Appendix A: Construction Community Risk Assessment

1207 N. CAPITOL AVENUE DAYCARE CONSTRUCTION COMMUNITY RISK ASSESSMENT

San José, California

September 30, 2022
Revised October 19, 2022

Prepared for:

Connor Tutino
Associate Project Manager
David J. Powers & Associates, Inc.
1736 Franklin Street, Suite 400
Oakland, CA 94612

Prepared by:

Casey Divine
Bill Popenuck
James Reyff

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
429 East Cotati Avenue
Cotati, CA 94931
(707) 794-0400

I&R Project#: 22-084

Introduction

The purpose of this report is to address the potential community risk impacts associated with the construction of a proposed daycare development located at 1207 N. Capitol Avenue in San José, California. The air quality impacts from this project would be associated with demolition of the existing land uses and construction of the residential building. Air pollutant emissions associated with construction of the project were predicted using appropriate computer models. In addition, the potential health risk impacts from existing toxic air contaminant (TAC) sources affecting the nearby and proposed sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The approximately 1.5-acre project site is currently developed with an approximately 5,630 square foot (sf) single-family residence. The project proposes to demolish the existing single-family residence and redevelop the site with new, approximately 14,380-sf daycare center. The project would also include an approximately 9,424-sf of outdoor play area divided into three separate spaces. The proposed daycare center would include a preschool program serving 252 students ages six weeks to five years old, operating Monday through Friday between the hours of 6:30 a.m. and 6:30 p.m., and requiring 33 to 34 full-time employees. A parking area would be located west of the daycare center and would include approximately 40 vehicle parking spaces. Of the 40 parking spaces, four would include electric vehicle (EV) charging stations and 16 would be EV capable.

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

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

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, often because they cause cancer. 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. Health risks from TACs are estimated using the Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines, which were published in February of 2015.[2] See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are the residents in the adjacent single-and multi-family homes to the north and west. Additional sensitive receptors are located at further distances. This project would introduce new sensitive receptors (i.e., infant/child students) to the area.

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

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California 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 ($PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

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

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

State Regulations

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

[3] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

[4] California Air Resources Board, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

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

CARB has adopted and implemented a number of additional 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, CARB's program is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

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

Bay Area Air Quality Management District (BAAQMD)

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

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

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

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

community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. The BAAQMD defines overburdened communities as areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall CalEnviroScreen score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.[6] The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. The project site is within the San José CARE area but not within a BAAQMD overburdened area as identified by CalEnviroScreen as the Project site is scored at the 32nd percentile.[7]

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines*[8] 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 California Environmental Quality Act (CEQA) requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for TACs, odors, and greenhouse gas (GHG) emissions. *Attachment 1* includes detailed community risk modeling methodology.

San José Envision 2040 General Plan

The San José Envision 2040 General Plan includes goals, policies, and actions to reduce exposure of the City's sensitive population to exposure of air pollution and toxic air contaminants or TACs. The following goals, policies, and actions are applicable to the proposed project and this assessment:

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize emissions from new development.

Applicable Policies – Air Pollutant Emission Reduction

MS-10.1 Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.

[6] See BAAQMD: https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofoverburdenedcommunities-pdf.pdf?la=en , accessed 10/1/2021.

[7] OEHAA, CalEnviroScreen 4.0 Maps https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

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

MS-10.2 Consider the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and State law.

MS-10.3 Promote the expansion and improvement of public transportation services and facilities, where appropriate, to both encourage energy conservation and reduce air pollution.

MS-10.5 In order to reduce vehicle miles traveled and traffic congestion, require new development within 2,000 feet of an existing or planned transit station to encourage the use of public transit and minimize the dependence on the automobile through the application of site design guidelines and transit incentives.

MS-10.7 Encourage regional and statewide air pollutant emission reduction through energy conservation to improve air quality.

MS-10.11 Enforce the City's wood-burning appliance ordinance to limit air pollutant emissions from residential and commercial buildings.

MS-10.13 As a part of City of San José Sustainable City efforts, educate the public about air polluting household consumer products and activities that generate air pollution. Increase public awareness about the alternative products and activities that reduce air pollutant emissions.

Applicable Goals – Toxic Air Contaminants

Goal MS-11 Minimize exposure of people to air pollution and toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

Applicable Policies – Toxic Air Contaminants

MS-11.2 For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.

MS-11.4 Encourage the installation of appropriate air filtration at existing schools, residences, and other sensitive receptor uses adversely affected by pollution sources.

MS-11.5 Encourage the use of pollution absorbing trees and vegetation in buffer areas between substantial sources of TACs and sensitive land uses.

Actions – Toxic Air Contaminants

MS-11.6 Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of toxic air contaminants (TACs) and particulate

matter smaller than 2.5 microns (PM2.5), emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. The Community Risk Reduction Plan will include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, progress reporting to the public and responsible agencies, and periodic updates of the plan, as appropriate.

MS-11.7 Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.

MS-11.8 For new projects that generate truck traffic, require signage which reminds drivers that the State truck idling law limits truck idling to five minutes.

Applicable Goals – Construction Air Emissions

Goal MS-13 Minimize air pollutant emissions during demolition and construction activities

Applicable Policies – Construction Air Emissions

MS-13.1 Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

Applicable Actions – Construction Air Emissions

MS-13.4 Adopt and periodically update dust, particulate, and exhaust control standard measures for demolition and grading activities to include on project plans as conditions of approval based upon construction mitigation measures in the BAAQMD CEQA Guidelines.

Significance Thresholds

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

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	
Health Risks and Hazards	**Single Sources Within Quarter Mile Zone of Influence**	**Combined Sources (Cumulative from all sources within Quarter Mile 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
Note: 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.		

Construction Impacts and Mitigation Measures

Project impacts related to increased community risk can occur either by generating emissions of TACs and air pollutants and by introducing a new sensitive receptor in proximity to an existing source of TACs. Temporary project construction activity would generate emissions of DPM from equipment and trucks and also generate dust on a temporary basis that could affect nearby sensitive receptors.

A community health risk assessment was prepared to address project construction impacts on the surrounding off-site sensitive receptors. Additionally, the project could introduce new infant and child students that are sensitive receptors, who would be exposed to existing sources of TACs and localized air pollutants in the vicinity of the project. Therefore, the impact of the existing sources of TAC upon the existing sensitive receptors and new incoming sensitive receptors was assessed.

Community risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual $PM_{2.5}$ concentrations, and computing the Hazard Index (HI) for non-cancer health risks. Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust emissions 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 $PM_{2.5}$. 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 $PM_{2.5}$.[9] This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated. The methodology for computing community risks impacts is contained in *Attachment 1*.

Construction Period Emissions

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

[9] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

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

CalEEMod Modeling

Land Use Inputs

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

Table 2. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
Day-Care Center	252	Students	14,380	1.5
Parking Lot	40	Parking Space	16,000	

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 project-specific construction information provided by the project applicant.

The project construction equipment worksheet provided by the applicant included the schedule for each construction phase (included in *Attachment 2*). Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays were based on provided information. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase. The construction schedule assumed that the earliest start date would be January 2024 and would be primarily built out over a period of approximately 12 months, or 262 construction workdays.

Construction Truck Traffic Emissions

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 concrete and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for demolition and grading were estimated from provided grading volumes by assuming each truck could carry 10 tons per load. The number of concrete and asphalt total

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

round haul trips were estimated for the project and converted to total one-way trips, assuming two trips per delivery.

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2017 motor vehicle emission factor model. This model has been superseded by the EMFAC2021 model; however, CalEEMod has not been updated to include EMFAC2021. Therefore, the construction traffic information was combined with EMFAC2021 motor vehicle emissions factors. EMFAC2021 provides aggregate emission rates in grams per mile for each vehicle type. The vehicle mix for this study was based on CalEEMod default assumptions, where worker trips are assumed to be comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, including concrete 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 (soil import/export). Since CalEEMod does not address concrete trucks, these were treated as vendor travel distances. Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On road emissions in Santa Clara County for the year 2024 were used in these calculations. Table 3 provides the traffic inputs that were combined with the EMFAC2021 emission database to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2021 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker[1]	Total Vendor[1]	Total Haul[2]	
Vehicle mix[1]	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0 (Demo/Soil) 7.3 (Concrete/Asphalt)	CalEEMod default distance with 5-min truck idle time.
Demolition	405	-	28	5,630-sf existing building and 10 tons pavement demolition. CalEEMod default worker trips.
Site Preparation	216	-	-	CalEEMod default worker trips.
Grading	612	-	125	350-cy soil export and 650-cy soil import. CalEEMod default worker trips.
Trenching	180	-	-	CalEEMod default worker trips.
Building Construction	1,001	60	60	30 concrete-truck round trips. CalEEMod default worker and vendor trips.
Architectural Coating	152	-	-	CalEEMod default worker trips.
Paving	100	-	120	500-cy asphalt hauling CalEEMod default worker trips.

Notes: [1] Based on 2024 EMFAC2021 light-duty vehicle fleet mix for Santa Clara County.
[2] Includes demolition and grading trips estimated by CalEEMod based on amount of material to be removed. Concrete and asphalt trips estimated based on data provided by the applicant.

Community Health Risk from Project Construction

Construction Emissions

The CalEEMod model and EMFAC2021 emissions 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 as 0.03 tons (56 pounds). The on-road emissions are a result of haul truck travel during grading activities, worker travel, and vendor deliveries during construction. A trip length of half a mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as less than 0.03 tons (51 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (i.e., residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects. [11,12] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

Construction Sources

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.[13] The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would be 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. Emissions from vehicle travel on- and off-site were distributed among the exhaust emission area sources throughout the site.

[11] BAAQMD, 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

[12] BAAQMD, 2020, *BAAQMD Health Risk Assessment Modeling Protocol.* December. Web: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol-pdf.pdf?la=en

[13] 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

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Figure 1 shows the project construction site and receptors.

AERMOD Inputs and Meteorological Data

The modeling used a five-year data set (2013 – 2017) of hourly meteorological data from San José Airport prepared for use with the AERMOD model by BAAQMD. Construction emissions were modeled as occurring on weekdays between 7:00 a.m. to 4:00 p.m., when the majority of construction activity is expected to occur. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2024 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors. Receptor heights of 5 feet (1.5 meters) and 15 feet (4.5 meters) were used to represent the breathing height on the first and second floors of nearby residences.[14]

Summary of Construction Community Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with the Office of Environmental Health Hazard Assessment (OEHHA) guidance for age sensitivity factors and exposure parameters as recommended by BAAQMD (see *Attachment 1)*. Non-cancer health hazards and maximum $PM_{2.5}$ concentrations were also calculated and identified. Age-sensitivity factors reflect the greater sensitivity of infants and children to cancer causing TACs. Third-trimester, infant, child, 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 value was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation reference exposure level of 5 $\mu g/m^3$.

The maximum-modeled annual DPM and $PM_{2.5}$ concentrations were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEI). Results of this assessment indicated that the construction MEIs were located at the same location on two different levels. The MEIs were located at receptors in an adjacent building along the northwest site boundary, with the cancer risk MEI located on the second floor (15 feet above

[14] 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

ground) and the $PM_{2.5}$ concentration MEI located on the first floor (5 feet above ground). Table 4 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities affecting the construction MEIs. *Attachment 4* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Summary of Project-Related Community Risks at the Off-Site Sensitive Receptors

As shown in Table 4, the unmitigated maximum cancer risks from construction activities at the MEI locations would exceed the BAAQMD single-source significance threshold. However, with the incorporation of the *Mitigation Measure AQ-1 and AQ-2*, the mitigated risk values would reduce emissions such that the cancer risk caused by construction would no longer exceed the BAAQMD single-source significance threshold. The unmitigated annual $PM_{2.5}$ concentration and HI at the construction MEIs, do not exceed their respective BAAQMD single-source significance thresholds.

Table 4. Construction Risk Impacts at the Off-Site Sensitive Receptors

Source		Cancer Risk[1] (per million)	Annual $PM_{2.5}$[1] ($\mu g/m^3$)	Hazard Index
Project Construction	Unmitigated	**15.39 (infant)**	0.23	0.02
	Mitigated[2]	4.56 (infant)	0.09	0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated[2]	*No*	*No*	*No*

Notes: [1] Maximum cancer risk and $PM_{2.5}$ concentration occur at the same receptor location on different levels.
[2] Construction equipment with Tier 4 interim engines and BMPs as Mitigation.

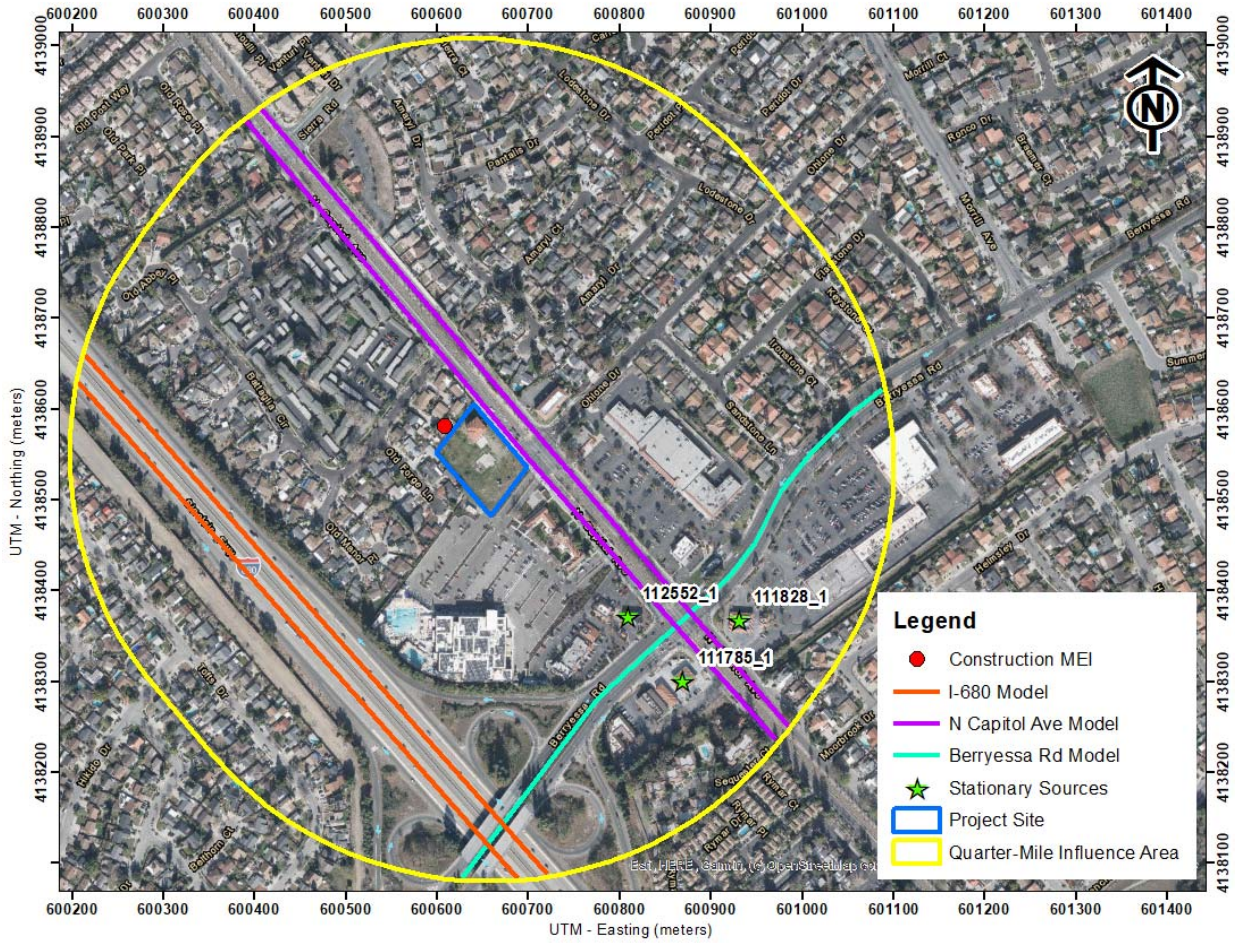
Figure 1. Locations of Project Construction Site, Off-Site Sensitive Receptors, and Maximum TAC Impacts (MEI)

