
A	CH4_STREX	0.028931	0.035248	0.041821	0.043924	0.009023	0.004811	0.008383	4.34672E-07	0.015222	0.002186	0.24786	0.006338	0.019545
A	CO_IDLEX	0	0	0	0	0.17731	0.131894	0.405402	6.28489984	0.644155	0	0	2.927328	0
A	CO_RUNEX	0.411156	0.540474	0.559142	0.551517	0.468742	0.489111	0.152189	0.405949458	0.262856	14.11073	17.60732	0.374881	0.311691
A	CO_STREX	1.716961	1.849789	2.287973	2.324828	0.890393	0.484256	0.872515	0.006685308	1.577018	0.139137	9.199577	0.858725	1.635194
A	CO2_NBIO_IDLEX	0	0	0	0	8.251826	13.00041	65.09769	930.0496847	97.36242	0	0	337.4754	0
A	CO2_NBIO_RUNEX	213.8884	258.4057	267.3331	322.2663	698.5465	679.813	993.4479	1226.348086	1210.85	1668.671	209.7572	970.5049	1350.267
A	CO2_NBIO_STREX	45.12682	55.17203	57.56738	67.91602	10.09364	6.438033	8.550649	0.051649278	13.46187	1.401901	59.22586	5.059627	15.54123
A	NOX_IDLEX	0	0	0	0	0.045908	0.074209	0.341766	5.199426871	0.431935	0	0	2.710433	0
A	NOX_RUNEX	0.019319	0.033468	0.034489	0.035665	0.299902	0.384329	1.428316	2.517362076	1.448391	0.706433	1.137409	3.086533	1.063099
A	NOX_STREX	0.125333	0.151052	0.168209	0.179169	0.225227	0.124883	1.689216	2.314548745	1.129093	0.015157	0.270173	1.184451	0.23668
A	PM10_IDLEX	0	0	0	0	0.000915	0.001502	0.000162	0.002145897	0.000142	0	0	0.002048	0
A	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.061109857	0.13034	0.069383	0.01176	0.7448	0.13034
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009901	0.010844	0.012	0.035621239	0.012	0.033326	0.004	0.010676	0.013189
A	PM10_RUNEX	0.000929	0.00107	0.001025	0.001034	0.007019	0.013839	0.007006	0.023790073	0.007882	0.005116	0.002138	0.021245	0.016043
A	PM10_STREX	0.001275	0.001461	0.00134	0.001344	0.00021	0.000106	0.000112	5.80093E-07	0.000156	1.52E-05	0.002862	6.76E-05	0.000212
A	PM25_IDLEX	0	0	0	0	0.000875	0.001437	0.000155	0.002053066	0.000136	0	0	0.00196	0
A	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026189939	0.05586	0.029736	0.00504	0.3192	0.05586
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002475	0.002711	0.003	0.00890531	0.003	0.008332	0.001	0.002669	0.003297
A	PM25_RUNEX	0.000855	0.000984	0.000944	0.000954	0.006671	0.013218	0.006696	0.022760894	0.007526	0.004893	0.001994	0.02031	0.015312
A	PM25_STREX	0.001172	0.001344	0.001232	0.001236	0.000193	9.76E-05	0.000103	5.33374E-07	0.000144	1.4E-05	0.002676	6.22E-05	0.000195
A	ROG_DIURN	0.024903	0.046388	0.048996	0.057349	0.001403	0.000642	0.000289	1.32994E-06	0.001062	6.14E-05	1.786807	0.00087	0.347564
A	ROG_HTSK	0.061657	0.093564	0.089096	0.0981	0.054855	0.024352	0.013852	5.78076E-05	0.015622	0.000814	0.631299	0.008304	0.028392
A	ROG_IDLEX	0	0	0	0	0.01734	0.013466	0.01847	0.422100311	0.050126	0	0	0.322319	0
A	ROG_RESTL	0.022934	0.041206	0.048532	0.056738	0.000772	0.000374	0.000168	7.97633E-07	0.000487	3.58E-05	0.946881	0.000414	0.1401
A	ROG_RUNEX	0.003247	0.0065	0.006553	0.006887	0.072661	0.0982	0.011844	0.024014489	0.016744	0.026969	2.128511	0.060159	0.038911
A	ROG_RUNLS	0.170512	0.364405	0.336782	0.340289	0.429696	0.143744	0.071507	0.000284481	0.181965	0.004928	1.487321	0.053902	0.535482
A	ROG_STREX	0.118715	0.154126	0.182707	0.199251	0.043726	0.022756	0.041407	2.2699E-06	0.076636	0.009261	1.877593	0.036024	0.074231
A	SO2_IDLEX	0	0	0	0	7.99E-05	0.000124	0.000618	0.00865265	0.000924	0	0	0.003219	0
A	SO2_RUNEX	9E-05	0.002567	0.00948	0.002976	0.006812	0.006557	0.00948	0.011212041	0.011649	0.010417	0.002076	0.009288	0.013242
A	SO2_STREX	0	0	8.46E-05	0.000628	9.99E-05	6.37E-05	8.46E-05	5.11111E-07	0.000133	1.39E-05	0.000586	5.01E-05	0.000154
A	TOG_DIURN	0.024903	0.046388	0.048996	0.057349	0.001403	0.000642	0.000289	1.32994E-06	0.001062	6.14E-05	1.786807	0.00087	0.347564
A	TOG_HTSK	0.061657	0.093564	0.089096	0.0981	0.054855	0.024352	0.013852	5.78076E-05	0.015622	0.000814	0.631299	0.008304	0.028392
A	TOG_IDLEX	0	0	0	0	0.02413	0.017772	0.025282	0.485180108	0.063906	0	0	0.463821	0
A	TOG_RESTL	0.022934	0.041206	0.048532	0.056738	0.000772	0.000374	0.000168	7.97633E-07	0.000487	3.58E-05	0.946881	0.000414	0.1401
A	TOG_RUNEX	0.004716	0.009483	0.009524	0.009983	0.08579	0.112949	0.014288	0.071682245	0.021563	1.898202	2.666273	0.071678	0.048331
A	TOG_RUNLS	0.170512	0.364405	0.336782	0.340289	0.429696	0.143744	0.071507	0.000284481	0.181965	0.004928	1.487321	0.053902	0.535482
A	TOG_STREX	0.129977	0.168749	0.200041	0.218155	0.047875	0.024915	0.045336	2.48526E-06	0.083906	0.01014	2.04481	0.039442	0.081274

CalEEMod EMFAC2017 Fleet Mix Input 2030

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.595423	0.053963	0.1714	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.00478	0.0009	0.000728

Adjustment Factors for EMFAC2017 Gasoline Light Duty Vehicles						
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust	CO2 Exhaust
NA	1	1	1	1	1	1
2021	1.0002	1.0001	1.0002	1.0009	1.0005	1.0023
2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065
2023	1.0007	1.0006	1.0007	1.0032	1.0027	1.0126
2024	1.0012	1.0010	1.0011	1.0051	1.0044	1.0207
2025	1.0018	1.0016	1.0016	1.0074	1.0065	1.0309
2026	1.0023	1.0022	1.0020	1.0091	1.0083	1.0394
2027	1.0028	1.0028	1.0024	1.0105	1.0102	1.0475
2028	1.0034	1.0035	1.0028	1.0117	1.0120	1.0554
2029	1.0040	1.0042	1.0032	1.0129	1.0138	1.0629
2030	1.0047	1.0051	1.0037	1.0142	1.0156	1.0702
2031	1.0054	1.0061	1.0042	1.0155	1.0173	1.0770
2032	1.0061	1.0072	1.0047	1.0169	1.0189	1.0834
2033	1.0068	1.0083	1.0052	1.0182	1.0204	1.0893
2034	1.0075	1.0095	1.0058	1.0196	1.0218	1.0947
2035	1.0081	1.0108	1.0063	1.0210	1.0232	1.0997
2036	1.0088	1.0121	1.0069	1.0223	1.0244	1.1041
2037	1.0094	1.0134	1.0074	1.0236	1.0255	1.1080
2038	1.0099	1.0148	1.0079	1.0248	1.0265	1.1114
2039	1.0104	1.0161	1.0085	1.0259	1.0274	1.1143
2040	1.0109	1.0174	1.0090	1.0270	1.0281	1.1168
2041	1.0113	1.0186	1.0095	1.0279	1.0288	1.1189
2042	1.0116	1.0198	1.0099	1.0286	1.0294	1.1207
2043	1.0119	1.0207	1.0103	1.0293	1.0299	1.1221
2044	1.0122	1.0216	1.0106	1.0299	1.0303	1.1233
2045	1.0124	1.0225	1.0109	1.0303	1.0306	1.1243
2046	1.0125	1.0233	1.0111	1.0308	1.0309	1.1251
2047	1.0127	1.0240	1.0113	1.0311	1.0311	1.1258
2048	1.0128	1.0246	1.0115	1.0314	1.0313	1.1263
2049	1.0128	1.0252	1.0116	1.0316	1.0315	1.1268
2050	1.0129	1.0257	1.0117	1.0318	1.0316	1.1272
Enter Year: **2030**	**1.0047**	**1.0051**	**1.0037**	**1.0142**	**1.0156**	**1.0702**

*PM Exhaust off model factor is only applied to the PM Exhaust emissions not start/idle

The off-model adjustment factors need to be applied only to emissions from gasoline light duty vehicles (LDA, LDT1, LDT2 and MDV). Please note that the adjustment factors are by calendar year and includes all model years.