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

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

A review of the project area and based on provided traffic information indicated that three highways and roadways within the influence area, I-680, N. Capitol Avenue, and Berryessa Road, would have traffic exceeding 10,000 vehicles per day. Other nearby streets would have less than 10,000 vehicles per day. A review of BAAQMD's stationary source geographic information systems (GIS) map tool identified three stationary sources with the potential to affect the project site and MEIs. Figure 2 shows the project area included within the influence area and the location of the MEIs. Community risk impacts from these sources upon the MEIs reported in Table 5. Details of the modeling and community risk calculations are included in *Attachment 5.*

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



Highways and Local Roadways – I-680, N. Capitol Avenue, and Berryessa Road

The project MEI is located near I-680. A refined analysis of the impacts of TACs and $PM_{2.5}$ to the MEI receptors is necessary to evaluate potential cancer risks and $PM_{2.5}$ concentrations from I-680. A review of the traffic information reported by Caltrans indicates that I-680 traffic includes 152,000 vehicles per day (based on an annual average)[15] that are about 5.4 percent trucks, of which 3.6 percent are considered diesel heavy duty trucks and 1.8 percent are medium duty trucks.[16]

A refined analysis of potential health impacts from vehicle traffic on N. Capitol Avenue and Berryessa Road was conducted. This analysis involved predicting emissions for the traffic volume and mix of vehicle types on the roadways near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks were then computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

[15] Caltrans. 2022. *2020 Traffic Volumes California State Highways.*
[16] Caltrans. 2022. *2020 Annual Average Daily Truck Traffic on the California State Highway System.*

Traffic Emissions Modeling

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on I-680, N. Capitol Avenue, and Berryessa Road using the Caltrans version of the CARB EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM.[17] Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear and from re-entrained roadway dust were included in the emissions estimate. DPM emissions are projected to decrease in the future as reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (Santa Clara County), type of road (freeway and major/collector), adjusted for the local truck mix on I-680 and truck percentage for non-state highways in Santa Clara County (3.51 percent)[18] for N. Capitol Avenue and Berryessa Road, traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (2025 – operational year), and season (annual).

To estimate TAC and $PM_{2.5}$ emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the MEI, the CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2025 (operational year). Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CT-EMFAC2017. Year 2025 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions, will decrease in the future.

Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[19] which were then applied to the average daily traffic (ADT) volumes to obtain estimated hourly traffic volumes and emissions for the roadway. The ADT volumes and truck percentages were based on Caltrans data for I-680. Traffic volumes were assumed to increase 1 percent per year for a total of 159,600 vehicles The ADT for N. Capitol Avenue and Berryessa Road was calculated based on traffic data obtained from the traffic consultant.[20] Assuming a 1 percent per year increase, the calculated ADT for N. Capitol Avenue would be 16,090 vehicles and for Berryessa Road would be 34,235 vehicles.

---

[17] The CT-EMFAC2017 version was used in the analysis because Caltrans has not yet release a CT-EMFAC version with the updated EMFAC2021 emissions that would provide TAC emission rates.

[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

[19] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2021 does not include Burden type output with hour by hour traffic volume information.

[20] Email correspondence with Connor Tutino, Connor Tutino Project Manager, David J. Powers & Associates, Inc., August 15, 2022. *Attachment: 1207 N Capitol Daycare Volumes - DJP&A.xslx.*

For all hours of the day on I-680, other than during peak a.m. and p.m. periods, an average speed of 65 mph was assumed for all vehicles. Based on traffic data from the Santa Clara Valley Transportation Authority's 2018 Monitoring and Conformance Report, traffic speeds during the peak a.m. and p.m. periods were identified.[21] For a 2-hour period during the peak a.m. period, an average travel speed of 55 mph was used for northbound traffic and an average speed of 60 mph was used for southbound traffic. For the peak p.m. period, an average travel speed of 60 mph was used for northbound traffic and an average travel speed of 20 mph was used for southbound traffic. For N. Capitol Avenue and Berryessa Road, an average travel speed of 30 mph was used for all hours of the day, 5 mph slower than the posted speed limit signs for the roadways to account for commute congestion and the amount of access in the area.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the EPA AERMOD air quality dispersion model, which is recommended by the BAAQMD for this type of analysis.[22] TAC and $PM_{2.5}$ emissions from traffic on these highways and roadways within a quarter mile of the project site were evaluated. Vehicle traffic on the highways and roadways were modeled using volume sources along a line (line volume sources); with line segments used for travel on the highways and roadways. The same meteorological data and off-site sensitive receptors used in the previous dispersion modeling were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations. Annual TAC and $PM_{2.5}$ concentrations for 2025 from traffic on the roadway was calculated using the model. Concentrations were calculated at the construction MEIs with receptor heights of 5 feet (1.5 meters) and 15 feet (4.5 meters) to represent the breathing heights on the first and second floors of the residences.

Computed Cancer and Non-Cancer Health Impacts

The cancer risk, $PM_{2.5}$ concentration, and HI impacts from I-680, N. Capitol Avenue, and Berryessa Road on the construction MEIs are shown in Table 5. Figure 2 shows the highway and roadway links used for the modeling and receptor locations where concentrations were calculated. Details of the emission calculations, dispersion modeling, and cancer risk calculations for the receptors with the maximum cancer risk from I-680, N. Capitol Avenue, and Berryessa Road traffic are provided in *Attachment 5*.

BAAQMD Permitted Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2020* geographic information system (GIS) map website.[23] This mapping tool identifies the location of nearby stationary sources and their estimated risk and hazard impacts. Three sources were identified using this tool, with all the

[21] Santa Clara Valley Transportation Authority. *2018 CMP Monitoring and Conformance Report May 24, 2019. Web:* https://www.vta.org/sites/default/files/2020-08/2018%20Monitoring%20Report.pdf
[22] BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012
[23] BAAQMD, *Stationary Source Screening Map*, 2022. Web: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3

sources being gas dispensing facilities. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. BAAQMD provided updated emissions data and risk values as well as the maximum annual throughput for the gas stations.[24]

The maximum annual throughput, risk, and hazard levels provided by BAAQMD for the stationary sources were adjusted for distance using CARB's *Gasoline Service Station Risk Assessment Tool*. Community risk impacts from the stationary sources upon the construction MEIs are reported in Table 5.

Summary of Cumulative Health Risk Impact at Construction MEIs

Table 5 reports both the project and cumulative community risk impacts at the sensitive receptors most affected by construction (i.e., the MEIs). The project would have an exceedance with respect to community risk caused by project construction since the unmitigated maximum cancer risk exceeds the BAAQMD single-source threshold. With the implementation of *Mitigation Measure AQ-1 and AQ-2*, the project's cancer risk would be lowered to a level below the single-source. The annual $PM_{2.5}$ concentration and HI, unmitigated and mitigated, do not exceed the single-source or cumulative-source thresholds.

Table 5. Impacts from Combined Sources at Construction MEIs

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Project Construction	Unmitigated	**15.39 (infant)**	0.23	0.02
	Mitigated	4.56 (infant)	0.09	0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated	*No*	*No*	*No*
Cumulative Sources				
I-680, ADT 159,600		4.56	0.12	<0.01
N. Capitol Avenue, ADT 16,090		0.94	0.08	<0.01
Berryessa Road, ADT 34,235		0.42	0.03	<0.01
Arco Facility #07079 (Facility ID #112552_1, GDF), MEIs at 770 feet		1.21	-	0.06
Capitol Chevron (Facility ID #111785_1, GDF), MEIs at +1,000 feet		0.21	-	0.01
Shell SS#68206 (Facility ID #111828_1, GDF), MEIs at +1,000 feet		0.57	-	0.02
Combined Sources	Unmitigated	23.30	0.46	<0.14
	Mitigated	12.47	0.32	<0.13
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
	Mitigated	*No*	*No*	*No*

[24] Correspondence with Matthew Hanson, CEQA Team, Environmental Planner II, BAAQMD, August 4, 2022.

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

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

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

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

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

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

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

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

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

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

Effectiveness of Mitigation Measure AQ-1

The measures above are consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines. These measures would also further reduce TAC emissions associated with construction activity.

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

Implement a feasible plan to reduce DPM emissions by 50 percent such that increased cancer risk and annual $PM_{2.5}$ concentrations from construction would be reduced below TAC significance levels as follows:

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

    a. If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 50 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).
    b. Use of electrical or non-diesel fueled equipment.

2. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 50 percent or greater. Elements of the plan could include a combination of some of the following measures:
    - Implementation of No. 1 above to use Tier 4 engines or alternatively fueled equipment,
    - Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors,
    - Use of electrically-powered equipment,
    - Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
    - Change in construction build-out plans to lengthen phases, and
    - Implementation of different building techniques that result in less diesel equipment usage.

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

Effectiveness of Mitigation Measure AQ-1 and AQ-2

CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment met U.S. EPA Tier 4 Interim engine standards and BAAQMD best management practices for construction were included. With these implemented, the project's construction cancer risk levels (assuming infant exposure) would be reduced by 71 percent to 4.74 chances per million. As a result, the project's construction risks would be reduced below the BAAQMD single-source threshold.

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

The City's General Plan Policy MS-11.1 requires new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs to avoid significant risks to health and safety required when new residential are proposed near existing sources of TACs. BAAQMD's recommended thresholds for health risks and hazards, shown in Table 1, are used to evaluate on-site exposure.

In addition to evaluating health impact from project construction, a health risk assessment was completed to assess the impact that the existing TAC sources would have on the new proposed sensitive receptors (students) that the project would introduce. The same TAC sources identified above were used in this health risk assessment.[25] Figure 3 shows the on-site sensitive receptors in relation to the nearby TAC sources. All on-site community task results are listed in Table 6. *Attachment 5* includes the dispersion modeling and risk calculations for TAC source impacts upon the proposed on-site sensitive receptors.

Highways and Local Roadways – I-680, N. Capitol Avenue, and Berryessa Road

The highway and roadway analysis for the project sensitive receptors was conducted in the same manner as described above for the off-site MEIs. On-site receptors were placed throughout the project site with a spacing of 6 meters (20 feet). Highway and roadway impacts were modeled at receptor heights of 3 feet (1 meter) representing the breathing height of infants and children of the proposed daycare. The portion of the highway and roadways included in the modeling are shown in Figure 3 along with the project site and receptor locations where impacts were modeled.

Maximum increased cancer risks were calculated for the daycare students at the project site using the maximum modeled TAC concentrations. A 5-year exposure period was used in calculating cancer risks assuming the daycare students would include infants and children and were assumed to be in the daycare for 12 hours per day for 250 days per year. The highest impacts the combined highway and roadways occurred at a receptor on the first floor along the eastern boundary of the daycare near N. Capitol Avenue. Cancer risks associated with the highway and roadways are greatest closest to the roadways and decrease with distance from the road. The highway and roadway community risk impacts at the project site are shown in Table 6. Details of the emission calculations, dispersion modeling, and cancer risk calculations are contained in *Attachment 5*.

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

Stationary Sources

The stationary source screening analysis for the new project sensitive receptors was conducted in the same manner as described above for the construction MEIs . Note that the risks are reported for continuous exposure over 30 years with adjustments for infant and child exposure. Risks at the daycare would be less because the exposure time of infants and children attending the daycare is much less than the CARB cancer risk assumptions used to develop the screening levels. Table 6 includes the health risk assessment results from the stationary sources.

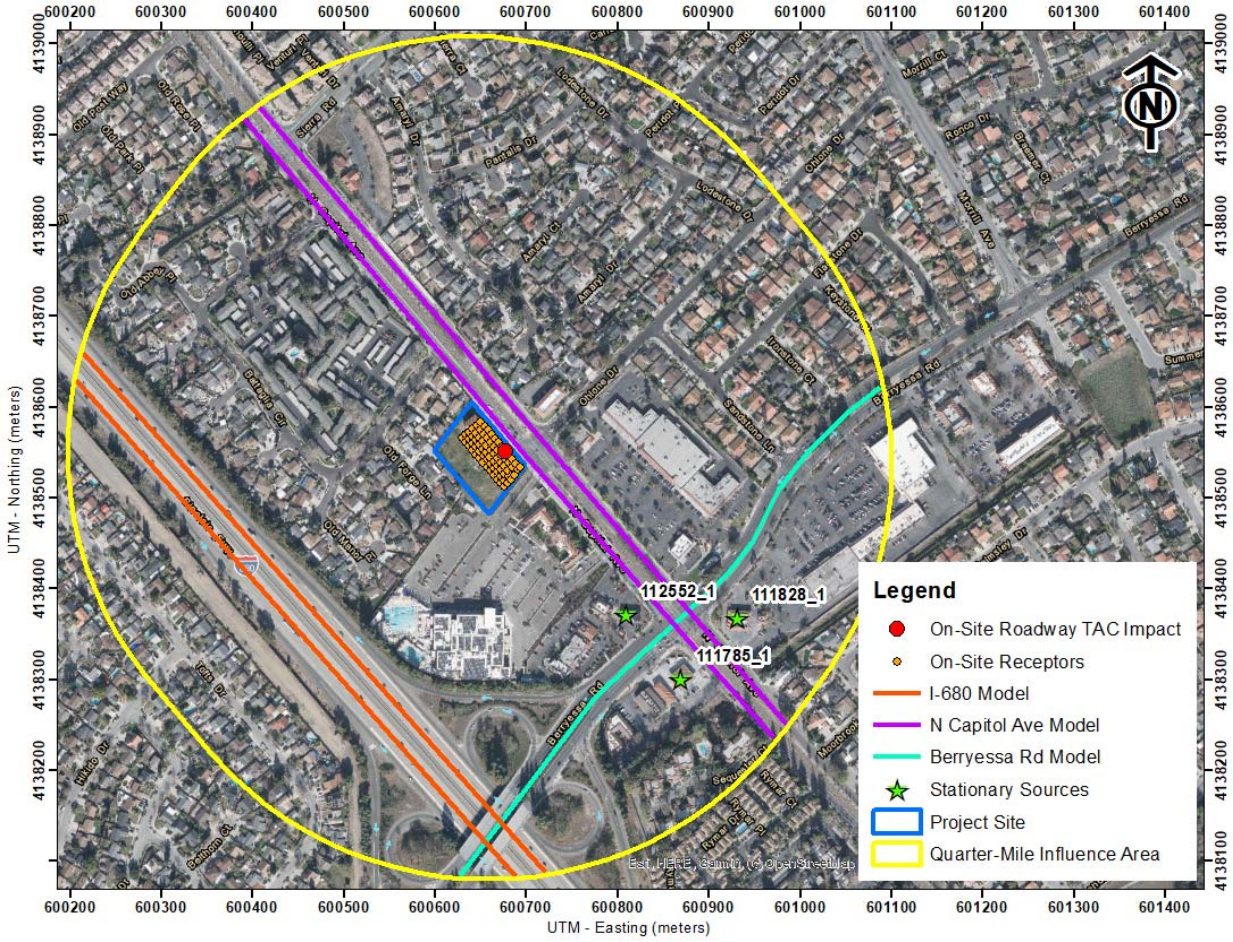
Summary of Cumulative Community Risks at the Project Site

Community risk impacts from the existing and TAC sources upon the project site are reported in Table 6. The risks from the singular TAC sources are compared against the BAAQMD single-source threshold. The risks from all the sources are then combined and compared against the BAAQMD cumulative-source threshold. As shown, none of the sources exceed the single-source or cumulative-source thresholds.

Table 6. Impacts from Combined Sources to Project Site Receptors

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
I-680, ADT 159,600	3.09	0.05	<0.01
N. Capitol Avenue, ADT 16,090	1.62	0.08	<0.01
Berryessa Road, ADT 34,235	0.39	0.02	<0.01
Arco Facility #07079 (Facility ID #112552_1, GDF), MEIs at 475 feet	2.82	-	0.20
Capitol Chevron (Facility ID #111785_1, GDF), MEIs at 820 feet	0.33	-	0.04
Shell SS#68206 (Facility ID #111828_1, GDF), MEIs at 250 feet	1.00	-	0.05
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold?	*No*	*No*	*No*
Cumulative Total	9.25	0.15	<0.32
BAAQMD Cumulative Source Threshold	***100***	***0.8***	***10.0***
Exceed Threshold?	*No*	*No*	*No*

Figure 3. Locations of Project Site, On-Site Daycare Receptors, Roadway Models, Stationary Sources, and Maximum TAC Impacts



Supporting Documentation

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

Attachment 2 includes the CalEEMod output for project construction emissions. Also included are any modeling assumptions.

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

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

Attachment 5 includes the cumulative community risk calculations, modeling results, and health risk calculations from sources affecting the construction MEIs and project site receptors.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[26] 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.[27] 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.[28] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

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

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

[26] 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.
[27] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[28] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

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

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

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

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

Where:

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

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

Where:

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

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 $(mg/kg\text{-}day)^{-1}$		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*
* An 8-hour breathing rate (8HrBR) is used for worker and school child exposures.					

Non-Cancer Hazards

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

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

Annual $PM_{2.5}$ Concentrations

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

Attachment 2: CalEEMod Modeling Inputs and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: Merryhill School @ N. Capitol Avenue

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	---	**Dwelling Units**	1.50	total project acres disturbed
	---	s.f. residential		
	---	s.f. retail		
	---	s.f. office/commercial		
	14,380	s.f. other, specify:		
	---	s.f. parking garage	--	spaces
		s.f. parking lot	40	spaces
Construction Hours		am to		pm

Pile Driving? Y/N? No

Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? No

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower:

Fuel Type:

Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	Demolition	**Start Date:**	**1/1/2024**	**Total phase:**	**14**			**Overall Import/Export Volumes**
		End Date:	**1/18/2024**					
1	Concrete/Industrial Saws	81	0.73	8	2	1.1428571	16	**Demolition Volume**
2	Excavators	158	0.38	8	14	8	224	Square footage of buildings to be demolished
1	Rubber-Tired Dozers	247	0.4	0	0	0	0	(*or* total tons to be hauled)
2	Tractors/Loaders/Backhoes	97	0.37	8	7	4	112	5,630 square feet *or*
								40 Hauling volume (tons)
								Any pavement demolished and hauled? 10 tons
	Site Preparation	**Start Date:**	**1/20/2024**	**Total phase:**	**30**			
		End Date:	**3/1/2024**					
1	Graders	187	0.41	8	8	2.1333333	64	
1	Rubber Tired Dozers	247	0.4	8	5	1.3333333	40	
1	Tractors/Loaders/Backhoes	97	0.37	8	5	1.3333333	40	
	Grading / Excavation	**Start Date:**	**2/21/2024**	**Total phase:**	**34**			
		End Date:	**4/8/2024**					**Soil Hauling Volume**
2	Excavators	158	0.38	8	12	2.8235294	192	Export volume = **350** cubic yards?
1	Graders	187	0.41	8	5	1.1764706	40	Import volume = **650** cubic yards?
2	Rubber Tired Dozers	247	0.4	8	5	1.1764706	80	
0	Concrete/Industrial Saws	81	0.73	0	0	0	0	
2	Tractors/Loaders/Backhoes	97	0.37	8	12	2.8235294	192	
	Other Equipment?							
	Trenching/Foundation	**Start Date:**	**3/25/2024**	**Total phase:**	**30**			
		End Date:	**5/3/2024**					
2	Tractor/Loader/Backhoe	97	0.37	8	15	4	240	
2	Excavators	158	0.38	8	15	4	240	
	Other Equipment?							
	Building - Exterior	**Start Date:**	**5/15/2024**	**Total phase:**	**77**			**Cement Trucks? 30 Total Round-Trips**
		End Date:	**8/29/2024**					
1	Cranes	231	0.29	8	2	0.2077922	16	Electric? (Y/N) N Otherwise assumed diesel
1	Forklifts	89	0.2	8	20	2.0779221	160	Liquid Propane (LPG)? (No)
1	Generator Sets	84	0.74	8	5	0.5194805	40	Or temporary line power? (Yes)
1	Tractors/Loaders/Backhoes	97	0.37	8	10	1.038961	80	
1	Welders	46	0.45	8	10	1.038961	80	
	Other Equipment?					0		
	Building - Interior/Architectural Coating	**Start Date:**	**6/1/2024**	**Total phase:**	**152**			
		End Date:	**12/31/2024**					
6	Air Compressors	78	0.48	8	60	3.1578947	2880	
5	Aerial Lift	62	0.31	8	60	3.1578947	2400	
	Other Equipment?							
	Paving	**Start Date:**	**11/1/2024**	**Total phase:**	**10**			
		Start Date:	**11/14/2024**					
1	Cement and Mortar Mixers	9	3	8	5	4	40	
1	Pavers	130	0.42	8	2	1.6	16	**Asphalt? 500 cubic yards or 4 round trips?**
1	Paving Equipment	132	0.36	8	2	1.6	16	
1	Rollers	80	0.38	8	2	1.6	16	
1	Tractors/Loaders/Backhoes	97	0.37	8	5	4	40	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**	**347**			
		Start Date:						

Equipment types listed in "Equipment Types" worksheet tab.

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

Complete one sheet for each project component

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horepower or load factor, as appropriate

Traffic Consultant Trip Gen						CalEEMod Default		
Land Use		Size	Daily Trips	New Trips	Weekday Trip Gen	Weekday	Sat	Sun
Day Care Facility	Students	252	1031	897	***3.56***	4.09	0.39	0.37
-Based Vehicle Mode Share			*-134*			*Rev*	***0.34***	***0.32***

Land Use	Size	Daily Trip Rate	Daily Trips	AM Peak Hour Trip Rate	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Trip Rate	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Day Care Facility[1]	252 Students	4.09	1,031	0.78	104	93	197	0.79	94	105	199
Location-Based Vehicle Mode Share (13%)[2]			*(134)*		*(14)*	*(12)*	*(26)*		*(12)*	*(14)*	*(26)*
Net Project Trips			**897**		**90**	**81**	**171**		**82**	**91**	**173**
Breakdown of Trips											
Trips by Non-Working Parents[3]			*269*		*27*	*24*	*51*		*25*	*27*	*52*
Trips by Working Parents[3]			*628*		*63*	*57*	*120*		*57*	*64*	*121*

Source: ITE *Trip Generation Manual*, 11th Edition, 2021.

Notes:

1. Average trip rates (in trips per student) for "Day Care Center" (ITE Land Use 565) are used.
2. A 13% reduction was applied based on the location-based vehicle mode share percentage outputs (Table 6 of TA Handbook) produced from the San Jose Travel Demand Model for retail development in an Urban Low-Transit area.
3. It was assumed 30% and 70% of the total trips are generated by non-working and working parents, respectively.

Construction Criteria Air Pollutants							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year	Tons					MT	
Construction Equipment							
2024	0.15	0.61	0.61	0.03	0.03	130.82	
EMFAC							
2024	0.004	0.02	0.002	0.0007	0.002	21.52	
Total Construction Emissions by Year							
2024	0.16	0.63	0.61	0.03		152.33	
	Total Construction Emissions						
Tons	0.16	0.63	0.61	0.03		152.33	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2024	1.20	4.82	4.68	0.20			262
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	1.20	4.82	4.68	0.20		0.00	
Average	1.20	4.82	4.68	0.20		0.00	262.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Operational Criteria Air Pollutants							
Unmitigated	ROG	NOX	Total PM10	Total PM2.5			
Year 2025	Tons						
Total	0.43	0.18	0.27	0.07			
	Average Daily Emissions						
Pounds Per Day	2.34	1.00	1.47	0.37			
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Mitigated Construction Criteria Air Pollutants							
Mitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year	Tons					MT	
Construction Equipment							
2024			0.01	0.01	0.01		
EMFAC							
2024							
Total Construction Emissions by Year							
2024	0.00	0.00	0.01	0.01	0.01	0.00	
	Total Construction Emissions						
Tons	0.00	0.00	0.01	0.01	0.01	0.00	

N Capitol Ave Daycare

Unmitigated DPM

Year	CalEEMod DPM	DPM EMFAC2021	Unmitigated Emissions		CalEEMod Fug PM2.5	Fug PM2.5 EMFAC2021	Unmitigated Emissions
2024	0.6108	0.0001	0.6109		0.0262	0.0001	0.0263

Mitigated DPM

Year	CalEEMod DPM	DPM EMFAC2021	Mitigated Emissions		CalEEMod Fug PM2.5	Fug PM2.5 EMFAC2021	Mitigated Emissions
2024	0.0079	0.0001	0.0080		0.0118	0.0001	0.0119

Paving

	sq in	sq ft	Cft	CY	Deliveries	Trips
Concrete			0	0	0	0
Asphalt			0	0	500	60	120
Asphalt Demo			0	0	0	0

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Merryhill School, N. Capitol Avenue, San Jose

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Day-Care Center	252.00	Student	1.50	14,380.00	0
Parking Lot	40.00	Space	0.00	16,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	178	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - San Jose Clean Energy 2020 rate = 178 lb/MWh.

Land Use - Provided construction data and operational profile - total project acres. square footage, and total number of students.

Construction Phase - Start dates and total days provided by construction worksheet.

Off-road Equipment - Provided in construction worksheet.

Off-road Equipment - Provided in construction worksheet.

Off-road Equipment - Provided in construction worksheet.

Off-road Equipment - Provided in construction worksheet.

Off-road Equipment - Provided in construction worksheet.

Off-road Equipment - Provided in construction worksheet.

Off-road Equipment - Provided in construction worksheet.

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Grading - Grading = 350-cy exported, 650-cy imported.

Demolition - Existing building demo = 5,630 sqft.

Trips and VMT - EMFAC2021 adjustment 0 trips, pavement demo =10-tons, building construction = 30 cement truck round trips, paving = 500-cy asphalt.

Vehicle Trips - Provided trip gen with reduction adjustments.

Vehicle Emission Factors - EMFAC2021 Vehicle Emission Factors Santa Clara County 2025.

Fleet Mix - EMFAC2021 fleet mix Santa Clara County 2025.

Energy Use - San Jose Reach Code - no natural gas - convert to electricity.

Water And Wastewater - Wastewater treatment 100% aerobic - no septic tanks or lagoons.