Enter NA in the date field if adjustments do not apply

Source: EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLE	NOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLI	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNE	CO2_IDLE	CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE	N2O_RUNI	N2O_IDLE	N2O_STRE	ROG_RUNI	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_REST	ROG_DIUR	TOG_RUNI	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_REST	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2030	HHDT	Aggregate	Aggregate	Gasoline	6.644908	846.0095	132.9513	2.895279	0	0.044486	0.001084	0	0.000414	0.005	0.02646	0.001179	0	0.00045	0.02	0.06174	1677.599	0	40.07141	0.06849	0	0.000337	0.127319	0	0.001575	0.302922	0	0.001761	0.044849	0.220711	0.012382	0.020645	0.442024	0	0.001928	0.044849	0.220711	0.012382	0.020645	28.21474	0	5.186707	0.016601	0	0.000397
Santa Clara	2030	HHDT	Aggregate	Aggregate	Diesel	9431.66	1177485	1014553.9	2.539781	56.05241	2.353151	0.023044	0.021785	0	0.008907	0.026186	0.024086	0.02277	0	0.035627	0.061101	1202.821	10016.29	0	0.001063	0.214358	0	0.189067	1.574421	0	0.022896	4.615071	0	0	0	0	0	0.026066	5.253907	0	0	0	0	0	0	0.238872	67.80499	0	0.011364	0.094629	0
Santa Clara	2030	HHDT	Aggregate	Aggregate	Natural Ga	400.4237	16329.01	1561.653	0.881174	19.09434	0	0.003462	0.015749	0	0.009	0.02646	0.003619	0.016461	0	0.036	0.06174	2899.524	3653.632	0	3.225286	1.19295	0	0.591087	0.744817	0	0.090199	0.028054	0	0	0	0	0	3.341906	1.230036	0	0	0	0	0	0	11.01311	21.88788	0	0	0	0
Santa Clara	2030	LDA	Aggregate	Aggregate	Gasoline	869969.1	28403709	4092414	0.020358	0	0.132956	0.000879	0	0.001249	0.002	0.01575	0.000956	0	0.001359	0.008	0.03675	211.6944	0	44.94162	0.001023	0	0.030835	0.003085	0	0.020493	0.003388	0	0.12606	0.065117	0.180811	0.11416	0.123291	0.004944	0	0.13802	0.065117	0.180811	0.11416	0.123291	0.43107	0	1.801842	0.002095	0	0.000445
Santa Clara	2030	LDA	Aggregate	Aggregate	Diesel	10023.63	337674.2	47693.27	0.01676	0	0	0.001829	0	0	0.002	0.01575	0.001912	0	0	0.008	0.03675	166.1368	0	0	0.000273	0	0	0.026114	0	0	0.005885	0	0	0	0	0	0	0.006699	0	0	0	0	0	0	0.146966	0	0	0.001571	0	0
Santa Clara	2030	LDA	Aggregate	Aggregate	Electricity	46172.96	1625146	221619.4	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2030	LDT1	Aggregate	Aggregate	Gasoline	88972.38	2670256	412660.2	0.034308	0	0.154254	0.000998	0	0.001379	0.002	0.01575	0.001085	0	0.001499	0.008	0.03675	248.8135	0	52.89319	0.001722	0	0.036164	0.003879	0	0.021779	0.00667	0	0.15755	0.095382	0.371981	0.194977	0.219194	0.009733	0	0.172497	0.095382	0.371981	0.194977	0.219194	0.548445	0	1.868724	0.002462	0	0.000523
Santa Clara	2030	LDT1	Aggregate	Aggregate	Diesel	12.41764	352.1646	54.72798	0.189506	0	0	0.017188	0	0	0.002	0.01575	0.017965	0	0	0.008	0.03675	322.0531	0	0	0.001569	0	0	0.050622	0	0	0.033785	0	0	0	0	0	0	0.038462	0	0	0	0	0	0	0.286183	0	0	0.003045	0	0
Santa Clara	2030	LDT1	Aggregate	Aggregate	Electricity	2180.044	81488.93	10672.84	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2030	LDT2	Aggregate	Aggregate	Gasoline	281546.9	8446247	1307139	0.035247	0	0.174198	0.000925	0	0.001282	0.002	0.01575	0.001006	0	0.001394	0.008	0.03675	226.344	0	55.96845	0.00178	0	0.043514	0.003847	0	0.023481	0.006634	0	0.189401	0.09208	0.348635	0.233116	0.234964	0.00968	0	0.20737	0.09208	0.348635	0.233116	0.234964	0.568541	0	2.344012	0.002537	0	0.000554
Santa Clara	2030	LDT2	Aggregate	Aggregate	Diesel	2576.298	81354.46	12261.45	0.02908	0	0	0.003937	0	0	0.002	0.01575	0.004115	0	0	0.008	0.03675	226.4921	0	0	0.000595	0	0	0.035601	0	0	0.01282	0	0	0	0	0	0	0.014595	0	0	0	0	0	0	0.129762	0	0	0.002141	0	0
Santa Clara	2030	LDT2	Aggregate	Aggregate	Electricity	8320.478	213767.2	40645.17	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2030	LHDT1	Aggregate	Aggregate	Gasoline	17444.25	563109.1	259893.3	0.098098	0.030587	0.387515	0.002081	0	0.000333	0.002	0.03276	0.002264	0	0.000362	0.008	0.07644	897.5407	110.5325	17.36665	0.004317	0.101968	0.015524	0.006844	0.002802	0.033538	0.018245	0.350811	0.075233	0.094381	0.739315	0.019801	0.035959	0.026623	0.511903	0.082371	0.094381	0.739315	0.019801	0.035959	0.368714	3.768698	1.531971	0.008882	0.001094	0.000172
Santa Clara	2030	LHDT1	Aggregate	Aggregate	Diesel	14887.61	510107.2	187267.4	0.522674	1.343027	0	0.011738	0.026289	0	0.003	0.03276	0.012269	0.027477	0	0.012	0.07644	478.8761	118.3357	0	0.006165	0.005098	0	0.075273	0.018601	0	0.13273	0.10976	0	0	0	0	0	0.151104	0.124954	0	0	0	0	0	0	0.579164	0.909745	0	0.004527	0.001119	0
Santa Clara	2030	LHDT2	Aggregate	Aggregate	Gasoline	2535.293	81915.35	37772.09	0.091162	0.030032	0.379653	0.001975	0	0.000297	0.002	0.03822	0.002148	0	0.000323	0.008	0.08918	1021.816	126.3902	19.57212	0.00327	0.10112	0.014626	0.00699	0.00275	0.032936	0.012455	0.344716	0.06918	0.074032	0.436992	0.016932	0.02908	0.018175	0.503009	0.075743	0.074032	0.436992	0.016932	0.02908	0.249204	3.775612	1.472175	0.010112	0.001251	0.000194
Santa Clara	2030	LHDT2	Aggregate	Aggregate	Diesel	6126.051	201454.9	77058.01	0.503536	1.378592	0	0.017789	0.026933	0	0.003	0.03822	0.018593	0.028151	0	0.012	0.08918	540.7481	191.3797	0	0.006181	0.005098	0	0.084998	0.030082	0	0.133066	0.10976	0	0	0	0	0	0.151486	0.124954	0	0	0	0	0	0	0.586662	0.909745	0	0.005112	0.001809	0
Santa Clara	2030	MCY	Aggregate	Aggregate	Gasoline	38839.87	253703.2	77679.74	1.137409	0	0.270173	0.001994	0	0.002676	0.001	0.00504	0.002138	0	0.002862	0.004	0.01176	209.7572	0	59.22586	0.319087	0	0.24786	0.065566	0	0.015364	2.128511	0	1.877593	0.631299	1.487321	0.946881	1.786807	2.666273	0	2.04481	0.631299	1.487321	0.946881	1.786807	17.60732	0	9.199577	0.002076	0	0.000586
Santa Clara	2030	MDV	Aggregate	Aggregate	Gasoline	173606	5113918	803848	0.03715	0	0.190209	0.00093	0	0.001318	0.002	0.01575	0.001012	0	0.001433	0.008	0.03675	309.7804	0	67.68816	0.001872	0	0.04685	0.004005	0	0.024192	0.007071	0	0.21174	0.103941	0.361114	0.278651	0.281249	0.010317	0	0.231829	0.103941	0.361114	0.278651	0.281249	0.571385	0	2.441594	0.003066	0	0.00067
Santa Clara	2030	MDV	Aggregate	Aggregate	Diesel	5652.323	175214.3	26820.46	0.016338	0	0	0.001999	0	0	0.002	0.01575	0.00209	0	0	0.008	0.03675	295.1303	0	0	0.000296	0	0	0.04639	0	0	0.006382	0	0	0	0	0	0	0.007265	0	0	0	0	0	0	0.160558	0	0	0.00279	0	0
Santa Clara	2030	MDV	Aggregate	Aggregate	Electricity	5412.776	143464.5	26723.4	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0.004888	0	0.00456	0.017501	0	0	0	0	0	0
Santa Clara	2030	MH	Aggregate	Aggregate	Gasoline	2781.183	26082.35	278.2296	0.161957	0	0.344848	0.001294	0	0.000284	0.003	0.05586	0.001408	0	0.000309	0.012	0.13034	1534.746	0	22.64387	0.005412	0	0.028477	0.014768	0	0.039513	0.01789	0	0.108156	0.041368	0.780207	0.020421	0.050661	0.026105	0	0.118417	0.041368	0.780207	0.020421	0.050661	0.321425	0	2.382509	0.015188	0	0.000224
Santa Clara	2030	MH	Aggregate	Aggregate	Diesel	1271.562	11026.54	127.1562	3.194675	0	0	0.048471	0	0	0.004	0.05586	0.050662	0	0	0.016	0.13034	913.8987	0	0	0.004117	0	0	0.143652	0	0	0.088635	0	0	0	0	0	0	0.100905	0	0	0	0	0	0	0.288665	0	0	0.00864	0	0
Santa Clara	2030	MHDT	Aggregate	Aggregate	Gasoline	1942.274	96462.8	38861.02	0.137179	0.089333	0.328382	0.001276	0	0.000397	0.003	0.05586	0.001388	0	0.000432	0.012	0.13034	1512.526	477.0555	33.02741	0.004329	0.277482	0.032379	0.010371	0.008413	0.029895	0.018098	1.025296	0.159937	0.053505	0.276198	0.013009	0.02236	0.026409	1.49611	0.175111	0.053505	0.276198	0.013009	0.02236	0.365535	15.26266	3.370143	0.014968	0.004721	0.000327
Santa Clara	2030	MHDT	Aggregate	Aggregate	Diesel	11245.42	599136.6	111242.1	1.636194	4.546441	2.164606	0.007568	0.002068	0	0.003	0.05586	0.00791	0.002162	0	0.012	0.13034	909.8747	786.5238	0	0.000503	0.003226	0	0.14302	0.123631	0	0.010837	0.069445	0	0	0	0	0	0.012337	0.079058	0	0	0	0	0	0	0.11784	2.775159	0	0.008596	0.007431	0
Santa Clara	2030	OBUS	Aggregate	Aggregate	Gasoline	521.2442	22324.56	10429.05	0.201397	0.065222	0.308429	0.001191	0	0.000252	0.003	0.05586	0.001295	0	0.000274	0.012	0.13034	1542.791	344.1269	23.61734	0.005871	0.202191	0.026706	0.012891	0.005853	0.026143	0.025703	0.748687	0.134449	0.027407	0.319238	0.017082	0.037276	0.037506	1.092483	0.147204	0.027407	0.319238	0.017082	0.037276	0.529537	5.789149	2.766701	0.015267	0.003405	0.000234
Santa Clara	2030	OBUS	Aggregate	Aggregate	Diesel	845.8557	51263.29	7867.551	1.991442	9.302951	2.216948	0.010285	0.002947	0	0.003	0.05586	0.01075	0.003081	0	0.012	0.13034	1066.293	1893.973	0	0.000596	0.028932	0	0.167606	0.297706	0	0.012842	0.6229	0	0	0	0	0	0.01462	0.709124	0	0	0	0	0	0	0.14672	10.36618	0	0.010074	0.017893	0
Santa Clara	2030	SBUS	Aggregate	Aggregate	Gasoline	362.3014	15198.78	1449.205	0.285961	0.92653	0.616868	0.001215	0	0.000547	0.002	0.3192	0.001322	0	0.000595	0.008	0.7448	803.9675	2414.339	44.56576	0.00626	2.435971	0.055823	0.018735	0.089714	0.057177	0.030067	10.64152	0.317303	0.073145	0.474779	0.014584	0.030637	0.043873	15.52808	0.347407	0.073145	0.474779	0.014584	0.030637	0.649967	82.24088	7.563743	0.007956	0.023892	0.000441
Santa Clara	2030	SBUS	Aggregate	Aggregate	Diesel	980.5629	30722.11	11315.56	4.472027	34.94152	1.257143	0.029756	0.025511	0	0.003	0.3192	0.031102	0.026664	0	0.012	0.7448	1052.894	3501.127	0	0.003486	0.012263	0	0.1655	0.550328	0	0.075046	0.264022	0	0	0	0	0	0.085434	0.300569	0	0	0	0	0	0	0.238791	7.720739	0	0.009947	0.033077	0
Santa Clara	2030	UBUS	Aggregate	Aggregate	Gasoline	8.45001	1063.703	33.80004	0.336697	0	0.964336	0.002209	0	0.000888	0.003	0.05586	0.002402	0	0.000966	0.012	0.13034	1956.157	0	89.19596	0.006892	0	0.139066	0.027885	0	0.079916	0.022728	0	0.589249	0.05182	0.313542	0.009109	0.015639	0.033164	0	0.645153	0.05182	0.313542	0.009109	0.015639	0.405122	0	8.852622	0.019358	0	0.000883
Santa Clara	2030	UBUS	Aggregate	Aggregate	Diesel	376.8943	42036.62	1507.577	0.804174	0	0	0.005656	0	0	0.008428	0.029265	0.005912	0	0	0.033371	0.068284	1523.264	0	0	0.077448	0	0	0.239436	0	0	0.001107	0	0	0	0	0	0	0.079041	0	0	0	0	0	0	0.131472	0	0	0.0144	0	0
Santa Clara	2030	UBUS	Aggregate	Aggregate	Natural Ga	152.2876	16985.28	609.1502	0.487691	0	0	0.003174	0	0	0.008428	0.029265	0.003317	0	0	0.033371	0.068284	2010.534	0	0	6.385838	0	0	0.40986	0	0	0.091241	0	0	0	0	0	0	6.517216	0	0	0	0	0	0	49.56612	0	0	0	0	0