Construction Off-road Equipment Mitigation - BMPS, tier 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	55
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	152.00
tblConstructionPhase	NumDays	200.00	77.00
tblConstructionPhase	NumDays	20.00	14.00
tblConstructionPhase	NumDays	4.00	34.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	PhaseEndDate	12/9/2024	12/31/2024
tblConstructionPhase	PhaseEndDate	11/11/2024	8/29/2024
tblConstructionPhase	PhaseEndDate	1/26/2024	1/18/2024
tblConstructionPhase	PhaseEndDate	2/5/2024	4/8/2024
tblConstructionPhase	PhaseEndDate	11/25/2024	11/14/2024
tblConstructionPhase	PhaseEndDate	1/30/2024	3/1/2024
tblConstructionPhase	PhaseStartDate	11/26/2024	6/1/2024
tblConstructionPhase	PhaseStartDate	2/6/2024	5/15/2024
tblConstructionPhase	PhaseStartDate	1/31/2024	2/21/2024
tblConstructionPhase	PhaseStartDate	11/12/2024	11/1/2024

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblConstructionPhase	PhaseStartDate	1/27/2024	1/20/2024
tblEnergyUse	NT24E	1.28	1.50
tblEnergyUse	NT24NG	0.93	0.00
tblEnergyUse	T24E	1.39	6.47
tblEnergyUse	T24NG	17.34	0.00
tblFleetMix	HHD	6.3770e-003	7.4400e-003
tblFleetMix	HHD	6.3770e-003	7.4400e-003
tblFleetMix	LDA	0.57	0.53
tblFleetMix	LDA	0.57	0.53
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.19	0.23
tblFleetMix	LDT2	0.19	0.23
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.1580e-003	5.7400e-003
tblFleetMix	LHD2	5.1580e-003	5.7400e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	2.7200e-003	2.5850e-003
tblFleetMix	MH	2.7200e-003	2.5850e-003
tblFleetMix	MHD	8.0300e-003	9.4250e-003
tblFleetMix	MHD	8.0300e-003	9.4250e-003
tblFleetMix	OBUS	8.9300e-004	1.0570e-003
tblFleetMix	OBUS	8.9300e-004	1.0570e-003
tblFleetMix	SBUS	9.0000e-004	6.8400e-004

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblFleetMix	SBUS	9.0000e-004	6.8400e-004
tblFleetMix	UBUS	3.7200e-004	4.1300e-004
tblFleetMix	UBUS	3.7200e-004	4.1300e-004
tblGrading	MaterialExported	0.00	350.00
tblGrading	MaterialImported	0.00	650.00
tblLandUse	LandUseSquareFeet	14,243.75	14,380.00
tblLandUse	LotAcreage	0.33	1.50
tblLandUse	LotAcreage	0.36	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	3.20
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	8.00	1.10
tblOffRoadEquipment	UsageHours	6.00	0.20
tblOffRoadEquipment	UsageHours	6.00	2.10
tblOffRoadEquipment	UsageHours	8.00	0.50
tblOffRoadEquipment	UsageHours	8.00	1.20
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	6.00	1.60
tblOffRoadEquipment	UsageHours	8.00	1.60
tblOffRoadEquipment	UsageHours	7.00	1.60
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	1.20
tblOffRoadEquipment	UsageHours	7.00	1.30
tblOffRoadEquipment	UsageHours	6.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblOffRoadEquipment	UsageHours	7.00	2.80
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	1.30
tblOffRoadEquipment	UsageHours	8.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	807.98	178
tblTripsAndVMT	HaulingTripNumber	26.00	0.00
tblTripsAndVMT	HaulingTripNumber	125.00	0.00
tblTripsAndVMT	VendorTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleEF	HHD	0.02	0.23
tblVehicleEF	HHD	0.05	0.12
tblVehicleEF	HHD	6.32	5.18
tblVehicleEF	HHD	0.41	0.76
tblVehicleEF	HHD	5.9250e-003	6.8500e-004
tblVehicleEF	HHD	1,030.26	813.97
tblVehicleEF	HHD	1,386.58	1,586.83
tblVehicleEF	HHD	0.05	0.02
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.22	0.25
tblVehicleEF	HHD	6.0000e-006	1.4000e-005
tblVehicleEF	HHD	5.35	3.97
tblVehicleEF	HHD	2.67	1.77

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.5050e-003	2.0970e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	2.3970e-003	2.0000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8870e-003	8.7820e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0000e-006	1.6100e-004
tblVehicleEF	HHD	8.6000e-005	4.8000e-005
tblVehicleEF	HHD	0.43	0.33
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	3.8000e-005	4.3200e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.5860e-003	7.0990e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.0000e-006	1.6100e-004
tblVehicleEF	HHD	8.6000e-005	4.8000e-005
tblVehicleEF	HHD	0.49	0.59
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.08	0.14
tblVehicleEF	HHD	3.8000e-005	4.3200e-004
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	LDA	1.5230e-003	1.8410e-003
tblVehicleEF	LDA	0.04	0.06

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	LDA	0.49	0.61
tblVehicleEF	LDA	2.00	2.71
tblVehicleEF	LDA	226.89	237.67
tblVehicleEF	LDA	48.21	61.73
tblVehicleEF	LDA	3.7350e-003	3.8850e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.15	0.22
tblVehicleEF	LDA	0.04	7.1370e-003
tblVehicleEF	LDA	1.2360e-003	1.1200e-003
tblVehicleEF	LDA	1.6250e-003	1.8490e-003
tblVehicleEF	LDA	0.02	2.4980e-003
tblVehicleEF	LDA	1.1380e-003	1.0310e-003
tblVehicleEF	LDA	1.4940e-003	1.7000e-003
tblVehicleEF	LDA	0.03	0.26
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	5.5720e-003	6.9420e-003
tblVehicleEF	LDA	0.03	0.20
tblVehicleEF	LDA	0.18	0.27
tblVehicleEF	LDA	2.2440e-003	2.3490e-003
tblVehicleEF	LDA	4.7700e-004	6.1000e-004
tblVehicleEF	LDA	0.03	0.26
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	8.1000e-003	0.01
tblVehicleEF	LDA	0.03	0.20
tblVehicleEF	LDA	0.19	0.30

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	LDT1	3.1240e-003	5.5770e-003
tblVehicleEF	LDT1	0.05	0.10
tblVehicleEF	LDT1	0.77	1.31
tblVehicleEF	LDT1	2.16	4.86
tblVehicleEF	LDT1	272.37	319.18
tblVehicleEF	LDT1	58.50	84.00
tblVehicleEF	LDT1	5.2980e-003	8.6270e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.06	0.11
tblVehicleEF	LDT1	0.20	0.36
tblVehicleEF	LDT1	0.04	9.2190e-003
tblVehicleEF	LDT1	1.5310e-003	1.8130e-003
tblVehicleEF	LDT1	1.9900e-003	2.7500e-003
tblVehicleEF	LDT1	0.02	3.2270e-003
tblVehicleEF	LDT1	1.4090e-003	1.6690e-003
tblVehicleEF	LDT1	1.8300e-003	2.5290e-003
tblVehicleEF	LDT1	0.07	0.56
tblVehicleEF	LDT1	0.13	0.16
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	0.07	0.44
tblVehicleEF	LDT1	0.25	0.50
tblVehicleEF	LDT1	2.6950e-003	3.1550e-003
tblVehicleEF	LDT1	5.7900e-004	8.3000e-004
tblVehicleEF	LDT1	0.07	0.56
tblVehicleEF	LDT1	0.13	0.16
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT1	0.02	0.04

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	LDT1	0.07	0.44
tblVehicleEF	LDT1	0.27	0.54
tblVehicleEF	LDT2	2.6570e-003	2.5920e-003
tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.69	0.78
tblVehicleEF	LDT2	2.60	3.42
tblVehicleEF	LDT2	290.83	327.62
tblVehicleEF	LDT2	63.01	84.01
tblVehicleEF	LDT2	5.2770e-003	5.6470e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.23	0.31
tblVehicleEF	LDT2	0.04	8.8600e-003
tblVehicleEF	LDT2	1.3020e-003	1.2920e-003
tblVehicleEF	LDT2	1.6610e-003	2.0610e-003
tblVehicleEF	LDT2	0.02	3.1010e-003
tblVehicleEF	LDT2	1.1980e-003	1.1890e-003
tblVehicleEF	LDT2	1.5270e-003	1.8950e-003
tblVehicleEF	LDT2	0.06	0.28
tblVehicleEF	LDT2	0.11	0.08
tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.21
tblVehicleEF	LDT2	0.26	0.35
tblVehicleEF	LDT2	2.8770e-003	3.2380e-003
tblVehicleEF	LDT2	6.2400e-004	8.3000e-004
tblVehicleEF	LDT2	0.06	0.28
tblVehicleEF	LDT2	0.11	0.08

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	0.06	0.21
tblVehicleEF	LDT2	0.29	0.39
tblVehicleEF	LHD1	4.8220e-003	5.1940e-003
tblVehicleEF	LHD1	7.2910e-003	7.2220e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.20
tblVehicleEF	LHD1	0.66	0.82
tblVehicleEF	LHD1	1.01	2.16
tblVehicleEF	LHD1	8.77	8.60
tblVehicleEF	LHD1	764.47	764.97
tblVehicleEF	LHD1	11.28	17.60
tblVehicleEF	LHD1	7.4300e-004	6.3700e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.57	0.59
tblVehicleEF	LHD1	0.29	0.42
tblVehicleEF	LHD1	8.5700e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8070e-003	9.4200e-003
tblVehicleEF	LHD1	9.0910e-003	0.01
tblVehicleEF	LHD1	2.3900e-004	2.0600e-004
tblVehicleEF	LHD1	8.2000e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4520e-003	2.3550e-003
tblVehicleEF	LHD1	8.6510e-003	0.01

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	LHD1	2.2000e-004	1.8900e-004
tblVehicleEF	LHD1	1.8120e-003	0.12
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.4400e-004	0.00
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	0.19	0.17
tblVehicleEF	LHD1	0.06	0.11
tblVehicleEF	LHD1	8.5000e-005	8.4000e-005
tblVehicleEF	LHD1	7.4620e-003	7.4710e-003
tblVehicleEF	LHD1	1.1200e-004	1.7400e-004
tblVehicleEF	LHD1	1.8120e-003	0.12
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	9.4400e-004	0.00
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.19	0.17
tblVehicleEF	LHD1	0.07	0.12
tblVehicleEF	LHD2	2.9270e-003	3.0230e-003
tblVehicleEF	LHD2	6.3420e-003	6.4550e-003
tblVehicleEF	LHD2	7.0910e-003	0.01
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.56	0.53
tblVehicleEF	LHD2	0.57	1.20
tblVehicleEF	LHD2	13.74	13.69
tblVehicleEF	LHD2	740.94	811.00
tblVehicleEF	LHD2	7.36	9.64
tblVehicleEF	LHD2	1.7280e-003	1.6800e-003

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.68	0.81
tblVehicleEF	LHD2	0.16	0.23
tblVehicleEF	LHD2	1.4520e-003	1.3890e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.2200e-004	9.1000e-005
tblVehicleEF	LHD2	1.3890e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.6970e-003	2.6660e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1200e-004	8.4000e-005
tblVehicleEF	LHD2	9.1300e-004	0.06
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.8500e-004	0.00
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	7.1520e-003	7.8120e-003
tblVehicleEF	LHD2	7.3000e-005	9.5000e-005
tblVehicleEF	LHD2	9.1300e-004	0.06
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.8500e-004	0.00

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	MCY	0.32	0.16
tblVehicleEF	MCY	0.25	0.18
tblVehicleEF	MCY	18.37	12.31
tblVehicleEF	MCY	9.09	7.97
tblVehicleEF	MCY	210.00	187.27
tblVehicleEF	MCY	60.43	47.31
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	7.6910e-003
tblVehicleEF	MCY	1.14	0.56
tblVehicleEF	MCY	0.27	0.13
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0310e-003	1.9250e-003
tblVehicleEF	MCY	2.9300e-003	3.4640e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.8970e-003	1.7990e-003
tblVehicleEF	MCY	2.7510e-003	3.2530e-003
tblVehicleEF	MCY	0.90	3.86
tblVehicleEF	MCY	0.67	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.18	1.02
tblVehicleEF	MCY	0.52	3.76
tblVehicleEF	MCY	1.92	1.31
tblVehicleEF	MCY	2.0780e-003	1.8510e-003
tblVehicleEF	MCY	5.9800e-004	4.6800e-004
tblVehicleEF	MCY	0.90	0.09

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	MCY	0.67	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.71	1.24
tblVehicleEF	MCY	0.52	3.76
tblVehicleEF	MCY	2.09	1.42
tblVehicleEF	MDV	2.9890e-003	3.3070e-003
tblVehicleEF	MDV	0.06	0.09
tblVehicleEF	MDV	0.72	0.87
tblVehicleEF	MDV	2.79	3.62
tblVehicleEF	MDV	351.34	394.23
tblVehicleEF	MDV	74.92	100.26
tblVehicleEF	MDV	6.9960e-003	7.5830e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.06	0.09
tblVehicleEF	MDV	0.26	0.38
tblVehicleEF	MDV	0.04	8.9720e-003
tblVehicleEF	MDV	1.3680e-003	1.3100e-003
tblVehicleEF	MDV	1.7330e-003	2.0690e-003
tblVehicleEF	MDV	0.02	3.1400e-003
tblVehicleEF	MDV	1.2620e-003	1.2070e-003
tblVehicleEF	MDV	1.5940e-003	1.9020e-003
tblVehicleEF	MDV	0.07	0.34
tblVehicleEF	MDV	0.12	0.09
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.06	0.26
tblVehicleEF	MDV	0.31	0.45
tblVehicleEF	MDV	3.4720e-003	3.8950e-003

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	MDV	7.4100e-004	9.9100e-004
tblVehicleEF	MDV	0.07	0.34
tblVehicleEF	MDV	0.12	0.09
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.26
tblVehicleEF	MDV	0.34	0.49
tblVehicleEF	MH	8.5740e-003	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	0.80	1.11
tblVehicleEF	MH	1.94	2.37
tblVehicleEF	MH	1,472.19	1,680.13
tblVehicleEF	MH	17.63	22.07
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.26	1.49
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.5000e-004	2.9600e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2830e-003	3.3090e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3000e-004	2.7200e-004
tblVehicleEF	MH	0.58	30.56
tblVehicleEF	MH	0.05	7.99
tblVehicleEF	MH	0.21	0.00

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	0.01	0.19
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.7400e-004	2.1800e-004
tblVehicleEF	MH	0.58	30.56
tblVehicleEF	MH	0.05	7.99
tblVehicleEF	MH	0.21	0.00
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.19
tblVehicleEF	MH	0.10	0.12
tblVehicleEF	MHD	3.6170e-003	0.01
tblVehicleEF	MHD	1.5120e-003	9.5360e-003
tblVehicleEF	MHD	8.8700e-003	8.3140e-003
tblVehicleEF	MHD	0.39	0.67
tblVehicleEF	MHD	0.21	0.30
tblVehicleEF	MHD	1.02	1.00
tblVehicleEF	MHD	70.85	158.59
tblVehicleEF	MHD	1,065.91	1,213.65
tblVehicleEF	MHD	8.98	8.21
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.14	0.16
tblVehicleEF	MHD	7.2880e-003	5.8580e-003
tblVehicleEF	MHD	0.40	0.85
tblVehicleEF	MHD	1.45	1.01
tblVehicleEF	MHD	1.70	1.40
tblVehicleEF	MHD	3.2300e-004	1.7620e-003
tblVehicleEF	MHD	0.13	0.05

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	MHD	7.0640e-003	0.01
tblVehicleEF	MHD	1.1300e-004	1.0100e-004
tblVehicleEF	MHD	3.0900e-004	1.6850e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7520e-003	0.01
tblVehicleEF	MHD	1.0400e-004	9.3000e-005
tblVehicleEF	MHD	3.5500e-004	0.02
tblVehicleEF	MHD	0.02	5.6030e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	1.8800e-004	0.00
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	6.7200e-004	1.4720e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	8.9000e-005	8.1000e-005
tblVehicleEF	MHD	3.5500e-004	0.02
tblVehicleEF	MHD	0.02	5.6030e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.8800e-004	0.00
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	OBUS	7.0670e-003	7.5140e-003
tblVehicleEF	OBUS	3.3170e-003	9.5930e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.60	0.52
tblVehicleEF	OBUS	0.39	0.44

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	OBUS	1.79	1.87
tblVehicleEF	OBUS	94.25	87.04
tblVehicleEF	OBUS	1,303.83	1,366.10
tblVehicleEF	OBUS	14.82	14.86
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.39	0.36
tblVehicleEF	OBUS	1.46	0.97
tblVehicleEF	OBUS	1.10	0.99
tblVehicleEF	OBUS	1.2700e-004	4.0400e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.4740e-003	0.02
tblVehicleEF	OBUS	1.4700e-004	1.3100e-004
tblVehicleEF	OBUS	1.2200e-004	3.8700e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.1370e-003	0.01
tblVehicleEF	OBUS	1.3500e-004	1.2100e-004
tblVehicleEF	OBUS	1.0870e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8600e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	OBUS	8.9500e-004	8.2300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.0870e-003	0.07

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8600e-004	0.00
tblVehicleEF	OBUS	0.03	0.06
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.10
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.7290e-003	0.09
tblVehicleEF	SBUS	5.1560e-003	4.8980e-003
tblVehicleEF	SBUS	2.37	1.69
tblVehicleEF	SBUS	0.47	0.86
tblVehicleEF	SBUS	0.74	0.67
tblVehicleEF	SBUS	345.98	189.05
tblVehicleEF	SBUS	1,037.30	1,017.84
tblVehicleEF	SBUS	4.26	3.78
tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	5.0100e-003	4.3540e-003
tblVehicleEF	SBUS	3.34	1.34
tblVehicleEF	SBUS	4.41	2.41
tblVehicleEF	SBUS	0.90	0.49
tblVehicleEF	SBUS	3.3290e-003	1.2090e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.1000e-005	4.1000e-005
tblVehicleEF	SBUS	3.1850e-003	1.1550e-003
tblVehicleEF	SBUS	0.32	0.02

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	SBUS	2.7110e-003	2.6430e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	4.7000e-005	3.8000e-005
tblVehicleEF	SBUS	5.9800e-004	0.03
tblVehicleEF	SBUS	5.7950e-003	7.7750e-003
tblVehicleEF	SBUS	0.26	0.19
tblVehicleEF	SBUS	2.6700e-004	0.00
tblVehicleEF	SBUS	0.08	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.2940e-003	1.7180e-003
tblVehicleEF	SBUS	9.9090e-003	9.4580e-003
tblVehicleEF	SBUS	4.2000e-005	3.7000e-005
tblVehicleEF	SBUS	5.9800e-004	0.03
tblVehicleEF	SBUS	5.7950e-003	7.7750e-003
tblVehicleEF	SBUS	0.38	0.30
tblVehicleEF	SBUS	2.6700e-004	0.00
tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	UBUS	1.66	0.50
tblVehicleEF	UBUS	1.6700e-003	3.7330e-003
tblVehicleEF	UBUS	12.57	5.88
tblVehicleEF	UBUS	0.14	0.52
tblVehicleEF	UBUS	1,657.49	1,082.15
tblVehicleEF	UBUS	1.39	3.18
tblVehicleEF	UBUS	0.28	0.17
tblVehicleEF	UBUS	1.1100e-003	6.1420e-003

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblVehicleEF	UBUS	0.71	0.30
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.2020e-003	5.6850e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9760e-003	5.4350e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	2.4000e-005	0.01
tblVehicleEF	UBUS	2.0100e-004	3.7860e-003
tblVehicleEF	UBUS	1.1000e-005	0.00
tblVehicleEF	UBUS	0.02	0.06
tblVehicleEF	UBUS	4.0000e-005	7.9870e-003
tblVehicleEF	UBUS	6.9810e-003	0.01
tblVehicleEF	UBUS	0.01	8.8540e-003
tblVehicleEF	UBUS	1.4000e-005	3.1000e-005
tblVehicleEF	UBUS	2.4000e-005	0.01
tblVehicleEF	UBUS	2.0100e-004	3.7860e-003
tblVehicleEF	UBUS	1.1000e-005	0.00
tblVehicleEF	UBUS	1.70	0.57
tblVehicleEF	UBUS	4.0000e-005	7.9870e-003
tblVehicleEF	UBUS	7.6430e-003	0.01
tblVehicleTrips	ST_TR	0.39	0.34
tblVehicleTrips	SU_TR	0.37	0.32
tblVehicleTrips	WD_TR	4.09	3.56
tblWater	AerobicPercent	87.46	100.00

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	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					
2024	0.1528	0.6108	0.9134	1.5000e-003	0.0557	0.0268	0.0824	0.0262	0.0259	0.0520	0.0000	130.1992	130.1992	0.0248	0.0000	130.8185
Maximum	**0.1528**	**0.6108**	**0.9134**	**1.5000e-003**	**0.0557**	**0.0268**	**0.0824**	**0.0262**	**0.0259**	**0.0520**	**0.0000**	**130.1992**	**130.1992**	**0.0248**	**0.0000**	**130.8185**

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					
2024	0.1065	0.6108	1.0028	1.5000e-003	0.0251	7.8800e-003	0.0329	0.0118	7.8800e-003	0.0197	0.0000	130.1991	130.1991	0.0248	0.0000	130.8183

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Maximum	**0.1065**	**0.6108**	**1.0028**	**1.5000e-003**	**0.0251**	**7.8800e-003**	**0.0329**	**0.0118**	**7.8800e-003**	**0.0197**	**0.0000**	**130.1991**	**130.1991**	**0.0248**	**0.0000**	**130.8183**

	ROG	NOx	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	**30.31**	**0.00**	**-9.78**	**0.00**	**54.99**	**70.54**	**60.05**	**55.00**	**69.52**	**62.21**	**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	**1-1-2024**	**3-31-2024**	0.1566	0.1192
2	**4-1-2024**	**6-30-2024**	0.1391	0.1380
3	**7-1-2024**	**9-30-2024**	0.2378	0.2323
		Highest	0.2378	0.2323

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	0.0653	2.0000e-005	2.6800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2200e-003	5.2200e-003	1.0000e-005	0.0000	5.5600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	12.6662	12.6662	2.3500e-003	2.8000e-004	12.8097
Mobile	0.3625	0.1829	1.6866	2.9200e-003	0.2652	2.2400e-003	0.2674	0.0661	2.0900e-003	0.0682	0.0000	269.9702	269.9702	0.0231	0.0162	275.3867
Waste						0.0000	0.0000		0.0000	0.0000	9.3356	0.0000	9.3356	0.5517	0.0000	23.1284
Water						0.0000	0.0000		0.0000	0.0000	0.2161	0.7108	0.9270	8.8000e-004	4.9000e-004	1.0937
Total	**0.4277**	**0.1830**	**1.6893**	**2.9200e-003**	**0.2652**	**2.2500e-003**	**0.2674**	**0.0661**	**2.1000e-003**	**0.0682**	**9.5517**	**283.3525**	**292.9042**	**0.5780**	**0.0170**	**312.4242**

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0653	2.0000e-005	2.6800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2200e-003	5.2200e-003	1.0000e-005	0.0000	5.5600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	12.6662	12.6662	2.3500e-003	2.8000e-004	12.8097
Mobile	0.3625	0.1829	1.6866	2.9200e-003	0.2652	2.2400e-003	0.2674	0.0661	2.0900e-003	0.0682	0.0000	269.9702	269.9702	0.0231	0.0162	275.3867
Waste						0.0000	0.0000		0.0000	0.0000	9.3356	0.0000	9.3356	0.5517	0.0000	23.1284
Water						0.0000	0.0000		0.0000	0.0000	0.2161	0.7108	0.9270	8.8000e-004	4.9000e-004	1.0937
Total	**0.4277**	**0.1830**	**1.6893**	**2.9200e-003**	**0.2652**	**2.2500e-003**	**0.2674**	**0.0661**	**2.1000e-003**	**0.0682**	**9.5517**	**283.3525**	**292.9042**	**0.5780**	**0.0170**	**312.4242**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2024	1/18/2024	5	14	

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

2	Site Preparation	Site Preparation	1/20/2024	3/1/2024	5	30	
3	Grading	Grading	2/21/2024	4/8/2024	5	34	
4	Building Construction	Building Construction	5/15/2024	8/29/2024	5	77	
5	Paving	Paving	11/1/2024	11/14/2024	5	10	
6	Architectural Coating	Architectural Coating	6/1/2024	12/31/2024	5	152	
7	Trenching	Trenching	3/25/2024	5/3/2024	5	30	

Acres of Grading (Site Preparation Phase): 6.38

Acres of Grading (Grading Phase): 7.65

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,570; Non-Residential Outdoor: 7,190; Striped Parking Area: 960 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	1.10	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Site Preparation	Graders	1	2.10	187	0.41
Site Preparation	Rubber Tired Dozers	1	1.30	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	1.30	97	0.37
Grading	Excavators	2	2.80	158	0.38
Grading	Graders	1	1.20	187	0.41
Grading	Rubber Tired Dozers	2	1.20	247	0.40
Grading	Tractors/Loaders/Backhoes	2	2.80	97	0.37
Trenching	Excavators	2	4.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Building Construction	Cranes	1	0.20	231	0.29

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Building Construction	Forklifts	1	2.10	89	0.20
Building Construction	Generator Sets	1	0.50	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	1.00	97	0.37
Building Construction	Welders	1	1.00	46	0.45
Architectural Coating	Aerial Lifts	5	3.20	63	0.31
Architectural Coating	Air Compressors	6	3.20	78	0.48
Paving	Cement and Mortar Mixers	1	4.00	9	0.56
Paving	Pavers	1	1.60	130	0.42
Paving	Paving Equipment	1	1.60	132	0.36
Paving	Rollers	1	1.60	80	0.38
Paving	Tractors/Loaders/Backhoes	1	4.00	97	0.37

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
Architectural Coating	11	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7700e-003	0.0000	2.7700e-003	4.2000e-004	0.0000	4.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8300e-003	0.0321	0.0649	1.0000e-004		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	8.7875	8.7875	2.7000e-003	0.0000	8.8550
Total	**3.8300e-003**	**0.0321**	**0.0649**	**1.0000e-004**	**2.7700e-003**	**1.5400e-003**	**4.3100e-003**	**4.2000e-004**	**1.4200e-003**	**1.8400e-003**	**0.0000**	**8.7875**	**8.7875**	**2.7000e-003**	**0.0000**	**8.8550**

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**

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

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					1.2500e-003	0.0000	1.2500e-003	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	0.0435	0.0750	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.7875	8.7875	2.7000e-003	0.0000	8.8549
Total	**1.4900e-003**	**0.0435**	**0.0750**	**1.0000e-004**	**1.2500e-003**	**1.6000e-004**	**1.4100e-003**	**1.9000e-004**	**1.6000e-004**	**3.5000e-004**	**0.0000**	**8.7875**	**8.7875**	**2.7000e-003**	**0.0000**	**8.8549**

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**

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0181	0.0000	0.0181	8.4300e-003	0.0000	8.4300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4400e-003	0.0373	0.0196	5.0000e-005		1.4800e-003	1.4800e-003		1.3600e-003	1.3600e-003	0.0000	4.7839	4.7839	1.5500e-003	0.0000	4.8226
Total	**3.4400e-003**	**0.0373**	**0.0196**	**5.0000e-005**	**0.0181**	**1.4800e-003**	**0.0195**	**8.4300e-003**	**1.3600e-003**	**9.7900e-003**	**0.0000**	**4.7839**	**4.7839**	**1.5500e-003**	**0.0000**	**4.8226**

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**

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

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					8.1300e-003	0.0000	8.1300e-003	3.8000e-003	0.0000	3.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.4000e-004	0.0157	0.0306	5.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	4.7839	4.7839	1.5500e-003	0.0000	4.8226
Total	**9.4000e-004**	**0.0157**	**0.0306**	**5.0000e-005**	**8.1300e-003**	**9.0000e-005**	**8.2200e-003**	**3.8000e-003**	**9.0000e-005**	**3.8900e-003**	**0.0000**	**4.7839**	**4.7839**	**1.5500e-003**	**0.0000**	**4.8226**

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**

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0348	0.0000	0.0348	0.0173	0.0000	0.0173	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3100e-003	0.0809	0.0857	1.6000e-004		3.5900e-003	3.5900e-003		3.3100e-003	3.3100e-003	0.0000	13.9662	13.9662	4.5200e-003	0.0000	14.0791
Total	**8.3100e-003**	**0.0809**	**0.0857**	**1.6000e-004**	**0.0348**	**3.5900e-003**	**0.0384**	**0.0173**	**3.3100e-003**	**0.0206**	**0.0000**	**13.9662**	**13.9662**	**4.5200e-003**	**0.0000**	**14.0791**

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**

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

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					0.0157	0.0000	0.0157	7.8000e-003	0.0000	7.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5700e-003	0.0591	0.1066	1.6000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	13.9662	13.9662	4.5200e-003	0.0000	14.0791
Total	**2.5700e-003**	**0.0591**	**0.1066**	**1.6000e-004**	**0.0157**	**2.6000e-004**	**0.0159**	**7.8000e-003**	**2.6000e-004**	**8.0600e-003**	**0.0000**	**13.9662**	**13.9662**	**4.5200e-003**	**0.0000**	**14.0791**

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**

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7800e-003	0.0320	0.0408	6.0000e-005		1.4700e-003	1.4700e-003		1.3900e-003	1.3900e-003	0.0000	5.4284	5.4284	1.1700e-003	0.0000	5.4577
Total	**3.7800e-003**	**0.0320**	**0.0408**	**6.0000e-005**		**1.4700e-003**	**1.4700e-003**		**1.3900e-003**	**1.3900e-003**	**0.0000**	**5.4284**	**5.4284**	**1.1700e-003**	**0.0000**	**5.4577**

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

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2800e-003	0.0284	0.0429	6.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	5.4284	5.4284	1.1700e-003	0.0000	5.4577
Total	**1.2800e-003**	**0.0284**	**0.0429**	**6.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**5.4284**	**5.4284**	**1.1700e-003**	**0.0000**	**5.4577**

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 Paving - 2024

Unmitigated Construction On-Site

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0000e-003	9.3000e-003	0.0137	2.0000e-005		4.4000e-004	4.4000e-004		4.0000e-004	4.0000e-004	0.0000	1.8003	1.8003	5.6000e-004	0.0000	1.8142
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0000e-003**	**9.3000e-003**	**0.0137**	**2.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**1.8003**	**1.8003**	**5.6000e-004**	**0.0000**	**1.8142**

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

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-004	8.4100e-003	0.0145	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.8003	1.8003	5.6000e-004	0.0000	1.8142
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4000e-004**	**8.4100e-003**	**0.0145**	**2.0000e-005**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**1.8003**	**1.8003**	**5.6000e-004**	**0.0000**	**1.8142**