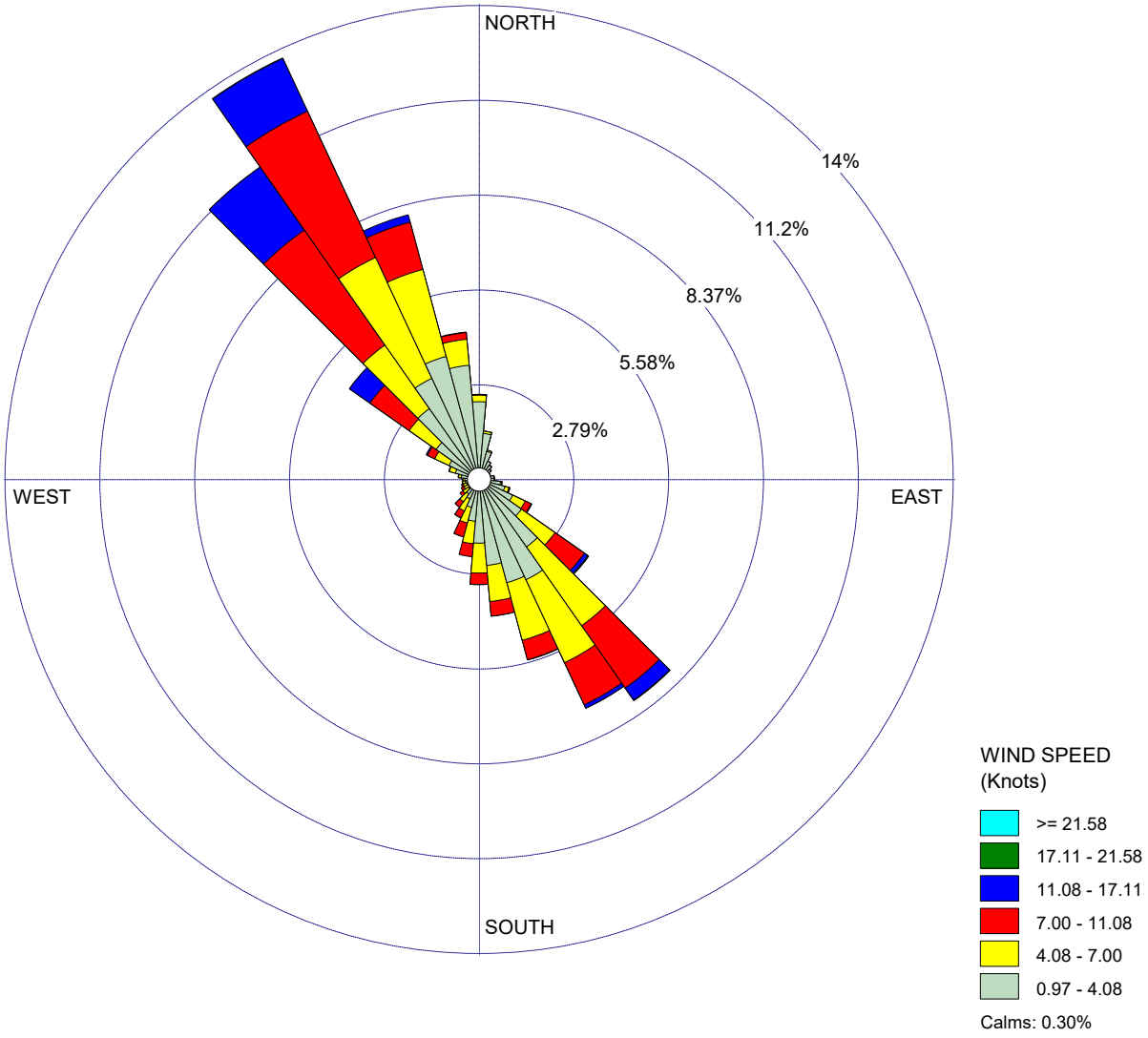
Attachment 4: Project Construction and Operation Dispersion Modeling Inputs and Risk Calculations

WIND ROSE PLOT:

San Martin Airport (2013-2017)
Prepared by BAAQMD

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2013 - 00:00** **End Date: 12/31/2017 - 23:59**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **0.30%**	TOTAL COUNT: **42868 hrs.**	
	AVG. WIND SPEED: **5.03 Knots**	DATE: **9/29/2020**	PROJECT NO.:

PROJECT CONSTRUCTION INPUTS AND RISKS

10th & Chestnut Commercial Development, Gilroy, California

DPM Emissions and Modeling Emission Rates - Unmitigated

Emissions Model 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 ($g/s/m^2$)
2021	Construction	0.1452	DPM	290.3	0.06628	8.35E-03	28,507	**2.93E-07**
2022	Construction	0.0147	DPM	29.4	0.00670	8.44E-04	28,507	**2.96E-08**
Total		***0.1598***		***320***	***0.073***	***0.009***		

Construction Hours

hr/day =	12	(7am - 7pm)
days/yr =	365	
hours/year =	4380	

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 $g/s/m^2$
2021	Construction	FUG	0.0858	171.6	0.03918	4.94E-03	28,507	**1.73E-07**
2022	Construction	FUG	0.0001	0.3	0.00006	7.83E-06	28,507	**2.75E-10**
Total			***0.0859***	***172***	***0.039***	***0.005***		

Construction Hours

hr/day =	12	(7am - 7pm)
days/yr =	365	
hours/year =	4380	

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021	Construction	0.0207	DPM	41.3	0.00944	1.19E-03	20,710	**5.74E-08**
2022	Construction	0.0029	DPM	5.8	0.00133	1.67E-04	20,710	**8.08E-09**
Total		***0.0236***		***47***	***0.011***	***0.001***		

Construction Hours

hr/day =	12	(7am - 7pm)
days/yr =	365	
hours/year =	4380	

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2021	Construction	FUG	0.0198	39.6	0.00904	1.14E-03	20,710	**5.50E-08**
2022	Construction	FUG	0.0001	0.3	0.00006	7.83E-06	20,710	**3.78E-10**
Total			***0.0199***	***40***	***0.009***	***0.001***		

Construction Hours

hr/day =	12	(7am - 7pm)
days/yr =	365	
hours/year =	4380	

Year	Unmitigated DPM	DPM EMFAC2017	Unmitigated Emissions	Mitigated DPM	DPM EMFAC2017	Mitigated Emissions
2021	0.1428	0.002	0.1452	0.0183	0.002	0.0207
2022	0.0142	0.000	0.0147	0.00243	0.000	0.0029

	Unmitigated Fug PM2.5	Fug PM2.5 EMFAC2017	Unmitigated Emissions	Mitigated Fug PM2.5	Fug PM2.5 EMFAC2017	Mitigated Emissions
2021	0.0852	0.001	0.0858	0.0192	0.001	0.0198
2022	0	0.000	0.0001	0	0.000	0.0001

10th & Chestnut Commercial Development, Gilroy, California
Construction Health Impacts Summary

Maximum Impacts at Construction MEI Location - Unmitigated

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2021	0.0587	0.0327	8.91	0.17	0.012	0.10
2022	0.0059	0.0001	0.83	0.02	0.001	0.01
Total	-	-	**9.74**	**0.19**	-	-
Maximum	0.0587	0.0327	**-**	**-**	**0.012**	**0.10**

Maximum Impacts at Construction 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): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2021	0.0101	0.0104	1.53	0.03	0.002	0.02
2022	0.0014	0.0001	0.20	0.00	0.000	0.00
Total	-	-	**1.73**	**0.03**	-	-
Maximum	0.0101	0.0104	**-**	**-**	**0.0020**	**0.02**

10th & Chestnut Commercial Development, Gilroy, California
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated Emissions
Impacts at Off-Site Receptors - 5 feet

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 =	0.85	0.85	0.72	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				
						Infant/Child		Modeled		Adult
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)
0	0.25	-0.25 - 0*	2021	0.0587	10	0.71	2021	0.0587	-	-
1	1	0 - 1	2021	0.0587	10	8.20	2021	0.0587	1	0.17
2	1	1 - 2	2022	0.0059	10	0.83	2022	0.0059	1	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						**9.74**				**0.19**

* Third trimester of pregnancy

Maximum		
Hazard Index	**Fugitive PM2.5**	**Total PM2.5**
0.012	**0.033**	**0.096**
0.0117	0.0327	0.0959
0.0012	0.0001	0.0060

10th & Chestnut Commercial Development, Gilroy, California
Maximum DPM Cancer Risk Calculations From Construction - Mitigated Emissions
Impacts at Off-Site Receptors - 5 feet

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 =	0.85	0.85	0.72	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			Infant/Child	Adult - Exposure Information			Adult
							Modeled			
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)
0	0.25	-0.25 - 0*	2021	0.0101	10	0.12	2021	0.0101	-	-
1	1	0 - 1	2021	0.0101	10	1.41	2021	0.0101	1	0.03
2	1	1 - 2	2022	0.0014	10	0.20	2022	0.0014	1	0.00
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						**1.73**				**0.03**

* Third trimester of pregnancy

Maximum		
Hazard Index	Fugitive PM2.5	Total PM2.5
0.002	**0.010**	**0.020**
0.0020	0.0104	0.0205
0.0003	0.0001	0.0015

PROJECT OPERATION INPUTS AND RISKS

10th & Chestnut, Gilroy

Standby Emergency Generator Impacts

Off-site Sensitive Receptors

DPM Emission Rates		
	DPM Emissions per Generator	
	Max Daily	Annual
Source Type	(lb/day)	(lb/year)
1x 750 kW Generator	0.0333	12.14
CalEEMod DPM Emissions	6.07E-03	

Modeling Information	
Model	AERMOD
Source	Diesel Generator Engine
Source Type	Point
Meteorological Data	2013-2017 San Martin Airport

Point Source Stack Parameters		
Generator Engine Size (hp)	1005	approximate
Stack Height (ft)*	12.00	near ground level release
Stack Diameter (ft)*	0.60	
Exhaust Gas Flowrate (CFM)**	2527.73	
Stack Exit Velocity (ft/sec)*	149.00	
Exhaust Temperature (˚F)*	872.00	
Emissions Rate (lb/hr)	0.001386	

*BAAQMD default generator parameters

** AERMOD default

10th and Chestnut, Gilroy CA - Cancer Risks from Project Operation
Project Emergency Generator
Impacts at Off-Site Receptors-5 feet receptor height
Impact at Project MEI (28-year Exposure)

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

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

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

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

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	0.85	0.85	0.72	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)
0	0.25	-0.25 - 0*	2021	0.0000	10	0.00
1	1	0 - 1	2021	0.0000	10	0.00
2	1	1 - 2	2022	0.0000	10	0.00
3	1	2 - 3	2023	0.0014	3	0.03
4	1	3 - 4	2024	0.0014	3	0.03
5	1	4 - 5	2025	0.0014	3	0.03
6	1	5 - 6	2026	0.0014	3	0.03
7	1	6 - 7	2027	0.0014	3	0.03
8	1	7 - 8	2028	0.0014	3	0.03
9	1	8 - 9	2029	0.0014	3	0.03
10	1	9 - 10	2030	0.0014	3	0.03
11	1	10 - 11	2031	0.0014	3	0.03
12	1	11 - 12	2032	0.0014	3	0.03
13	1	12 - 13	2033	0.0014	3	0.03
14	1	13 - 14	2034	0.0014	3	0.03
15	1	14 - 15	2035	0.0014	3	0.03
16	1	15 - 16	2036	0.0014	3	0.03
17	1	16-17	2037	0.0014	1	0.00
18	1	17-18	2038	0.0014	1	0.00
19	1	18-19	2039	0.0014	1	0.00
20	1	19-20	2040	0.0014	1	0.00
21	1	20-21	2041	0.0014	1	0.00
22	1	21-22	2042	0.0014	1	0.00
23	1	22-23	2043	0.0014	1	0.00
24	1	23-24	2044	0.0014	1	0.00
25	1	24-25	2045	0.0014	1	0.00
26	1	25-26	2046	0.0014	1	0.00
27	1	26-27	2047	0.0014	1	0.00
28	1	27-28	2048	0.0014	1	0.00
29	1	28-29	2049	0.0014	1	0.00
30	1	29-30	2050	0.0014	1	0.00
Total Increased Cancer Risk						**0.43**

Maximum	
Hazard Index	Total PM2.5
0.0003	0.001

* Third trimester of pregnancy

Gasoline Station Calculator - 10th and Chestnut Commercial Development

Approximate Permitted max throughput for Proposed Project Gas Station: 10,000,000 gallons/year

BAAQMD Evaluation

Controlled Rate (for all activities) = 0.67 lbs/10^3 gal throughput

Estimated Project Throughput: 10000 10^3 gal/year

Annual VOC Emissions			6,700	pounds/year	18.4	pounds/day
			3.35	tons/year		
Annual TAC Emissions	Factors		0.02		0.101	pounds/day
Benzene	0.00284	lbs/1000gal	0.01	tons/year	**0.078**	**pounds/day**
Ethylbenzene	0.00405	lbs/1000gal	0.02	tons/year	**0.111**	**pounds/day**
Hexane	0.0112	lbs/1000gal	0.06	tons/year	**0.307**	**pounds/day**
Toluene	0.0272	lbs/1000gal	0.14	tons/year	**0.745**	**pounds/day**
Xylene	0.0227	lbs/1000gal	0.11	tons/year	**0.622**	**pounds/day**