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 Architectural Coating - 2024

Unmitigated Construction On-Site

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0492	0.3764	0.6063	9.8000e-004		0.0162	0.0162		0.0161	0.0161	0.0000	84.5191	84.5191	0.0108	0.0000	84.7878
Total	**0.1275**	**0.3764**	**0.6063**	**9.8000e-004**		**0.0162**	**0.0162**		**0.0161**	**0.0161**	**0.0000**	**84.5191**	**84.5191**	**0.0108**	**0.0000**	**84.7878**

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

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.4012	0.6394	9.8000e-004		6.8300e-003	6.8300e-003		6.8300e-003	6.8300e-003	0.0000	84.5190	84.5190	0.0108	0.0000	84.7877
Total	**0.0979**	**0.4012**	**0.6394**	**9.8000e-004**		**6.8300e-003**	**6.8300e-003**		**6.8300e-003**	**6.8300e-003**	**0.0000**	**84.5190**	**84.5190**	**0.0108**	**0.0000**	**84.7877**

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 Trenching - 2024

Unmitigated Construction On-Site

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.8600e-003	0.0428	0.0825	1.2000e-004		2.0300e-003	2.0300e-003		1.8700e-003	1.8700e-003	0.0000	10.9139	10.9139	3.5300e-003	0.0000	11.0021
Total	**4.8600e-003**	**0.0428**	**0.0825**	**1.2000e-004**		**2.0300e-003**	**2.0300e-003**		**1.8700e-003**	**1.8700e-003**	**0.0000**	**10.9139**	**10.9139**	**3.5300e-003**	**0.0000**	**11.0021**

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

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Off-Road	2.0000e-003	0.0545	0.0939	1.2000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	10.9139	10.9139	3.5300e-003	0.0000	11.0021
Total	**2.0000e-003**	**0.0545**	**0.0939**	**1.2000e-004**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**10.9139**	**10.9139**	**3.5300e-003**	**0.0000**	**11.0021**

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**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3625	0.1829	1.6866	2.9200e-003	0.2652	2.2400e-003	0.2674	0.0661	2.0900e-003	0.0682	0.0000	269.9702	269.9702	0.0231	0.0162	275.3867
Unmitigated	0.3625	0.1829	1.6866	2.9200e-003	0.2652	2.2400e-003	0.2674	0.0661	2.0900e-003	0.0682	0.0000	269.9702	269.9702	0.0231	0.0162	275.3867

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	897.12	85.68	80.64	782,605	782,605
Parking Lot	0.00	0.00	0.00		
Total	897.12	85.68	80.64	782,605	782,605

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Day-Care Center	0.528224	0.040364	0.230108	0.128589	0.023276	0.005740	0.009425	0.007440	0.001057	0.000413	0.022096	0.000684	0.002
Parking Lot	0.528224	0.040364	0.230108	0.128589	0.023276	0.005740	0.009425	0.007440	0.001057	0.000413	0.022096	0.000684	0.002

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.6662	12.6662	2.3500e-003	2.8000e-004	12.8097
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.6662	12.6662	2.3500e-003	2.8000e-004	12.8097
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Day-Care Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	151278	12.2141	2.2600e-003	2.7000e-004	12.3525
Parking Lot	5600	0.4521	8.0000e-005	1.0000e-005	0.4573

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Total		**12.6662**	**2.3400e-003**	**2.8000e-004**	**12.8097**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	151278	12.2141	2.2600e-003	2.7000e-004	12.3525
Parking Lot	5600	0.4521	8.0000e-005	1.0000e-005	0.4573
Total		**12.6662**	**2.3400e-003**	**2.8000e-004**	**12.8097**

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					

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Mitigated	0.0653	2.0000e-005	2.6800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2200e-003	5.2200e-003	1.0000e-005	0.0000	5.5600e-003
Unmitigated	0.0653	2.0000e-005	2.6800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2200e-003	5.2200e-003	1.0000e-005	0.0000	5.5600e-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	7.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0572					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2200e-003	5.2200e-003	1.0000e-005	0.0000	5.5600e-003
Total	**0.0653**	**2.0000e-005**	**2.6800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.2200e-003**	**5.2200e-003**	**1.0000e-005**	**0.0000**	**5.5600e-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	7.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Consumer Products	0.0572					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2200e-003	5.2200e-003	1.0000e-005	0.0000	5.5600e-003
Total	**0.0653**	**2.0000e-005**	**2.6800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.2200e-003**	**5.2200e-003**	**1.0000e-005**	**0.0000**	**5.5600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.9270	8.8000e-004	4.9000e-004	1.0937
Unmitigated	0.9270	8.8000e-004	4.9000e-004	1.0937

7.2 Water by Land Use

Unmitigated

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

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Day-Care Center	0.610908 / 1.57091	0.9270	8.8000e-004	4.9000e-004	1.0937
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.9270**	**8.8000e-004**	**4.9000e-004**	**1.0937**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.610908 / 1.57091	0.9270	8.8000e-004	4.9000e-004	1.0937
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.9270**	**8.8000e-004**	**4.9000e-004**	**1.0937**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

	MT/yr			
Mitigated	9.3356	0.5517	0.0000	23.1284
Unmitigated	9.3356	0.5517	0.0000	23.1284

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	45.99	9.3356	0.5517	0.0000	23.1284
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**9.3356**	**0.5517**	**0.0000**	**23.1284**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	45.99	9.3356	0.5517	0.0000	23.1284

Merryhill School, N. Capitol Avenue, San Jose - Santa Clara County, Annual

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

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**9.3356**	**0.5517**	**0.0000**	**23.1284**

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: EMFAC2021 Calculations

Summary of Construction Traffic Emissions (EMFAC2021)

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
					Tons							*Metric Tons*		
Criteria Pollutants														
2024	0.0045	0.0212	0.0518	0.0002	0.0129	0.0016	0.0145	0.0019	0.0007	0.0026	20.8704	0.0012	0.0021	21.5161
Toxic Air Contaminants (0.5 Mile Trip Length)														
2024	0.0039	0.0061	0.0170	0.0000	0.0006	0.0001	0.0007	0.0001	0.0000	0.0001	1.6552	0.0004	0.0003	1.7448

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	15	0	210	0	26	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	2268	0	520
Site Preparation	8	0	240	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	2592	0	0
Grading	18	0	612	0	125	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	6609.6	0	2500
Trenching	10	0	300	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3240	0	0
Building Construction	13	5	1001	385	60	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	10810.8	2810.5	438
Architectural Coating	3	0	456	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	4924.8	0	0
Paving	13	0	130	0	120	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	1404	0	876

Number of Days Per Year					
2024	1/1/24	12/31/24	366	262	
			366	**262**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/1/2024	1/18/2024	5	14
Site Preparation	1/20/2024	3/1/2024	5	30
Grading	2/21/2024	4/8/2024	5	34
Trenching	3/25/2024	5/3/2024	5	30
Building Construction	5/15/2024	8/29/2024	5	77
Architectural Coating	6/1/2024	12/31/2024	6	152
Paving	11/1/2024	11/14/2024	5	10

Category		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_PM BW	PM10_PM TW	PM10_IDLEX	PM10_RUNEX	PM10_STREX	Road Dust PM25	PM25_PM BW	PM25_PM TW	PM25_IDLEX	PM25_RUNEX	PM25_STREX	CO2_NBIO_IDLEX	CO2_NBIO_RUNEX	CO2_NBIO_STREX	CH4_IDLEX	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
																														19	22	23	8	9	10						
Hauling	HHDT	100.0	1	0.000195977	5.82846E-05	0.329789936	0	0.01860554	0.00052501	4.36152E-07	4.075118	1.850604526	2.731408381	5.19556	0.77488683	0.000626	0.00728035	0.014635772	1.93499E-07		0.081298	0.035125	0.002182	0.025474	6.09682E-07		0.028454	0.008781	0.002082	0.0243688	5.606E-07	832.31669	1617.1297	0.019573	0.232934	0.121678903	8.02769E-08	0.134072	0.258076714	1.94763E-05
	MHD	0.0	0	0.025794994	0.006259754	0.026359118	0	0.03811329	0.05096401	0.04894298	0.8928585	1.112921974	1.40789614	0.671381	0.34617278	1.07433	0.00148998	0.011664295	8.43209E-05	0.299	0.045399	0.012	0.002128	0.012985	0.000106814	0.04499	0.01589	0.003	0.002035	0.0124151	9.821E-05	160.25985	1229.1806	8.5293121	0.013383	0.009658327	0.008772715	0.024689	0.158249654	0.006031915
Vendor	HHDT	50.0	0.5	9.79886E-05	2.91423E-05	0.164894968	0	0.00930277	0.0002625	2.18076E-07	2.037559	0.925302263	1.36570419	2.59778	0.38744341	0.000313	0.00364017	0.007317886	9.67497E-08		0.040649	0.017563	0.001091	0.012737	3.04841E-07		0.014227	0.004391	0.001041	0.0121844	2.803E-07	416.15835	808.56485	0.0097865	0.116467	0.060839451	4.01385E-08	0.067036	0.129038357	9.73817E-06
	MHD	50.0	0.5	0.012897497	0.003129877	0.013179559	0	0.01905664	0.02548201	0.02447149	0.4464293	0.556460987	0.70394807	0.335691	0.17308639	0.537165	0.00074499	0.005832147	4.21605E-05		0.0227	0.006	0.001064	0.006492	5.3407E-05		0.007945	0.0015	0.001018	0.0062075	4.911E-05	80.129824	614.5903	4.2646561	0.006691	0.004829164	0.004386358	0.012344	0.079124827	0.003015958
			1	0.012995486	0.003159019	0.178074527	0	0.02835941	0.02574451	0.024471708	2.4839883	1.48176325	2.06965226	2.933471	0.56052298	0.537478	0.00438516	0.013150033	4.22572E-05	0.299	0.063348	0.023563	0.002155	0.01923	5.37119E-05	0.04499	0.022172	0.005891	0.002059	0.0183919	4.939E-05	496.28827	1423.1552	4.2744426	0.123158	0.065668615	0.004386398	0.07938	0.208163184	0.003025696
Worker	LDA	50.0	0.5	0.136796864	0.040510207	0	0	0.00394285	0.10236849	0.147535756	0	0.018684555	0.115476587	0	0.32486778	1.445873	0	0.001211349	0.000313927		0.003584	0.004	0	0.000585	0.000954881		0.001254	0.001	0	0.000539	0.000878	0	122.54122	31.754603	0	0.001026569	0.03235985	0	0.002080964	0.014940319
	LDT1	25.0	0.25	0.148814258	0.041105424	0	0	0.00690435	0.11745495	0.134116008	0	0.0319581	0.094816504	0	0.35468197	1.306204	0	0.000804162	0.00021249		0.002306	0.002	0	0.000482	0.00072446		0.000807	0.0005	0	0.0004435	0.0006661	0	81.34419	21.494004	0	0.001555571	0.026204278	0	0.002343639	0.009623613
	LDT2	25.0	0.25	0.072043204	0.020150051	0	0	0.00277508	0.05338915	0.094795741	0	0.017007912	0.082407943	0	0.2073341	0.905899	0	0.000831592	0.000213499		0.002217	0.002	0	0.000333	0.000526973		0.000776	0.0005	0	0.0003065	0.0004845	0	84.129497	21.596069	0	0.000704556	0.020482149	0	0.001504103	0.009197602
			1	0.357654326	0.101765681	0	0	0.01362228	0.2734126	0.376447505	0	0.067650567	0.292701033	0	0.88688386	3.657977	0	0.002847102	0.000739916	0.299	0.008107	0.008	0	0.001401	0.002206314	0.04499	0.002837	0.002	0	0.001289	0.0020286	0	288.01491	74.844675	0	0.003286696	0.079046277	0	0.005928705	0.033761535

CalEEMod EMFAC2021 Emission Factors Input — Year 2025

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.005194	0.003023	0.013842	0.229861003	0.007514	0	0	0.076044	0
A	CH4_RUNEX	0.001841	0.005577	0.002592	0.003307	0.007222	0.006455	0.009536	0.117132109	0.009593	0.497756349	0.158292	0.090769	0.011159
A	CH4_STREX	0.060617	0.097956	0.077312	0.090898	0.021636	0.011648	0.008314	7.74759E-08	0.016852	0.003733046	0.177199	0.004898	0.025922
A	CO_IDLEX	0	0	0	0	0.195049	0.141036	0.668176	5.176290252	0.524506	0	0	1.692209	0
A	CO_RUNEX	0.606604	1.307107	0.781421	0.865797	0.821777	0.532869	0.296939	0.756535609	0.44406	5.878094388	12.31202	0.85843	1.105311
A	CO_STREX	2.711494	4.855262	3.417927	3.621729	2.164208	1.195973	1.000247	0.000684691	1.872658	0.515229574	7.965438	0.66885	2.373596
A	CO2_NBIO_IDLEX	0	0	0	0	8.602925	13.6884	158.593	813.9732577	87.04447	0	0	189.0522	0
A	CO2_NBIO_RUNEX	237.6743	319.1813	327.6236	394.2305	764.972	810.9955	1213.655	1586.833625	1366.1	1082.148951	187.2679	1017.838	1680.132
A	CO2_NBIO_STREX	61.73081	84.00027	84.00689	100.2571	17.59535	9.640849	8.205073	0.017114195	14.85767	3.177121883	47.30784	3.779827	22.06858
A	NOX_IDLEX	0	0	0	0	0.046413	0.089605	0.847928	3.965211308	0.364367	0	0	1.342517	0
A	NOX_RUNEX	0.033383	0.114688	0.061427	0.085138	0.585978	0.806102	1.006394	1.774057666	0.968278	0.301158242	0.557882	2.407715	1.487818
A	NOX_STREX	0.218516	0.357478	0.309231	0.377914	0.420652	0.228874	1.403485	2.751173324	0.987981	0.039008099	0.129146	0.492123	0.298831
A	PM10_IDLEX	0	0	0	0	0.000685	0.001389	0.001762	0.002096665	0.000404	0	0	0.001209	0
A	PM10_PMBW	0.007137	0.009219	0.00886	0.008972	0.077556	0.090487	0.04526	0.081222471	0.04982	0.123663808	0.012	0.044786	0.044946
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.00942	0.010665	0.012	0.035128275	0.012	0.042521858	0.004	0.010572	0.013235
A	PM10_RUNEX	0.00112	0.001813	0.001292	0.00131	0.01302	0.021567	0.011186	0.025031341	0.015263	0.005684616	0.001925	0.012423	0.028992
A	PM10_STREX	0.001849	0.00275	0.002061	0.002069	0.000206	9.12E-05	0.000101	5.20395E-07	0.000131	1.2108E-05	0.003464	4.08E-05	0.000296
A	PM25_IDLEX	0	0	0	0	0.000656	0.001329	0.001685	0.001999711	0.000387	0	0	0.001155	0
A	PM25_PMBW	0.002498	0.003227	0.003101	0.00314	0.027145	0.03167	0.015841	0.028427865	0.017437	0.043282333	0.0042	0.015675	0.015731
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002355	0.002666	0.003	0.008782069	0.003	0.010630465	0.001	0.002643	0.003309
A	PM25_RUNEX	0.001031	0.001669	0.001189	0.001207	0.012419	0.020616	0.010694	0.023944936	0.014593	0.005434911	0.001799	0.01187	0.027693
A	PM25_STREX	0.0017	0.002528	0.001895	0.001902	0.000189	8.39E-05	9.28E-05	4.78484E-07	0.000121	1.11329E-05	0.003253	3.76E-05	0.000272
A	ROG_DIURN	0.264632	0.562584	0.283569	0.336782	0.120201	0.063181	0.023118	0.000161301	0.068202	0.010220489	3.860886	0.029457	30.55965
A	ROG_HTSK	0.077597	0.155938	0.078131	0.089235	0.030304	0.015991	0.005603	4.7964E-05	0.016021	0.003785535	3.558651	0.007775	7.988502
A	ROG_IDLEX	0	0	0	0	0.021187	0.015503	0.025251	0.32711902	0.04025	0	0	0.185349	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.006942	0.024558	0.010089	0.013778	0.079612	0.109106	0.032483	0.017799596	0.044456	0.059943987	1.024683	0.053481	0.077128
A	ROG_RUNLS	0.197921	0.439329	0.211003	0.255197	0.16959	0.087065	0.045291	0.000432041	0.075038	0.007986552	3.760078	0.019152	0.188623
A	ROG_STREX	0.273326	0.495732	0.354505	0.447416	0.106693	0.056928	0.045776	4.20633E-07	0.089311	0.013239776	1.305157	0.027862	0.108247
A	SO2_IDLEX	0	0	0	0	8.37E-05	0.000131	0.001472	0.007098942	0.000823	0	0	0.001718	0
A	SO2_RUNEX	0.002349	0.003155	0.003238	0.003895	0.007471	0.007812	0.011512	0.014348163	0.013043	0.00885381	0.001851	0.009458	0.016473
A	SO2_STREX	0.00061	0.00083	0.00083	0.000991	0.000174	9.53E-05	8.11E-05	1.69191E-07	0.000147	3.14091E-05	0.000468	3.74E-05	0.000218
A	TOG_DIURN	0.264632	0.562584	0.283569	0.336782	0.120201	0.063181	0.023118	0.000161301	0.068202	0.010220489	0.08531	0.029457	30.55965
A	TOG_HTSK	0.077597	0.155938	0.078131	0.089235	0.030304	0.015991	0.005603	4.7964E-05	0.016021	0.003785535	3.558651	0.007775	7.988502
A	TOG_IDLEX	0	0	0	0	0.03005	0.020889	0.042478	0.588143126	0.05333	0	0	0.302207	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.010114	0.035818	0.014707	0.020053	0.097862	0.126808	0.046457	0.137213337	0.060464	0.565677917	1.236542	0.152507	0.100988
A	TOG_RUNLS	0.197921	0.439329	0.211003	0.255197	0.16959	0.087065	0.045291	0.000432041	0.075038	0.007986552	3.760078	0.019152	0.188623
A	TOG_STREX	0.299257	0.542764	0.388138	0.489864	0.116815	0.062329	0.050119	4.6054E-07	0.097784	0.014495888	1.419098	0.030505	0.118517
A	N2O_IDLEX	0	0	0	0	0.000637	0.00168	0.024457	0.131219379	0.012456	0	0	0.024955	0
A	N2O_RUNEX	0.003885	0.008627	0.005647	0.007583	0.040583	0.081593	0.156018	0.253304032	0.157183	0.165902975	0.038984	0.126174	0.069141
A	N2O_STREX	0.028873	0.037292	0.035503	0.037751	0.034174	0.018376	0.005858	1.42154E-05	0.01459	0.006142466	0.007691	0.004354	0.031786

CalEEMod EMFAC2021 Fleet Mix Input — Year 2025

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Day-Care Center	0.528224	0.040364	0.230108	0.128589	0.023276	0.00574	0.009425	0.00744	0.001057	0.000413	0.022096	0.000684	0.002585
Parking Lot	0.528224	0.040364	0.230108	0.128589	0.023276	0.00574	0.009425	0.00744	0.001057	0.000413	0.022096	0.000684	0.002585

Adjustment Factors

Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
HHDT	GAS	2.33035896	1.70966E-05	124.9448223	0.0001166	46.62582199	0.000342
HHDT	DSL	8692.57496	0.06377287	1008963.948	0.9416827	127877.0897	0.938167
HHDT	ELEC	63.3712014	0.000464921	6579.674935	0.0061409	825.9971986	0.00606
HHDT	NG	832.40502	0.00610692	55779.3819	0.0520598	7555.504424	0.055431
		9590.68154		1071447.949		136305.2172	
LDA	GAS	598860.284	0.189163833	22133914.69	0.8620184	2780384.029	0.878248
LDA	DSL	1620.03991	0.000511727	46912.85411	0.001827	6871.193241	0.00217
LDA	ELEC	61443.1924	0.019408249	2670451.983	0.1040023	299852.6978	0.094715
LDA	PIH	19037.6636	0.006013485	825567.7143	0.0321522	78720.73884	0.024866
		680961.18		25676847.24		3165828.659	
LDT1	GAS	51680.8552	0.222992328	1664705.874	0.9915742	230185.983	0.993205
LDT1	DSL	21.282725	9.18306E-05	302.825779	0.0001804	59.13231308	0.000255
LDT1	ELEC	234.457824	0.001011638	9323.703781	0.0055536	1109.79593	0.004789
LDT1	PIH	98.1319848	0.000423419	4519.182281	0.0026918	405.7757571	0.001751
		52034.7277		1678851.586		231760.687	
LDT2	GAS	290874.748	0.209748755	10447705.78	0.9789509	1360240.873	0.980865
LDT2	DSL	1049.95238	0.000757117	38652.33695	0.0036217	4980.340082	0.003591
LDT2	ELEC	2157.05904	0.001555448	73663.77305	0.0069023	10962.38395	0.007905
LDT2	PIH	2561.88514	0.001847366	112327.2154	0.0105251	10593.39505	0.007639
		296643.645		10672349.11		1386776.992	
LHDT1	GAS	19422.4639	0.045941069	728336.977	0.6336476	289365.7727	0.684453
LHDT1	DSL	10387.1028	0.024569211	408019.3319	0.3549737	130656.6864	0.30905
LHDT1	ELEC	196.401964	0.000464561	13079.06139	0.0113787	2746.629156	0.006497
		30005.9687	0.070974841	1149435.37		422769.0882	
LHDT2	GAS	2512.65228	0.025565973	91345.05406	0.3225651	37434.7751	0.380895
LHDT2	DSL	4837.2356	0.049218364	188645.0475	0.6661587	60846.33861	0.619105
LHDT2	ELEC	50.4620201	0.000513446	3193.250687	0.0112763	669.1749743	0.006809
		7400.3499	0.075297782	283183.3523		98281.11371	
MCY	GAS	28484.893	0.022095845	166414.5147	1	56969.78604	1
MDV	GAS	159532.218	0.207432201	5551044.411	0.9605893	739781.3765	0.961903
MDV	DSL	2421.36412	0.003148385	85326.79887	0.0147655	11351.14178	0.014759
MDV	ELEC	2274.54722	0.002957486	77934.95958	0.0134864	11571.05737	0.015045
MDV	PIH	1542.36579	0.002005465	64484.39206	0.0111588	6377.682532	0.008293
		165770.495		5778790.561		769081.2582	
MH	GAS	2337.87649	7.013583236	21506.19156	0.6912933	233.8811638	0.701639
MH	DSL	994.543666	2.983611331	9603.892712	0.3087067	99.45436656	0.298361
		3332.42015		31110.08427		333.3355304	
MHDT	GAS	1412.26257	0.009037553	72039.87357	0.1394582	28256.54946	0.180823
MHDT	DSL	10548.0591	0.067500648	435100.6189	0.8422883	125915.2277	0.805775
MHDT	ELEC	90.8085123	0.000581115	4838.905804	0.0093674	1182.343378	0.007566
MHDT	NG	98.9062774	0.000632935	4590.306874	0.0088861	911.9208312	0.005836
		12150.0365		516569.7051		156266.0414	
OBUS	GAS	430.702276	0.023671729	18962.49127	0.2311741	8617.491144	0.473624
OBUS	DSL	921.411582	0.050641491	62304.88754	0.7595666	9451.527202	0.519463
OBUS	ELEC	2.67203053	0.000146857	221.7710452	0.0027036	53.46198693	0.002938
OBUS	NG	8.1253065	0.000446573	537.746753	0.0065557	72.31522781	0.003975
		1362.9112		82026.89662		18194.79556	
SBUS	GAS	178.243554	0.016385172	8812.851183	0.3543672	712.9742161	0.065541
SBUS	DSL	673.204793	0.061884852	15283.75186	0.6145639	9748.005403	0.896093
SBUS	ELEC	4.48116849	0.000411935	145.0761128	0.0058336	51.24766317	0.004711
SBUS	NG	25.2843935	0.002324287	627.585971	0.0252354	366.1180183	0.033656
		881.213909		24869.26513		10878.3453	
UBUS	GAS	46.2191762	0.021676301	4826.657731	0.0818022	184.8767049	0.086705
UBUS	DSL	405.367492	0.190113029	44987.36567	0.7624463	1621.46997	0.760452
UBUS	ELEC	23.3120232	0.100202165	2427.539875	0.3589751	93.248093	0.400809
UBUS	NG	58.1624738	0.02727758	6762.418158	0.1146095	232.6498951	0.10911
		533.061166		59003.98143		2132.244663	