Step 1:	
Plant Name	10th and Chestnut Commercial Development
Plant No.	Proposed Gas Station

Step 2: Estimate Distance	
What is the distance (m) from the facility boundary to the MEI?	260

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 5: Read Estimates		
Total Cancer Risk	0.211	per 1,000,000
Total Chronic Hazard	0.001	
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 compo	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	7.78E-02	9.95E+00	4.90E-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. 60	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	1.11E-01	1.23E+00	1.05E-04		
	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				
			0.00E+00				
	Hydrogen Chloride	7647010					
	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	7.45E-01		4.69E-03		
	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	6.22E-01		1.68E-03	
Vanadium	7440622	0.00E+00			
		TOTAL UNADJUSTED Risk Values	**11.185**	**0.055**	**0.000**

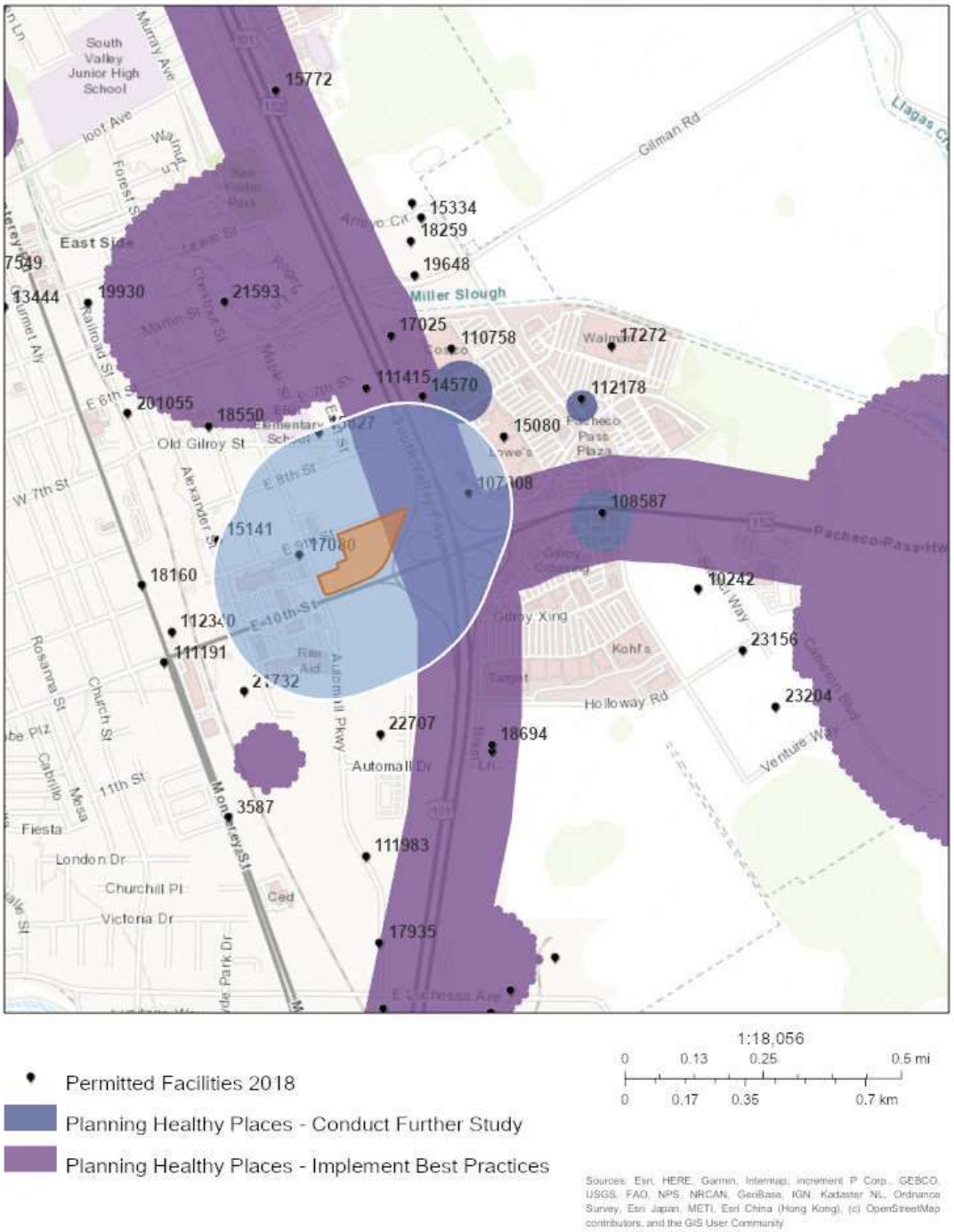
Attachment 5: Cumulative Community Risk from TAC Sources

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 6,047,430.65 ft²

Aug 6 2020 15:06:48 Pacific Daylight Time



20-093 10th & Chestnut Commercial Development Project

Summary

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

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	15141	Mission Power Coating, Inc	7238 Alexander St	Gilroy	CA
2	15827	City of Gilroy	613 Old Gilroy St	Gilroy	CA
3	17080	City of Gilroy	7070 Chestnut St	Gilroy	CA
4	107808	California Highway Patrol	740 Renz Ln	Gilroy	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	95020	Santa Clara	0.000	0.000	0.000	Contact BAAQMD	1
2	95020	Santa Clara	2.350	0.000	0.000	Generators	1
3	95020	Santa Clara	1.280	0.000	0.000	Generators	1
4	95020	Santa Clara	0.830	0.000	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.

Screening Risk Adjusted for Distance					
Source Information			***Screening Risks***		
FACID	**Name**	**Type**	**Cancer Risk**	**Hazard Index**	**PM2.5**
15141	Mission Power Coating, Inc	Contact BAAQMD	0.00	0.00	0.00
15827	City of Gilroy	Generators	2.35	0.00	0.00
17080	City of Gilroy	Generators	1.28	0.00	0.00
107808	California Highway Patrol	Gas Dispensing Facility	0.83	0.00	0.00
Offsite Existing MEI	***Distance***		***Adjusted***		
	Distance from MEI (feet)	**Distance Adjustment**	**Cancer Risk**	**Hazard Index**	**PM2.5**
	>1,000	0.132	0.00	0.00	0.00
	790	0.060	0.14	0.00	0.00
	590	0.090	0.12	0.00	0.00
	>1,000	0.015	0.01	0.00	0.00

FID	OBJECTID	FACID	Name	Address	City	St	Zip	County	Cancer	Hazard	PM_25	Type	Latitude	Longitude	x	y
2336	2,336	15141	Mission Power Coating, Inc	7238 Alexander St	Gilroy	CA	95020	Santa Clara	0	0	0	Contact BAAQMD	37.003	-121.564	627700.65	4096382.02
2587	2,587	15827	City of Gilroy	613 Old Gilroy St	Gilroy	CA	95020	Santa Clara	2.35	0	0	Generators	37.006	-121.561	628170.46	4096563.23
3114	3,114	17080	City of Gilroy	7070 Chestnut St	Gilroy	CA	95020	Santa Clara	1.28	0	0	Generators	37.003	-121.561	628045.38	4096183.66
7184	7,184	107808	California Highway Patrol	740 Renz Ln	Gilroy	CA	95020	Santa Clara	0.83	0	0	Gas Dispensing Facility	37.004	-121.556	628474.32	4096339

Gasoline Dispensing Facility (GDF) Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and chronic hazard index found in the District's Stationary Source Screening Analysis Tool for GDF's, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Gas Station

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Risk or Hazard	Adjusted Risk or Hazard
0	0.0	1.000		0.0000
5	16.4	1.000		0.0000
10	32.8	1.000		0.0000
15	49.2	1.000		0.0000
20	65.6	1.000		0.0000
25	82.0	0.728		0.0000
30	98.4	0.559		0.0000
35	114.8	0.445		0.0000
40	131.2	0.365		0.0000
45	147.6	0.305		0.0000
50	164.0	0.260		0.0000
55	180.4	0.225		0.0000
60	196.9	0.197		0.0000
65	213.3	0.174		0.0000
70	229.7	0.155		0.0000
75	246.1	0.139		0.0000
80	262.5	0.126		0.0000
85	278.9	0.114		0.0000
90	295.3	0.104		0.0000
95	311.7	0.096		0.0000
100	328.1	0.088		0.0000
105	344.5	0.082		0.0000
110	360.9	0.076		0.0000
115	377.3	0.071		0.0000
120	393.7	0.066		0.0000
125	410.1	0.062		0.0000
130	426.5	0.058		0.0000
135	442.9	0.055		0.0000
140	459.3	0.052		0.0000
145	475.7	0.049		0.0000
150	492.1	0.046		0.0000
155	508.5	0.044		0.0000
160	524.9	0.042		0.0000
165	541.3	0.040		0.0000
170	557.7	0.038		0.0000
175	574.1	0.036		0.0000
180	590.6	0.034		0.0000
185	607.0	0.033		0.0000
190	623.4	0.031		0.0000
195	639.8	0.030		0.0000
200	656.2	0.029		0.0000
205	672.6	0.028		0.0000
210	689.0	0.027		0.0000
215	705.4	0.026		0.0000
220	721.8	0.025		0.0000
225	738.2	0.024		0.0000
230	754.6	0.023		0.0000
235	771.0	0.022		0.0000
240	787.4	0.022		0.0000
245	803.8	0.021		0.0000
250	820.2	0.020		0.0000
255	836.6	0.020		0.0000
260	853.0	0.019		0.0000
265	869.4	0.018		0.0000
270	885.8	0.018		0.0000
275	902.2	0.017		0.0000
280	918.6	0.017		0.0000
285	935.0	0.016		0.0000
290	951.4	0.016		0.0000
295	967.8	0.015		0.0000
300	984.3	0.015		0.0000

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Risk or Hazard	Adjusted Risk or Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0
5	16.4	1.000		0		0
10	32.8	1.000		0		0
15	49.2	1.000		0		0
20	65.6	1.000		0		0
25	82.0	0.85		0		0
30	98.4	0.73		0		0
35	114.8	0.64		0		0
40	131.2	0.58		0		0
50	164.0	0.5		0		0
60	196.9	0.41		0		0
70	229.7	0.31		0		0
80	262.5	0.28		0		0
90	295.3	0.25		0		0
100	328.1	0.22		0		0
110	360.9	0.18		0		0
120	393.7	0.16		0		0
130	426.5	0.15		0		0
140	459.3	0.14		0		0
150	492.1	0.12		0		0
160	524.9	0.1		0		0
180	590.6	0.09		0		0
200	656.2	0.08		0		0
220	721.8	0.07		0		0
240	787.4	0.06		0		0
260	853.0	0.05		0		0
280	918.6	0.04		0		0

Generic Distance Multiplier Tool: This distance multiplier tool refines the screening values to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Generic Case

Distance (meters)	Distance (feet)	Multiplier	Enter Risk or Hazard	Adjusted Risk or Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0
5	16.4	1.000		0		0
10	32.8	0.883		0		0
15	49.2	0.855		0		0
20	65.6	0.827		0		0
25	82.0	0.801		0		0
30	98.4	0.775		0		0
35	114.8	0.750		0		0
40	131.2	0.726		0		0
45	147.6	0.702		0		0
50	164.0	0.679		0		0
55	180.4	0.658		0		0
60	196.9	0.636		0		0
65	213.3	0.616		0		0
70	229.7	0.596		0		0
75	246.1	0.577		0		0
80	262.5	0.558		0		0
85	278.9	0.540		0		0
90	295.3	0.523		0		0
95	311.7	0.506		0		0
100	328.1	0.489		0		0
105	344.5	0.474		0		0
110	360.9	0.458		0		0
115	377.3	0.444		0		0
120	393.7	0.429		0		0
125	410.1	0.415		0		0
130	426.5	0.402		0		0
135	442.9	0.389		0		0
140	459.3	0.376		0		0
145	475.7	0.364		0		0
150	492.1	0.353		0		0
155	508.5	0.341		0		0
160	524.9	0.330		0		0
165	541.3	0.319		0		0
170	557.7	0.309		0		0
175	574.1	0.299		0		0
180	590.6	0.290		0		0
185	607.0	0.280		0		0
190	623.4	0.271		0		0
195	639.8	0.262		0		0
200	656.2	0.254		0		0
205	672.6	0.246		0		0
210	689.0	0.238		0		0
215	705.4	0.230		0		0
220	721.8	0.223		0		0
225	738.2	0.216		0		0
230	754.6	0.209		0		0
235	771.0	0.202		0		0
240	787.4	0.195		0		0
245	803.8	0.189		0		0
250	820.2	0.183		0		0
255	836.6	0.177		0		0
260	853.0	0.171		0		0
265	869.4	0.166		0		0
270	885.8	0.160		0		0
275	902.2	0.155		0		0
280	918.6	0.150		0		0
285	935.0	0.145		0		0
290	951.4	0.141		0		0
295	967.8	0.136		0		0
300	984.3	0.132		0		0

Roadway Emissions Calculations and Modeling Information

Highway 101 Information

```
           File Name:   10th & Chestnut Gilroy - Santa Clara (SF) - 2023 - Annual Hwy 101.EF
CT-EMFAC2017 Version:   1.0.2.27401
            Run Date:   8/17/2020 12:42:04 AM
                Area:   Santa Clara (SF)
       Analysis Year:   2023
              Season:   Annual

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

Vehicle Category        VMT Fraction            Diesel VMT Fraction     Gas VMT Fraction
                        Across Category         Within Category         Within Category
         Truck 1             0.034                   0.487                   0.513
         Truck 2             0.041                   0.938                   0.047
       Non-Truck             0.925                   0.014                   0.958

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

             Road Type:               Freeway
     Silt Loading Factor:                CARB         0.015 g/m2
Precipitation Correction:                CARB         P = 64 days     N = 365 days

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

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

       Pollutant Name     15 mph     25 mph     35 mph     45 mph     55 mph         60 mph     65 mph
                PM2.5   0.004347   0.002417   0.001740   0.001629   0.001883       0.002138   0.002489
                  TOG   0.089373   0.047261   0.031491   0.025431   0.024963       0.026685   0.029998
            Diesel PM   0.000983   0.000674   0.000627   0.000752   0.001030       0.001217   0.001431
                 DEOG   0.008502   0.003182   0.002117   0.001669   0.001619       0.001699   0.001823

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

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

       Pollutant Name   Emission Factor
                  TOG          1.386495

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.002216

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.017598

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.008795

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

10th & Chestnut Gilroy - Roadway Emissions
Highway 101
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
NB101_DPM	Northbound SR-87	N	3	728.4	0.45	17.0	55.7	3.4	Variable	54,705
SB101_DPM	Southbound SR-87	S	3	718.9	0.45	17.0	55.7	3.4	Variable	54,705
									Total	109,410

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	65	60		
Emissions per Vehicle (g/VMT)	0.00143	0.001217		

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and DPM Emissions - NB101_DPM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.91%	2139	3.85E-04	9	6.50%	3555	5.44E-04	17	5.58%	3051	4.67E-04
2	2.59%	1416	2.55E-04	10	7.36%	4027	7.24E-04	18	3.28%	1793	2.74E-04
3	2.88%	1573	2.83E-04	11	6.33%	3460	6.23E-04	19	2.36%	1290	2.32E-04
4	3.34%	1825	3.28E-04	12	6.84%	3743	6.74E-04	20	0.92%	503	9.06E-05
5	2.19%	1195	2.15E-04	13	6.15%	3366	6.06E-04	21	2.99%	1636	2.94E-04
6	3.39%	1856	3.34E-04	14	6.15%	3366	6.06E-04	22	4.14%	2265	4.08E-04
7	5.98%	3272	5.89E-04	15	5.23%	2863	5.15E-04	23	2.47%	1353	2.43E-04
8	4.66%	2548	3.90E-04	16	3.91%	2139	3.85E-04	24	0.86%	472	8.49E-05
								Total		54,705	

2023 Hourly Traffic Volumes Per Direction and DPM Emissions - SB101_DPM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.91%	2139	3.80E-04	9	6.50%	3555	5.37E-04	17	5.58%	3051	4.61E-04
2	2.59%	1416	2.51E-04	10	7.36%	4027	7.15E-04	18	3.28%	1793	2.71E-04
3	2.88%	1573	2.79E-04	11	6.33%	3460	6.14E-04	19	2.36%	1290	2.29E-04
4	3.34%	1825	3.24E-04	12	6.84%	3743	6.65E-04	20	0.92%	503	8.94E-05
5	2.19%	1195	2.12E-04	13	6.15%	3366	5.98E-04	21	2.99%	1636	2.90E-04
6	3.39%	1856	3.30E-04	14	6.15%	3366	5.98E-04	22	4.14%	2265	4.02E-04
7	5.98%	3272	5.81E-04	15	5.23%	2863	5.08E-04	23	2.47%	1353	2.40E-04
8	4.66%	2548	3.85E-04	16	3.91%	2139	3.80E-04	24	0.86%	472	8.38E-05
								Total		54,705	

Analysis Year = ***2023***

Vehicle Type	2018 Caltrans Vehicles (veh/day)	2023 Vehicles (veh/day)
Truck 1 (MDT)	3,567	3,745
Truck 2 (HDT)	4,259	4,472
Non-Truck	96,375	101,193
Total	**104,200**	**109,410**

Increase From 2018 1.05
Vehicles/Direction **54,705**
Avg Vehicles/Hour/Direction 2,279

Traffic Data Year = ***2018***

Caltrans Truck AADT Data (2018)	AADT Total	Total Truck	Trucks by Axle 2	3	4	5
Rte 101, A Gilroy, Jct. Rte. 152 East	104,200	7,825	3,567	419	189	3,651
			45.58%	5.35%	2.41%	46.66%
Percent of Total Vehicles		7.51%	3.42%	0.40%	0.18%	3.50%

Traffic Increase per Year (%) = *1.00%*

10th & Chestnut Gilroy - Roadway Emissions
Highway 101
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
NB101_PM25	Northbound SR-87	N	3	728.4	0.45	17.0	56	1.3	Variable	54,705
SB101_PM25	Southbound SR-87	S	3	718.9	0.45	17.0	56	1.3	Variable	54,705
									Total	109,410

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	60		
Emissions per Vehicle (g/VMT)	0.002489	0.00214		

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and PM2.5 Emissions - NB101_PM25

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	630	1.97E-04	9	7.11%	3890	1.05E-03	17	7.38%	4040	1.09E-03
2	0.42%	228	7.15E-05	10	4.39%	2403	7.52E-04	18	8.17%	4470	1.20E-03
3	0.41%	223	6.98E-05	11	4.66%	2551	7.98E-04	19	5.70%	3116	9.75E-04
4	0.26%	144	4.51E-05	12	5.89%	3221	1.01E-03	20	4.27%	2338	7.32E-04
5	0.50%	274	8.57E-05	13	6.15%	3365	1.05E-03	21	3.26%	1783	5.58E-04
6	0.90%	495	1.55E-04	14	6.04%	3302	1.03E-03	22	3.30%	1804	5.65E-04
7	3.79%	2075	6.49E-04	15	7.01%	3836	1.20E-03	23	2.46%	1345	4.21E-04
8	7.76%	4246	1.14E-03	16	7.14%	3903	1.22E-03	24	1.86%	1020	3.19E-04
								Total		54,705	

2023 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - SB101_PM25

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	630	1.95E-04	9	7.11%	3890	1.03E-03	17	7.38%	4040	1.07E-03
2	0.42%	228	7.05E-05	10	4.39%	2403	7.42E-04	18	8.17%	4470	1.19E-03
3	0.41%	223	6.89E-05	11	4.66%	2551	7.88E-04	19	5.70%	3116	9.62E-04
4	0.26%	144	4.45E-05	12	5.89%	3221	9.95E-04	20	4.27%	2338	7.22E-04
5	0.50%	274	8.46E-05	13	6.15%	3365	1.04E-03	21	3.26%	1783	5.51E-04
6	0.90%	495	1.53E-04	14	6.04%	3302	1.02E-03	22	3.30%	1804	5.57E-04
7	3.79%	2075	6.41E-04	15	7.01%	3836	1.18E-03	23	2.46%	1345	4.16E-04
8	7.76%	4246	1.13E-03	16	7.14%	3903	1.21E-03	24	1.86%	1020	3.15E-04
								Total		54,705	

10th & Chestnut Gilroy - Roadway Emissions
Highway 101
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
NB101_TEXH	Northbound SR-87	N	3	728.4	0.45	17.0	56	1.3	Variable	54,705
SB101_TEXH	Southbound SR-87	S	3	718.9	0.45	17.0	56	1.3	Variable	54,705
									Total	109,410

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	65	60		
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.029998	0.026685		
Diesel Veghicles TOG Emissions per Vehicle (g/VMT)	0.001823	0.001699		
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02818	0.02499		

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and TOG Exhaust Emissions - NB101_TEXH

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	630	2.23E-03	9	7.11%	3890	1.22E-02	17	7.38%	4040	1.27E-02
2	0.42%	228	8.09E-04	10	4.39%	2403	8.51E-03	18	8.17%	4470	1.40E-02
3	0.41%	223	7.90E-04	11	4.66%	2551	9.04E-03	19	5.70%	3116	1.10E-02
4	0.26%	144	5.10E-04	12	5.89%	3221	1.14E-02	20	4.27%	2338	8.28E-03
5	0.50%	274	9.70E-04	13	6.15%	3365	1.19E-02	21	3.26%	1783	6.32E-03
6	0.90%	495	1.75E-03	14	6.04%	3302	1.17E-02	22	3.30%	1804	6.39E-03
7	3.79%	2075	7.35E-03	15	7.01%	3836	1.36E-02	23	2.46%	1345	4.77E-03
8	7.76%	4246	1.33E-02	16	7.14%	3903	1.38E-02	24	1.86%	1020	3.61E-03
								Total		54,705	

2023 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - SB101_TEXH

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	630	2.20E-03	9	7.11%	3890	1.21E-02	17	7.38%	4040	1.25E-02
2	0.42%	228	7.99E-04	10	4.39%	2403	8.40E-03	18	8.17%	4470	1.39E-02
3	0.41%	223	7.80E-04	11	4.66%	2551	8.92E-03	19	5.70%	3116	1.09E-02
4	0.26%	144	5.03E-04	12	5.89%	3221	1.13E-02	20	4.27%	2338	8.17E-03
5	0.50%	274	9.57E-04	13	6.15%	3365	1.18E-02	21	3.26%	1783	6.23E-03
6	0.90%	495	1.73E-03	14	6.04%	3302	1.15E-02	22	3.30%	1804	6.31E-03
7	3.79%	2075	7.25E-03	15	7.01%	3836	1.34E-02	23	2.46%	1345	4.70E-03
8	7.76%	4246	1.32E-02	16	7.14%	3903	1.36E-02	24	1.86%	1020	3.56E-03
								Total		54,705	

10th & Chestnut Gilroy - Roadway Emissions
Highway 101
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
NB101_TEVAP	Northbound SR-87	N	3	728.4	0.45	17.0	56	1.3	Variable	54,705
SB101_TEVAP	Southbound SR-87	S	3	718.9	0.45	17.0	56	1.3	Variable	54,705
									Total	109,410

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	65	60		
Emissions per Vehicle per Hour (g/hour)	1.38650	1.38650		
Emissions per Vehicle per Mile (g/VMT)	0.02133	0.02311		

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and TOG Evaporative Emissions - NB101_TEVAP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	630	1.69E-03	9	7.11%	3890	1.13E-02	17	7.38%	4040	1.17E-02
2	0.42%	228	6.13E-04	10	4.39%	2403	6.44E-03	18	8.17%	4470	1.30E-02
3	0.41%	223	5.98E-04	11	4.66%	2551	6.84E-03	19	5.70%	3116	8.36E-03
4	0.26%	144	3.86E-04	12	5.89%	3221	8.64E-03	20	4.27%	2338	6.27E-03
5	0.50%	274	7.34E-04	13	6.15%	3365	9.03E-03	21	3.26%	1783	4.78E-03
6	0.90%	495	1.33E-03	14	6.04%	3302	8.86E-03	22	3.30%	1804	4.84E-03
7	3.79%	2075	5.57E-03	15	7.01%	3836	1.03E-02	23	2.46%	1345	3.61E-03
8	7.76%	4246	1.23E-02	16	7.14%	3903	1.05E-02	24	1.86%	1020	2.73E-03
								Total		54,705	

2023 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - SB101_TEVAP

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	630	1.67E-03	9	7.11%	3890	1.12E-02	17	7.38%	4040	1.16E-02
2	0.42%	228	6.05E-04	10	4.39%	2403	6.36E-03	18	8.17%	4470	1.28E-02
3	0.41%	223	5.90E-04	11	4.66%	2551	6.75E-03	19	5.70%	3116	8.25E-03
4	0.26%	144	3.81E-04	12	5.89%	3221	8.53E-03	20	4.27%	2338	6.19E-03
5	0.50%	274	7.25E-04	13	6.15%	3365	8.91E-03	21	3.26%	1783	4.72E-03
6	0.90%	495	1.31E-03	14	6.04%	3302	8.74E-03	22	3.30%	1804	4.78E-03
7	3.79%	2075	5.49E-03	15	7.01%	3836	1.02E-02	23	2.46%	1345	3.56E-03
8	7.76%	4246	1.22E-02	16	7.14%	3903	1.03E-02	24	1.86%	1020	2.70E-03
								Total		54,705	

10th & Chestnut Gilroy - Roadway Emissions
Highway 101
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
NB101_FUG	Northbound SR-87	N	3	728.4	0.45	17.0	56	1.3	Variable	54,705
SB101_FUG	Southbound SR-87	S	3	718.9	0.45	17.0	56	1.3	Variable	54,705
									Total	109,410

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	0	0
Tire Wear - Emissions per Vehicle (g/VMT)	0.00222	0.00222		
Brake Wear - Emissions per Vehicle (g/VMT)	0.01760	0.01760		
Road Dust - Emissions per Vehicle (g/VMT)	0.00880	0.00880		
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02861	0.02861		

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - NB101_FUG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	630	2.27E-03	9	7.11%	3890	1.40E-02	17	7.38%	4040	1.45E-02
2	0.42%	228	8.22E-04	10	4.39%	2403	8.64E-03	18	8.17%	4470	1.61E-02
3	0.41%	223	8.02E-04	11	4.66%	2551	9.18E-03	19	5.70%	3116	1.12E-02
4	0.26%	144	5.18E-04	12	5.89%	3221	1.16E-02	20	4.27%	2338	8.41E-03
5	0.50%	274	9.85E-04	13	6.15%	3365	1.21E-02	21	3.26%	1783	6.41E-03
6	0.90%	495	1.78E-03	14	6.04%	3302	1.19E-02	22	3.30%	1804	6.49E-03
7	3.79%	2075	7.46E-03	15	7.01%	3836	1.38E-02	23	2.46%	1345	4.84E-03
8	7.76%	4246	1.53E-02	16	7.14%	3903	1.40E-02	24	1.86%	1020	3.67E-03
								Total		54,705	

2023 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - SB101_FUG

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	630	2.24E-03	9	7.11%	3890	1.38E-02	17	7.38%	4040	1.43E-02
2	0.42%	228	8.11E-04	10	4.39%	2403	8.53E-03	18	8.17%	4470	1.59E-02
3	0.41%	223	7.92E-04	11	4.66%	2551	9.06E-03	19	5.70%	3116	1.11E-02
4	0.26%	144	5.11E-04	12	5.89%	3221	1.14E-02	20	4.27%	2338	8.30E-03
5	0.50%	274	9.72E-04	13	6.15%	3365	1.19E-02	21	3.26%	1783	6.33E-03
6	0.90%	495	1.76E-03	14	6.04%	3302	1.17E-02	22	3.30%	1804	6.41E-03
7	3.79%	2075	7.37E-03	15	7.01%	3836	1.36E-02	23	2.46%	1345	4.78E-03
8	7.76%	4246	1.51E-02	16	7.14%	3903	1.39E-02	24	1.86%	1020	3.62E-03
								Total		54,705	

10th Street Information

```
           File Name:   Santa Clara (SF) - 2023 - Annual.EF
CT-EMFAC2017 Version:   1.0.2.27401
            Run Date:   6/13/2020 12:36:17 AM
                Area:   Santa Clara (SF)
       Analysis Year:   2023
              Season:   Annual

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

Vehicle Category        VMT Fraction            Diesel VMT Fraction     Gas VMT Fraction
                        Across Category         Within Category         Within Category
         Truck 1             0.026                   0.487                   0.513
         Truck 2             0.036                   0.938                   0.047
       Non-Truck             0.938                   0.014                   0.958

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

              Road Type:       Major/Collector
     Silt Loading Factor:                 CARB         0.032 g/m2
Precipitation Correction:                 CARB         P = 64 days     N = 365 days

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

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

       Pollutant Name     10 mph     15 mph     20 mph     25 mph     30 mph     35 mph     40 mph
                PM2.5   0.006198   0.004236   0.003051   0.002336   0.001907   0.001664   0.001551
                  TOG   0.131848   0.088154   0.062068   0.046876   0.037363   0.031255   0.027433
            Diesel PM   0.001078   0.000832   0.000664   0.000572   0.000533   0.000535   0.000575
                 DEOG   0.012961   0.007006   0.003698   0.002634   0.002107   0.001752   0.001518

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

       Pollutant Name   Emission Factor
                  TOG          1.369896

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.002188

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.017348

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.016823

============================END=======================================
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10th & Chestnut Project, Gilroy - Roadway Emissions
10th Street
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
EB10TH_DPM	Eastbound 10th Street	E	2	894.6	0.56	13.3	43.7	3.4	35	14,798
WB10TH_DPM	Werstbound 10th Street	W	2	894.9	0.56	13.3	43.7	3.4	35	14,798
									Total	29,595

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00054			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and DPM Emissions - EB10TH_DPM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.91%	579	4.78E-05	9	6.50%	962	7.94E-05	17	5.58%	825	6.82E-05
2	2.59%	383	3.16E-05	10	7.36%	1089	9.00E-05	18	3.28%	485	4.01E-05
3	2.88%	425	3.51E-05	11	6.33%	936	7.73E-05	19	2.36%	349	2.88E-05
4	3.34%	494	4.08E-05	12	6.84%	1013	8.37E-05	20	0.92%	136	1.12E-05
5	2.19%	323	2.67E-05	13	6.15%	910	7.52E-05	21	2.99%	442	3.66E-05
6	3.39%	502	4.15E-05	14	6.15%	910	7.52E-05	22	4.14%	613	5.06E-05
7	5.98%	885	7.31E-05	15	5.23%	774	6.40E-05	23	2.47%	366	3.02E-05
8	4.66%	689	5.69E-05	16	3.91%	579	4.78E-05	24	0.86%	128	1.05E-05
								Total		14,798	

2023 Hourly Traffic Volumes Per Direction and DPM Emissions - WB10TH_DPM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.91%	579	4.78E-05	9	6.50%	962	7.95E-05	17	5.58%	825	6.82E-05
2	2.59%	383	3.16E-05	10	7.36%	1089	9.00E-05	18	3.28%	485	4.01E-05
3	2.88%	425	3.52E-05	11	6.33%	936	7.73E-05	19	2.36%	349	2.88E-05
4	3.34%	494	4.08E-05	12	6.84%	1013	8.37E-05	20	0.92%	136	1.13E-05
5	2.19%	323	2.67E-05	13	6.15%	910	7.52E-05	21	2.99%	442	3.66E-05
6	3.39%	502	4.15E-05	14	6.15%	910	7.52E-05	22	4.14%	613	5.06E-05
7	5.98%	885	7.31E-05	15	5.23%	774	6.40E-05	23	2.47%	366	3.02E-05
8	4.66%	689	5.70E-05	16	3.91%	579	4.78E-05	24	0.86%	128	1.05E-05
								Total		14,798	

10th & Chestnut Project, Gilroy - Roadway Emissions
10th Street
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
EB10TH_PM25	Eastbound 10th Street	E	2	894.6	0.56	13.3	44	1.3	35	14,798
WB10TH_PM25	Werstbound 10th Street	W	2	894.9	0.56	13.3	44	1.3	35	14,798
									Total	29,595

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001664			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and PM2.5 Emissions - EB10TH_PM25

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	170	4.38E-05	9	7.11%	1052	2.70E-04	17	7.38%	1093	2.81E-04
2	0.42%	62	1.59E-05	10	4.39%	650	1.67E-04	18	8.17%	1209	3.11E-04
3	0.41%	60	1.55E-05	11	4.66%	690	1.77E-04	19	5.70%	843	2.17E-04
4	0.26%	39	1.00E-05	12	5.89%	871	2.24E-04	20	4.27%	632	1.63E-04
5	0.50%	74	1.90E-05	13	6.15%	910	2.34E-04	21	3.26%	482	1.24E-04
6	0.90%	134	3.44E-05	14	6.04%	893	2.30E-04	22	3.30%	488	1.25E-04
7	3.79%	561	1.44E-04	15	7.01%	1038	2.67E-04	23	2.46%	364	9.35E-05
8	7.76%	1149	2.95E-04	16	7.14%	1056	2.71E-04	24	1.86%	276	7.09E-05
								Total		14,798	

2023 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - WB10TH_PM25

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	170	4.38E-05	9	7.11%	1052	2.70E-04	17	7.38%	1093	2.81E-04
2	0.42%	62	1.59E-05	10	4.39%	650	1.67E-04	18	8.17%	1209	3.11E-04
3	0.41%	60	1.55E-05	11	4.66%	690	1.77E-04	19	5.70%	843	2.17E-04
4	0.26%	39	1.00E-05	12	5.89%	871	2.24E-04	20	4.27%	632	1.63E-04
5	0.50%	74	1.90E-05	13	6.15%	910	2.34E-04	21	3.26%	482	1.24E-04
6	0.90%	134	3.44E-05	14	6.04%	893	2.30E-04	22	3.30%	488	1.25E-04
7	3.79%	561	1.44E-04	15	7.01%	1038	2.67E-04	23	2.46%	364	9.35E-05
8	7.76%	1149	2.95E-04	16	7.14%	1056	2.71E-04	24	1.86%	276	7.09E-05
								Total		14,798	

10th & Chestnut Project, Gilroy - Roadway Emissions
10th Street
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
EB10TH_TEXH	Eastbound 10th Street	E	2	894.6	0.56	13.3	44	1.3	35	14,798
WB10TH_TEXH	Werstbound 10th Street	W	2	894.9	0.56	13.3	44	1.3	35	14,798
									Total	29,595

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.031255			
Diesel Veghicles TOG Emissions per Vehicle (g/VMT)	0.001752			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02950			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and TOG Exhaust Emissions - EB10TH_TEXH

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	170	7.76E-04	9	7.11%	1052	4.79E-03	17	7.38%	1093	4.98E-03
2	0.42%	62	2.81E-04	10	4.39%	650	2.96E-03	18	8.17%	1209	5.51E-03
3	0.41%	60	2.75E-04	11	4.66%	690	3.14E-03	19	5.70%	843	3.84E-03
4	0.26%	39	1.77E-04	12	5.89%	871	3.97E-03	20	4.27%	632	2.88E-03
5	0.50%	74	3.37E-04	13	6.15%	910	4.15E-03	21	3.26%	482	2.20E-03
6	0.90%	134	6.10E-04	14	6.04%	893	4.07E-03	22	3.30%	488	2.22E-03
7	3.79%	561	2.56E-03	15	7.01%	1038	4.73E-03	23	2.46%	364	1.66E-03
8	7.76%	1149	5.23E-03	16	7.14%	1056	4.81E-03	24	1.86%	276	1.26E-03
								Total		14,798	

2023 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - WB10TH_TEXH

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	170	7.77E-04	9	7.11%	1052	4.80E-03	17	7.38%	1093	4.98E-03
2	0.42%	62	2.82E-04	10	4.39%	650	2.96E-03	18	8.17%	1209	5.51E-03
3	0.41%	60	2.75E-04	11	4.66%	690	3.14E-03	19	5.70%	843	3.84E-03
4	0.26%	39	1.77E-04	12	5.89%	871	3.97E-03	20	4.27%	632	2.88E-03
5	0.50%	74	3.38E-04	13	6.15%	910	4.15E-03	21	3.26%	482	2.20E-03
6	0.90%	134	6.10E-04	14	6.04%	893	4.07E-03	22	3.30%	488	2.22E-03
7	3.79%	561	2.56E-03	15	7.01%	1038	4.73E-03	23	2.46%	364	1.66E-03
8	7.76%	1149	5.23E-03	16	7.14%	1056	4.81E-03	24	1.86%	276	1.26E-03
								Total		14,798	

10th & Chestnut Project, Gilroy - Roadway Emissions
10th Street
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
EB10TH_TEVAP	Eastbound 10th Street	E	2	894.6	0.56	13.3	44	1.3	35	14,798
WB10TH_TEVAP	Werstbound 10th Street	W	2	894.9	0.56	13.3	44	1.3	35	14,798
									Total	29,595

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	1.36990			
Emissions per Vehicle per Mile (g/VMT)	0.03914			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and TOG Evaporative Emissions - EB10TH_TEVAP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	170	1.03E-03	9	7.11%	1052	6.36E-03	17	7.38%	1093	6.60E-03
2	0.42%	62	3.73E-04	10	4.39%	650	3.93E-03	18	8.17%	1209	7.31E-03
3	0.41%	60	3.65E-04	11	4.66%	690	4.17E-03	19	5.70%	843	5.09E-03
4	0.26%	39	2.35E-04	12	5.89%	871	5.27E-03	20	4.27%	632	3.82E-03
5	0.50%	74	4.48E-04	13	6.15%	910	5.50E-03	21	3.26%	482	2.91E-03
6	0.90%	134	8.09E-04	14	6.04%	893	5.40E-03	22	3.30%	488	2.95E-03
7	3.79%	561	3.39E-03	15	7.01%	1038	6.27E-03	23	2.46%	364	2.20E-03
8	7.76%	1149	6.94E-03	16	7.14%	1056	6.38E-03	24	1.86%	276	1.67E-03
								Total		14,798	

2023 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - WB10TH_TEVAP

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	170	1.03E-03	9	7.11%	1052	6.36E-03	17	7.38%	1093	6.61E-03
2	0.42%	62	3.73E-04	10	4.39%	650	3.93E-03	18	8.17%	1209	7.31E-03
3	0.41%	60	3.65E-04	11	4.66%	690	4.17E-03	19	5.70%	843	5.10E-03
4	0.26%	39	2.35E-04	12	5.89%	871	5.27E-03	20	4.27%	632	3.82E-03
5	0.50%	74	4.48E-04	13	6.15%	910	5.50E-03	21	3.26%	482	2.92E-03
6	0.90%	134	8.09E-04	14	6.04%	893	5.40E-03	22	3.30%	488	2.95E-03
7	3.79%	561	3.39E-03	15	7.01%	1038	6.27E-03	23	2.46%	364	2.20E-03
8	7.76%	1149	6.94E-03	16	7.14%	1056	6.38E-03	24	1.86%	276	1.67E-03
								Total		14,798	

10th & Chestnut Project, Gilroy - Roadway Emissions
10th Street
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
EB10TH_FUG	Eastbound 10th Street	E	2	894.6	0.56	13.3	44	1.3	35	14,798
WB10TH_FUG	Werstbound 10th Street	W	2	894.9	0.56	13.3	44	1.3	35	14,798
									Total	29,595

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00219			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01735			
Road Dust - Emissions per Vehicle (g/VMT)	0.01682			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03636			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - EB10TH_FUG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	170	9.57E-04	9	7.11%	1052	5.91E-03	17	7.38%	1093	6.13E-03
2	0.42%	62	3.47E-04	10	4.39%	650	3.65E-03	18	8.17%	1209	6.79E-03
3	0.41%	60	3.39E-04	11	4.66%	690	3.87E-03	19	5.70%	843	4.73E-03
4	0.26%	39	2.19E-04	12	5.89%	871	4.89E-03	20	4.27%	632	3.55E-03
5	0.50%	74	4.16E-04	13	6.15%	910	5.11E-03	21	3.26%	482	2.71E-03
6	0.90%	134	7.51E-04	14	6.04%	893	5.02E-03	22	3.30%	488	2.74E-03
7	3.79%	561	3.15E-03	15	7.01%	1038	5.83E-03	23	2.46%	364	2.04E-03
8	7.76%	1149	6.45E-03	16	7.14%	1056	5.93E-03	24	1.86%	276	1.55E-03
								Total		14,798	

2023 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - WB10TH_FUG

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	170	9.57E-04	9	7.11%	1052	5.91E-03	17	7.38%	1093	6.14E-03
2	0.42%	62	3.47E-04	10	4.39%	650	3.65E-03	18	8.17%	1209	6.79E-03
3	0.41%	60	3.39E-04	11	4.66%	690	3.88E-03	19	5.70%	843	4.73E-03
4	0.26%	39	2.19E-04	12	5.89%	871	4.89E-03	20	4.27%	632	3.55E-03
5	0.50%	74	4.16E-04	13	6.15%	910	5.11E-03	21	3.26%	482	2.71E-03
6	0.90%	134	7.51E-04	14	6.04%	893	5.02E-03	22	3.30%	488	2.74E-03
7	3.79%	561	3.15E-03	15	7.01%	1038	5.83E-03	23	2.46%	364	2.04E-03
8	7.76%	1149	6.45E-03	16	7.14%	1056	5.93E-03	24	1.86%	276	1.55E-03
								Total		14,798	

Chestnut Street Information

```
           File Name:   Santa Clara (SF) - 2023 - Annual.EF
CT-EMFAC2017 Version:   1.0.2.27401
            Run Date:   6/13/2020 12:36:17 AM
                Area:   Santa Clara (SF)
       Analysis Year:   2023
              Season:   Annual

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

Vehicle Category        VMT Fraction            Diesel VMT Fraction     Gas VMT Fraction
                        Across Category         Within Category         Within Category
         Truck 1             0.026                   0.487                   0.513
         Truck 2             0.036                   0.938                   0.047
       Non-Truck             0.938                   0.014                   0.958

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

               Road Type:       Major/Collector
     Silt Loading Factor:                  CARB         0.032 g/m2
Precipitation Correction:                  CARB         P = 64 days     N = 365 days

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

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

       Pollutant Name     10 mph     15 mph     20 mph     25 mph     30 mph     35 mph     40 mph
                PM2.5   0.006198   0.004236   0.003051   0.002336   0.001907   0.001664   0.001551
                  TOG   0.131848   0.088154   0.062068   0.046876   0.037363   0.031255   0.027433
            Diesel PM   0.001078   0.000832   0.000664   0.000572   0.000533   0.000535   0.000575
                 DEOG   0.012961   0.007006   0.003698   0.002634   0.002107   0.001752   0.001518

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

       Pollutant Name   Emission Factor
                  TOG          1.369896

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.002188

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.017348

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.016823

============================END==============================================
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10th & Chestnut Project, Gilroy - Roadway Emissions
Chestnut Street
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
NBCHST_DPM	Northbound Chestnut Street	N	1	742.0	0.46	9.7	31.7	3.4	35	5,755
SBCHST_DPM	Southbound Chestnut Street	S	1	736.8	0.46	9.7	31.7	3.4	35	5,755
									Total	11,510

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00054			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and DPM Emissions - NBCHST_DPM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.91%	225	1.54E-05	9	6.50%	374	2.56E-05	17	5.58%	321	2.20E-05
2	2.59%	149	1.02E-05	10	7.36%	424	2.90E-05	18	3.28%	189	1.29E-05
3	2.88%	165	1.13E-05	11	6.33%	364	2.49E-05	19	2.36%	136	9.30E-06
4	3.34%	192	1.32E-05	12	6.84%	394	2.70E-05	20	0.92%	53	3.63E-06
5	2.19%	126	8.62E-06	13	6.15%	354	2.43E-05	21	2.99%	172	1.18E-05
6	3.39%	195	1.34E-05	14	6.15%	354	2.43E-05	22	4.14%	238	1.63E-05
7	5.98%	344	2.36E-05	15	5.23%	301	2.06E-05	23	2.47%	142	9.75E-06
8	4.66%	268	1.84E-05	16	3.91%	225	1.54E-05	24	0.86%	50	3.40E-06
								Total		5,755	

2023 Hourly Traffic Volumes Per Direction and DPM Emissions - SBCHST_DPM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.91%	225	1.53E-05	9	6.50%	374	2.54E-05	17	5.58%	321	2.18E-05
2	2.59%	149	1.01E-05	10	7.36%	424	2.88E-05	18	3.28%	189	1.28E-05
3	2.88%	165	1.13E-05	11	6.33%	364	2.48E-05	19	2.36%	136	9.23E-06
4	3.34%	192	1.31E-05	12	6.84%	394	2.68E-05	20	0.92%	53	3.60E-06
5	2.19%	126	8.56E-06	13	6.15%	354	2.41E-05	21	2.99%	172	1.17E-05
6	3.39%	195	1.33E-05	14	6.15%	354	2.41E-05	22	4.14%	238	1.62E-05
7	5.98%	344	2.34E-05	15	5.23%	301	2.05E-05	23	2.47%	142	9.68E-06
8	4.66%	268	1.82E-05	16	3.91%	225	1.53E-05	24	0.86%	50	3.38E-06
								Total		5,755	

10th & Chestnut Project, Gilroy - Roadway Emissions
Chestnut Street
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
NBCHST_PM25	Northbound Chestnut Street	N	1	742.0	0.46	9.7	32	1.3	35	5,755
SBCHST_PM25	Southbound Chestnut Street	S	1	736.8	0.46	9.7	32	1.3	35	5,755
									Total	11,510

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001664			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and PM2.5 Emissions - NBCHST_PM25

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	66	1.41E-05	9	7.11%	409	8.72E-05	17	7.38%	425	9.06E-05
2	0.42%	24	5.12E-06	10	4.39%	253	5.39E-05	18	8.17%	470	1.00E-04
3	0.41%	23	5.00E-06	11	4.66%	268	5.72E-05	19	5.70%	328	6.99E-05
4	0.26%	15	3.23E-06	12	5.89%	339	7.22E-05	20	4.27%	246	5.24E-05
5	0.50%	29	6.14E-06	13	6.15%	354	7.55E-05	21	3.26%	188	4.00E-05
6	0.90%	52	1.11E-05	14	6.04%	347	7.40E-05	22	3.30%	190	4.05E-05
7	3.79%	218	4.65E-05	15	7.01%	404	8.60E-05	23	2.46%	142	3.02E-05
8	7.76%	447	9.52E-05	16	7.14%	411	8.75E-05	24	1.86%	107	2.29E-05
								Total		5,755	

2023 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - SBCHST_PM25

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	66	1.40E-05	9	7.11%	409	8.66E-05	17	7.38%	425	8.99E-05
2	0.42%	24	5.08E-06	10	4.39%	253	5.35E-05	18	8.17%	470	9.95E-05
3	0.41%	23	4.96E-06	11	4.66%	268	5.68E-05	19	5.70%	328	6.94E-05
4	0.26%	15	3.20E-06	12	5.89%	339	7.17E-05	20	4.27%	246	5.20E-05
5	0.50%	29	6.10E-06	13	6.15%	354	7.49E-05	21	3.26%	188	3.97E-05
6	0.90%	52	1.10E-05	14	6.04%	347	7.35E-05	22	3.30%	190	4.02E-05
7	3.79%	218	4.62E-05	15	7.01%	404	8.54E-05	23	2.46%	142	3.00E-05
8	7.76%	447	9.45E-05	16	7.14%	411	8.69E-05	24	1.86%	107	2.27E-05
								Total		5,755	

10th & Chestnut Project, Gilroy - Roadway Emissions
Chestnut Street
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
NBCHST_TEXH	Northbound Chestnut Street	N	1	742.0	0.46	9.7	32	1.3	35	5,755
SBCHST_TEXH	Southbound Chestnut Street	S	1	736.8	0.46	9.7	32	1.3	35	5,755
									Total	11,510

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.031255			
Diesel Veghicles TOG Emissions per Vehicle (g/VMT)	0.001752			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02950			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and TOG Exhaust Emissions - NBCHST_TEXH

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	66	2.50E-04	9	7.11%	409	1.55E-03	17	7.38%	425	1.61E-03
2	0.42%	24	9.08E-05	10	4.39%	253	9.55E-04	18	8.17%	470	1.78E-03
3	0.41%	23	8.86E-05	11	4.66%	268	1.01E-03	19	5.70%	328	1.24E-03
4	0.26%	15	5.72E-05	12	5.89%	339	1.28E-03	20	4.27%	246	9.29E-04
5	0.50%	29	1.09E-04	13	6.15%	354	1.34E-03	21	3.26%	188	7.09E-04
6	0.90%	52	1.97E-04	14	6.04%	347	1.31E-03	22	3.30%	190	7.17E-04
7	3.79%	218	8.25E-04	15	7.01%	404	1.52E-03	23	2.46%	142	5.35E-04
8	7.76%	447	1.69E-03	16	7.14%	411	1.55E-03	24	1.86%	107	4.05E-04
								Total		5,755	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	66	2.49E-04	9	7.11%	409	1.54E-03	17	7.38%	425	1.59E-03
2	0.42%	24	9.01E-05	10	4.39%	253	9.48E-04	18	8.17%	470	1.76E-03
3	0.41%	23	8.80E-05	11	4.66%	268	1.01E-03	19	5.70%	328	1.23E-03
4	0.26%	15	5.68E-05	12	5.89%	339	1.27E-03	20	4.27%	246	9.23E-04
5	0.50%	29	1.08E-04	13	6.15%	354	1.33E-03	21	3.26%	188	7.04E-04
6	0.90%	52	1.95E-04	14	6.04%	347	1.30E-03	22	3.30%	190	7.12E-04
7	3.79%	218	8.19E-04	15	7.01%	404	1.51E-03	23	2.46%	142	5.31E-04
8	7.76%	447	1.68E-03	16	7.14%	411	1.54E-03	24	1.86%	107	4.02E-04
								Total		5,755	

10th & Chestnut Project, Gilroy - Roadway Emissions
Chestnut Street
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
NBCHST_TEVAP	Northbound Chestnut Street	N	1	742.0	0.46	9.7	32	1.3	35	5,755
SBCHST_TEVAP	Southbound Chestnut Street	S	1	736.8	0.46	9.7	32	1.3	35	5,755
									Total	11,510

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	1.36990			
Emissions per Vehicle per Mile (g/VMT)	0.03914			

Emisson Factors from CT-EMFAC2017

2023 Hourly Traffic Volumes and TOG Evaporative Emissions - NBCHST_TEVAP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	66	3.32E-04	9	7.11%	409	2.05E-03	17	7.38%	425	2.13E-03
2	0.42%	24	1.20E-04	10	4.39%	253	1.27E-03	18	8.17%	470	2.36E-03
3	0.41%	23	1.18E-04	11	4.66%	268	1.35E-03	19	5.70%	328	1.64E-03
4	0.26%	15	7.59E-05	12	5.89%	339	1.70E-03	20	4.27%	246	1.23E-03
5	0.50%	29	1.44E-04	13	6.15%	354	1.77E-03	21	3.26%	188	9.40E-04
6	0.90%	52	2.61E-04	14	6.04%	347	1.74E-03	22	3.30%	190	9.52E-04
7	3.79%	218	1.09E-03	15	7.01%	404	2.02E-03	23	2.46%	142	7.10E-04
8	7.76%	447	2.24E-03	16	7.14%	411	2.06E-03	24	1.86%	107	5.38E-04
								Total		5,755	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	66	3.30E-04	9	7.11%	409	2.04E-03	17	7.38%	425	2.12E-03
2	0.42%	24	1.20E-04	10	4.39%	253	1.26E-03	18	8.17%	470	2.34E-03
3	0.41%	23	1.17E-04	11	4.66%	268	1.34E-03	19	5.70%	328	1.63E-03
4	0.26%	15	7.54E-05	12	5.89%	339	1.69E-03	20	4.27%	246	1.22E-03
5	0.50%	29	1.43E-04	13	6.15%	354	1.76E-03	21	3.26%	188	9.33E-04
6	0.90%	52	2.59E-04	14	6.04%	347	1.73E-03	22	3.30%	190	9.45E-04
7	3.79%	218	1.09E-03	15	7.01%	404	2.01E-03	23	2.46%	142	7.05E-04
8	7.76%	447	2.22E-03	16	7.14%	411	2.04E-03	24	1.86%	107	5.34E-04
								Total		5,755	

10th & Chestnut Project, Gilroy - Roadway Emissions
Chestnut Street
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
NBCHST_FUG	Northbound Chestnut Street	N	1	742.0	0.46	9.7	32	1.3	35	5,755
SBCHST_FUG	Southbound Chestnut Street	S	1	736.8	0.46	9.7	32	1.3	35	5,755
									Total	11,510

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00219			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01735			
Road Dust - Emissions per Vehicle (g/VMT)	0.01682			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03636			

Emisson Factors from CT-EMFAC2017

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

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	66	3.09E-04	9	7.11%	409	1.91E-03	17	7.38%	425	1.98E-03
2	0.42%	24	1.12E-04	10	4.39%	253	1.18E-03	18	8.17%	470	2.19E-03
3	0.41%	23	1.09E-04	11	4.66%	268	1.25E-03	19	5.70%	328	1.53E-03
4	0.26%	15	7.05E-05	12	5.89%	339	1.58E-03	20	4.27%	246	1.15E-03
5	0.50%	29	1.34E-04	13	6.15%	354	1.65E-03	21	3.26%	188	8.73E-04
6	0.90%	52	2.42E-04	14	6.04%	347	1.62E-03	22	3.30%	190	8.84E-04
7	3.79%	218	1.02E-03	15	7.01%	404	1.88E-03	23	2.46%	142	6.59E-04
8	7.76%	447	2.08E-03	16	7.14%	411	1.91E-03	24	1.86%	107	5.00E-04
								Total		5,755	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	66	3.06E-04	9	7.11%	409	1.89E-03	17	7.38%	425	1.96E-03
2	0.42%	24	1.11E-04	10	4.39%	253	1.17E-03	18	8.17%	470	2.17E-03
3	0.41%	23	1.08E-04	11	4.66%	268	1.24E-03	19	5.70%	328	1.52E-03
4	0.26%	15	7.00E-05	12	5.89%	339	1.57E-03	20	4.27%	246	1.14E-03
5	0.50%	29	1.33E-04	13	6.15%	354	1.64E-03	21	3.26%	188	8.67E-04
6	0.90%	52	2.41E-04	14	6.04%	347	1.61E-03	22	3.30%	190	8.78E-04
7	3.79%	218	1.01E-03	15	7.01%	404	1.87E-03	23	2.46%	142	6.54E-04
8	7.76%	447	2.07E-03	16	7.14%	411	1.90E-03	24	1.86%	107	4.96E-04
								Total		5,755	

10th & Chestnut Commercial Development, Gilroy, California
Maximum DPM Cancer Risk Calculations From U.S. Route 101
Impacts at Offsite Project MEI (30-Years Exposure), 5 Feet

Cancer Risk Calculation Method

Cancer Risk (per millio 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 =	0.85	0.85	0.72	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	Maximum		
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG		Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2023	10	0.0129	0.1892	0.1430	0.149	0.012	0.0006	0.162			
1	1	0 - 1	2023	10	0.0129	0.1892	0.1430	1.794	0.151	0.0067	1.951	0.00	0.19	0.20
2	1	1 - 2	2024	10	0.0129	0.1892	0.1430	1.794	0.151	0.0067	1.951			
3	1	2 - 3	2025	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
4	1	3 - 4	2026	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
5	1	4 - 5	2027	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
6	1	5 - 6	2028	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
7	1	6 - 7	2029	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
8	1	7 - 8	2030	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
9	1	8 - 9	2031	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
10	1	9 - 10	2032	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
11	1	10 - 11	2033	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
12	1	11 - 12	2034	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
13	1	12 - 13	2035	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
14	1	13 - 14	2036	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
15	1	14 - 15	2037	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
16	1	15 - 16	2038	3	0.0129	0.1892	0.1430	0.239	0.020	0.0009	0.260			
17	1	16-17	2039	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
18	1	17-18	2040	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
19	1	18-19	2041	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
20	1	19-20	2042	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
21	1	20-21	2043	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
22	1	21-22	2044	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
23	1	22-23	2045	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
24	1	23-24	2046	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
25	1	24-25	2047	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
26	1	25-26	2048	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
27	1	26-27	2049	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
28	1	27-28	2050	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
29	1	28-29	2051	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
30	1	29-30	2052	1	0.0129	0.1892	0.1430	0.037	0.003	0.0001	0.040			
Total Increased Cancer Risk								7.60	0.639	0.028	**8.27**			

* Third trimester of pregnancy

10th & Chestnut Commercial Development, Gilroy, California
Maximum DPM Cancer Risk Calculations From 10th Street
Impacts at Offsite Project MEI (30-Years Exposure), 5 Feet

Cancer Risk Calculation Method

Cancer Risk (per millio 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 =	0.85	0.85	0.72	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*	2023	10	0.0023	0.0963	0.1277	0.026	0.006	0.0005	0.033
1	1	0 - 1	2023	10	0.0023	0.0963	0.1277	0.316	0.077	0.0060	0.398
2	1	1 - 2	2024	10	0.0023	0.0963	0.1277	0.316	0.077	0.0060	0.398
3	1	2 - 3	2025	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
4	1	3 - 4	2026	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
5	1	4 - 5	2027	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
6	1	5 - 6	2028	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
7	1	6 - 7	2029	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
8	1	7 - 8	2030	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
9	1	8 - 9	2031	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
10	1	9 - 10	2032	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
11	1	10 - 11	2033	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
12	1	11 - 12	2034	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
13	1	12 - 13	2035	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
14	1	13 - 14	2036	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
15	1	14 - 15	2037	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
16	1	15 - 16	2038	3	0.0023	0.0963	0.1277	0.042	0.010	0.0008	0.053
17	1	16-17	2039	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
18	1	17-18	2040	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
19	1	18-19	2041	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
20	1	19-20	2042	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
21	1	20-21	2043	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
22	1	21-22	2044	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
23	1	22-23	2045	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
24	1	23-24	2046	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
25	1	24-25	2047	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
26	1	25-26	2048	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
27	1	26-27	2049	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
28	1	27-28	2050	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
29	1	28-29	2051	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
30	1	29-30	2052	1	0.0023	0.0963	0.1277	0.006	0.002	0.0001	0.008
Total Increased Cancer Risk								1.34	0.325	0.025	**1.69**

Maximum		
Hazard Index	Fugitive PM2.5	Total PM2.5
0.00	0.12	0.12

* Third trimester of pregnancy

10th & Chestnut Commercial Development, Gilroy, California
Maximum DPM Cancer Risk Calculations From Chestnut Street
Impacts at Offsite Project MEI (30-Years Exposure), 5 Feet

Cancer Risk Calculation Method

Cancer Risk (per millio 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 =	0.85	0.85	0.72	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)				
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL	Maximum
												Hazard Index
0	0.25	-0.25 - 0*	2023	10	0.0007	0.0338	0.0449	0.009	0.002	0.0002	0.011	0.00
1	1	0 - 1	2023	10	0.0007	0.0338	0.0449	0.103	0.027	0.0021	0.132	
2	1	1 - 2	2024	10	0.0007	0.0338	0.0449	0.103	0.027	0.0021	0.132	
3	1	2 - 3	2025	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
4	1	3 - 4	2026	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
5	1	4 - 5	2027	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
6	1	5 - 6	2028	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
7	1	6 - 7	2029	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
8	1	7 - 8	2030	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
9	1	8 - 9	2031	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
10	1	9 - 10	2032	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
11	1	10 - 11	2033	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
12	1	11 - 12	2034	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
13	1	12 - 13	2035	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
14	1	13 - 14	2036	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
15	1	14 - 15	2037	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
16	1	15 - 16	2038	3	0.0007	0.0338	0.0449	0.014	0.004	0.0003	0.018	
17	1	16-17	2039	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
18	1	17-18	2040	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
19	1	18-19	2041	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
20	1	19-20	2042	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
21	1	20-21	2043	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
22	1	21-22	2044	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
23	1	22-23	2045	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
24	1	23-24	2046	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
25	1	24-25	2047	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
26	1	25-26	2048	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
27	1	26-27	2049	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
28	1	27-28	2050	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
29	1	28-29	2051	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
30	1	29-30	2052	1	0.0007	0.0338	0.0449	0.002	0.001	0.0000	0.003	
Total Increased Cancer Risk								0.44	0.114	0.009	**0.56**	

Maximum		
Fugitive PM2.5	Total PM2.5	
0.04	0.04	

* Third trimester of pregnancy

Attachment 2: CalEEMod Input Assumptions and Outputs

Attachment 3: EMFAC2017 Emissions and CARB SAFE Off-Model Adjustment Factors

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

Attachment 5: Cumulative Community Risk from TAC Sources