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_DIU	PM2.5_TIR	PM10_RUI	PM10_IDL	PM10_STR	PM10_DIU	PM10_TIR	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2024	HHDT	Aggregate	Aggregate	Gasoline	2.588708	115.1526	115.1526	0	51.79487	7.013725	0	1.695629	0.003612	0	0.001433	0.005	0.03384	0.003929	0	0.001559	0.02	0.096686	2166.164	0	50.04419	0.246012	0	0.000205	0.192927	0	0.049797	1.47824	0	0.001115	0.149022	1.34233	10.02547	2.157045	0	0.001221	0.149022	1.34233	10.02547	0.04274	52.51903	0	1.60109	0.021415	0	0.000495
Santa Clara	2024	HHDT	Aggregate	Aggregate	Diesel	8486.693	1001095	1001095	0	124748.4	1.894567	62.32042	2.898867	0.025674	0.03017	0	0.008877	0.027454	0.026835	0.031534	0	0.035082	0.07844	1634.1	11997.01	0	0.000777	0.23663	0	0.257453	1.890134	0	0.016732	5.094584	0	0	0	0	0.019048	5.799796	0	0	0	0	0	0.215084	0.082524	74.10576	0	0.015474	0.113605	0
Santa Clara	2024	HHDT	Aggregate	Aggregate	Electricity	28.33039	2794.261	0	2794.261	378.7946	0	0	0	0	0	0	0.008585	0.014055	0	0	0	0.034341	0.040158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	HHDT	Aggregate	Aggregate	Natural Ga	794.401	54591.27	54591.27	0	7249.717	1.128254	13.55515	0	0.001724	0.024776	0	0.009	0.047521	0.001875	0.026946	0	0.036	0.135775	1387.534	10583.64	0	2.344742	36.30276	0	0.282858	2.157544	0	0.050833	0.550696	0	0	0	0	0.41272	37.08609	0	0	0	0	0	0.85184	13.40196	74.43135	0	0	0	0
Santa Clara	2024	LDA	Aggregate	Aggregate	Gasoline	600108.2	22290344	22290344	0	2786617	0.042281	0	0.257993	0.001177	0	0.001931	0.002	0.002656	0.00128	0	0.0021	0.008	0.007587	275.9552	0	70.08069	0.002338	0	0.072036	0.004672	0	0.033228	0.008937	0	0.328953	0.090491	0.230394	1.422636	0.013041	0	0.360162	0.090491	0.230394	1.422636	0.034712	0.737516	0	3.233068	0.002728	0	0.000693
Santa Clara	2024	LDA	Aggregate	Aggregate	Diesel	1750.024	51573.48	51573.48	0	7442.61	0.213181	0	0	0.016747	0	0	0.002	0.002706	0.017504	0	0	0.008	0.00773	232.3976	0	0	0.001289	0	0	0.036614	0	0	0.027749	0	0	0	0	0	0.03159	0	0	0	0	0	0.0031	0.331109	0	0	0.002202	0	0
Santa Clara	2024	LDA	Aggregate	Aggregate	Electricity	57627.4	2472767	0	2472767	282733	0	0	0	0	0	0	0.002	0.001533	0	0	0	0.008	0.00438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LDA	Aggregate	Aggregate	Plug-in Hyb	17457.1	767059.2	381568.7	385490.5	72185.1	0.003264	0	0.11551	0.000618	0	0.00207	0.002	0.001377	0.000672	0	0.002252	0.008	0.003935	138.86	0	65.1247	0.000444	0	0.04244	0.000587	0	0.020762	0.001412	0	0.173285	0.041111	0.037292	0.447104	0.00206	0	0.189725	0.041111	0.037292	0.447104	0.019502	0.214853	0	1.339893	0.001373	0	0.000644
Santa Clara	2024	LDT1	Aggregate	Aggregate	Gasoline	52693.37	1706864	1706864	0	234793.4	0.128357	0	0.381294	0.001737	0	0.002678	0.002	0.00324	0.001889	0	0.002913	0.008	0.009258	327.2571	0	86.38434	0.006261	0	0.105365	0.009424	0	0.03869	0.027741	0	0.539321	0.165332	0.472477	2.667158	0.040475	0	0.590488	0.165332	0.472477	2.667158	0.036079	1.427621	0	5.253053	0.003235	0	0.000854
Santa Clara	2024	LDT1	Aggregate	Aggregate	Diesel	23.46233	343.9308	343.9308	0	66.44459	1.651932	0	0	0.239373	0	0	0.002	0.003724	0.250196	0	0	0.008	0.01064	415.3002	0	0	0.013862	0	0	0.065431	0	0	0.298448	0	0	0	0	0	0.339763	0	0	0	0	0	0.0031	1.593665	0	0	0.003935	0	0
Santa Clara	2024	LDT1	Aggregate	Aggregate	Electricity	211.0028	8008.646	0	8008.646	994.4346	0	0	0	0	0	0	0.002	0.001539	0	0	0	0.008	0.004397	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LDT1	Aggregate	Aggregate	Plug-in Hyb	67.64578	3164.46	1414.302	1750.158	279.7153	0.002933	0	0.11551	0.000367	0	0.001381	0.002	0.001389	0.0004	0	0.001502	0.008	0.003967	124.8456	0	69.31208	0.000397	0	0.042219	0.000522	0	0.020556	0.001268	0	0.173285	0.024153	0.020965	0.279628	0.001851	0	0.189725	0.024153	0.020965	0.279628	0.018771	0.19347	0	1.339893	0.001234	0	0.000685
Santa Clara	2024	LDT2	Aggregate	Aggregate	Gasoline	285585.4	10322758	10322758	0	1336438	0.069091	0	0.334237	0.001227	0	0.001959	0.002	0.003127	0.001334	0	0.00213	0.008	0.008936	340.3247	0	87.29427	0.002864	0	0.082985	0.005943	0	0.037254	0.011242	0	0.384216	0.081741	0.217688	1.368189	0.016404	0	0.420668	0.081741	0.217688	1.368189	0.036359	0.842122	0	3.673764	0.003364	0	0.000863
Santa Clara	2024	LDT2	Aggregate	Aggregate	Diesel	1015.453	37944.26	37944.26	0	4835.434	0.041515	0	0	0.004813	0	0	0.002	0.003113	0.005031	0	0	0.008	0.008895	307.1615	0	0	0.000609	0	0	0.048393	0	0	0.013105	0	0	0	0	0	0.014919	0	0	0	0	0	0.0031	0.129976	0	0	0.002911	0	0
Santa Clara	2024	LDT2	Aggregate	Aggregate	Electricity	1597.567	55532.59	0	55532.59	8150.927	0	0	0	0	0	0	0.002	0.001526	0	0	0	0.008	0.004359	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LDT2	Aggregate	Aggregate	Plug-in Hyb	2116.58	94757.71	44376.61	50381.09	8752.056	0.003073	0	0.11551	0.000467	0	0.001672	0.002	0.001383	0.000508	0	0.001819	0.008	0.003953	130.7877	0	75.60584	0.000416	0	0.042233	0.000547	0	0.020569	0.001329	0	0.173285	0.025949	0.023686	0.309385	0.001939	0	0.189725	0.025949	0.023686	0.309385	0.019635	0.202568	0	1.339893	0.001293	0	0.000747
Santa Clara	2024	LHDT1	Aggregate	Aggregate	Gasoline	19314.14	722529.3	722529.3	0	287751.9	0.17374	0.036221	0.636996	0.001534	0	0.000302	0.002	0.0273	0.001668	0	0.000328	0.008	0.078	871.4559	119.0993	25.78022	0.008358	0.112945	0.032997	0.009778	0.002977	0.050968	0.041718	0.415023	0.163611	0.047402	0.263136	2.768514	0.060875	0.605601	0.179134	0.047402	0.263136	2.768514	0.044898	1.142278	3.756209	3.123927	0.008615	0.001177	0.000255
Santa Clara	2024	LHDT1	Aggregate	Aggregate	Diesel	10107.74	398004.1	398004.1	0	127142.6	1.563015	1.92168	0	0.035058	0.026804	0	0.003	0.0273	0.036643	0.028016	0	0.012	0.078	631.4008	131.1503	0	0.008006	0.005098	0	0.099477	0.020663	0	0.172364	0.10976	0	0	0	0	0.196225	0.124954	0	0	0	0	0	0.172781	0.473594	0.909745	0	0.005983	0.001243	0
Santa Clara	2024	LHDT1	Aggregate	Aggregate	Electricity	70.82836	5110.544	0	5110.544	989.4273	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LHDT2	Aggregate	Aggregate	Gasoline	2506.906	91452.57	91452.57	0	37349.16	0.16518	0.035604	0.621534	0.00139	0	0.000239	0.002	0.03185	0.001512	0	0.000259	0.008	0.091	980.0361	137.5922	25.51292	0.006183	0.111453	0.031983	0.009819	0.00291	0.049384	0.028613	0.40822	0.157242	0.04419	0.238167	2.558385	0.041752	0.595674	0.17216	0.04419	0.238167	2.558385	0.044971	0.899209	3.762546	3.129931	0.009689	0.00136	0.000252
Santa Clara	2024	LHDT2	Aggregate	Aggregate	Diesel	4663.455	183558.4	183558.4	0	58660.4	1.266102	1.895403	0	0.032055	0.027	0	0.003	0.03185	0.033504	0.028221	0	0.012	0.091	756.8682	209.5618	0	0.007406	0.005098	0	0.119245	0.033017	0	0.159439	0.10976	0	0	0	0	0.18151	0.124954	0	0	0	0	0	0.184132	0.411861	0.909745	0	0.007172	0.001986	0
Santa Clara	2024	LHDT2	Aggregate	Aggregate	Electricity	18.33259	1253.286	0	1253.286	242.668	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	MCY	Aggregate	Aggregate	Gasoline	28171.51	1660222.3	1660222.3	0	56343.02	0.571344	0	0.135477	0.001779	0	0.003248	0.001	0.0042	0.001902	0	0.003456	0.004	0.012	187.743	0	48.37697	0.162609	0	0.181972	0.039558	0	0.00802	1.062175	0	1.345317	3.559276	3.75283	3.900294	1.276951	0	1.462608	3.559276	3.75283	3.900294	0.008808	12.6697	0	8.002987	0.001856	0	0.000478
Santa Clara	2024	MDV	Aggregate	Aggregate	Gasoline	156642.4	5468054	5468054	0	726101.1	0.101279	0	0.42828	0.001229	0	0.002042	0.002	0.003184	0.001336	0	0.002221	0.008	0.009096	412.8049	0	106.2216	0.003873	0	0.10186	0.007628	0	0.040967	0.01626	0	0.508806	0.097051	0.275722	1.677059	0.023715	0	0.557077	0.097051	0.275722	1.677059	0.036179	0.972241	0	4.022964	0.004081	0	0.00105
Santa Clara	2024	MDV	Aggregate	Aggregate	Diesel	2400.615	86292.69	86292.69	0	11318.82	0.048844	0	0	0.004909	0	0	0.002	0.003206	0.005131	0	0	0.008	0.009159	405.6621	0	0	0.00051	0	0	0.063912	0	0	0.010978	0	0	0	0	0	0.012498	0	0	0	0	0	0.0031	0.201538	0	0	0.003844	0	0
Santa Clara	2024	MDV	Aggregate	Aggregate	Electricity	1678.684	58660.63	0	58660.63	8578.496	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004358	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	MDV	Aggregate	Aggregate	Plug-in Hyb	1250.857	52904.03	25301.52	27602.51	5172.294	0.003138	0	0.11551	0.000561	0	0.001962	0.002	0.001382	0.00061	0	0.002134	0.008	0.003948	133.5372	0	94.06379	0.000423	0	0.042047	0.000554	0	0.020395	0.001357	0	0.173285	0.030318	0.026684	0.341695	0.00198	0	0.189725	0.030318	0.026684	0.341695	0.020087	0.206737	0	1.339893	0.00132	0	0.00093
Santa Clara	2024	MH	Aggregate	Aggregate	Gasoline	2420.57	22012.3	22012.3	0	242.1538	0.420938	0	0.419963	0.001679	0	0.000404	0.003	0.015756	0.001826	0	0.000439	0.012	0.045017	1947.501	0	31.65056	0.015478	0	0.037539	0.025731	0	0.04407	0.06827	0	0.159123	12.21143	0.286769	4.596479	0.09962	0	0.174219	12.21143	0.286769	4.596479	0.044846	1.682224	0	3.497247	0.019253	0	0.000313
Santa Clara	2024	MH	Aggregate	Aggregate	Diesel	977.3606	9498.302	9498.302	0	977.3606	4.117169	0	0	0.091772	0	0	0.004	0.015675	0.095921	0	0	0.016	0.044785	1081.931	0	0	0.005558	0	0	0.170459	0	0	0.11965	0	0	0	0	0	0.136214	0	0	0	0	0	0.155539	0.397281	0	0	0.010252	0	0
Santa Clara	2024	MHDT	Aggregate	Aggregate	Gasoline	1414.552	71600.35	71600.35	0	28302.35	0.470752	0.088485	0.440963	0.001362	0	0.000533	0.003	0.015756	0.001482	0	0.000579	0.012	0.045017	1768.687	531.8002	46.25227	0.015051	0.25808	0.047572	0.022913	0.00727	0.03271	0.074951	1.01271	0.265405	0.033945	0.276365	2.798712	0.109368	1.477744	0.290585	0.033945	0.276365	2.798712	0.04498	1.56073	15.11634	5.825814	0.017485	0.005257	0.000457
Santa Clara	2024	MHDT	Aggregate	Aggregate	Diesel	10390.53	434043.6	434043.6	0	123939	1.232824	13.11952	1.642732	0.014397	0.029902	0	0.003	0.015941	0.015048	0.031254	0	0.012	0.045546	1147.309	2248.547	0	0.001507	0.01158	0	0.180759	0.35426	0	0.032455	0.249319	0	0	0	0	0.036947	0.283831	0	0	0	0	0	0.210532	0.120871	7.556027	0	0.010864	0.021292	0
Santa Clara	2024	MHDT	Aggregate	Aggregate	Electricity	30.91601	1660.353	0	1660.353	407.4536	0	0	0	0	0	0	0.003	0.007956	0	0	0	0.012	0.022732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	MHDT	Aggregate	Aggregate	Natural Ga	90.59449	4303.581	4303.581	0	827.6228	0.133415	6.499719	0	0.001179	0.018131	0	0.003	0.016007	0.001282	0.019719	0	0.012	0.045734	984.6917	5301.101	0	0.74573	17.31409	0	0.200736	1.080664	0	0.010655	0.247384	0	0	0	0	0.761072	17.6703	0	0	0	0	0	1.06	2.995842	34.7393	0	0	0	0
Santa Clara	2024	OBUS	Aggregate	Aggregate	Gasoline	443.1467	19894.31	19894.31	0	8866.48	0.49672	0.06506	0.408547	0.000907	0	0.000252	0.003	0.01568	0.000987	0	0.000274	0.012	0.044799	1764.001	379.4143	31.61308	0.013757	0.195733	0.03606	0.024018	0.005304	0.031028	0.067076	0.746281	0.190964	0.033873	0.154922	2.818385	0.097877	1.088971	0.209081	0.033873	0.154922	2.818385	0.044969	1.491576	5.774637	4.000641	0.017439	0.003751	0.000313
Santa Clara	2024	OBUS	Aggregate	Aggregate	Diesel	893.1376	61949.05	61949.05	0	9141.625	1.178643	7.363387	1.543157	0.019849	0.008167	0	0.003	0.018015	0.020746	0.008536	0	0.012	0.051472	1273.38	1538.564	0	0.001935	0.020479	0	0.200622	0.242401	0	0.04166	0.440905	0	0	0	0	0.047427	0.501937	0	0	0	0	0	0.216021	0.150181	7.500483	0	0.012058	0.014569	0
Santa Clara	2024	OBUS	Aggregate	Aggregate	Electricity	1.087481	92.50105	0	92.50105	21.75833	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	OBUS	Aggregate	Aggregate	Natural Ga	7.05737	469.3876	469.3876	0	62.81059	0.190585	1.537414	0	0.00106	0.003899	0	0.003	0.016148	0.001153	0.004241	0	0.012	0.046137	1004.237	1191.581	0	0.789796	4.236895	0	0.20472	0.242912	0	0.011285	0.060537	0	0	0	0	0.806045	4.324062	0	0	0	0	0	1.06	3.254325	7.353064	0	0	0	0
Santa Clara	2024	SBUS	Aggregate	Aggregate	Gasoline	172.6948	8584.866	8584.866	0	690.7791	0.50288	0.925939	0.716801	0.000864	0	0.000567	0.002	0.015721	0.000939	0	0.000616	0.008	0.044917	810.6064	2589.131	58.1367	0.011135	2.464862	0.074893	0.027101	0.086311	0.065929	0.054059	10.63288	0.426367	0.113914	0.274691	1.686167	0.078883	15.51547	0.466819	0.113914	0.274691	1.686167	0.045	1.38705	82.18841	10.36621	0.008014	0.025596	0.000575
Santa Clara	2024	SBUS	Aggregate	Aggregate	Diesel	670.5958	15345.26	15345.26	0	9710.228	3.821388	21.87689	0.482851	0.019766	0.019703	0	0.003	0.015721	0.02066	0.020594	0	0.012	0.044917	1144.18	2229	0	0.002665	0.008001	0	0.180266	0.35118	0	0.057376	0.172257	0	0	0	0	0.065318	0.196101	0	0	0	0	0	0.148025	0.1775	4.677792	0	0.010835	0.021107	0
Santa Clara	2024	SBUS	Aggregate	Aggregate	Electricity	2.064666	64.35501	0	64.35501	23.64639	0	0	0	0	0	0	0.002539	0.00786	0	0	0	0.010157	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	SBUS	Aggregate	Aggregate	Natural Ga	24.3995	612.0941	612.0941	0	353.3048	0.567729	5.270895	0	0.003378	0.011357	0	0.003	0.015721	0.003674	0.012352	0	0.012	0.044917	1261.305	4066.736	0	3.436672	15.25665	0	0.257125	0.829031	0	0.049103	0.217987	0	0	0	0	3.507376	15.57053	0	0	0	0	0	1.06	11.64901	20.74693	0	0	0	0
Santa Clara	2024	UBUS	Aggregate	Aggregate	Gasoline	46.08313	4812.451	4812.451	0	184.3325	0.027483	0	0.457232	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	926.0836	0	36.94783	0.002034	0	0.043067	0.004288	0	0.071717	0.005634	0	0.152979	0.038099	0.092116	0.456438	0.008221	0	0.167492	0.038099	0.092116	0.456438	0.045	0.581148	0	6.130495	0.009155	0	0.000365
Santa Clara	2024	UBUS	Aggregate	Aggregate	Diesel	437.4745	48917.61	48917.61	0	1749.898	0.386257	0	0	0.007023	0	0	0.0083	0.0385	0.00734	0	0	0.0332	0.11	1101.14	0	0	0.003215	0	0	0.173485	0	0	0.069208	0	0	0	0	0	0.078788	0	0	0	0	0	0.187908	0.079368	0	0	0.010434	0	0
Santa Clara	2024	UBUS	Aggregate	Aggregate	Electricity	5.347565	235.0626	0	235.0626	21.39026	0	0	0	0	0	0	0.008888	0.01925	0	0	0	0.03552	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	UBUS	Aggregate	Aggregate	Natural Ga	42.58696	4865.187	4865.187	0	170.3478	0.058788	0	0	0.000282	0	0	0.008183	0.0385	0.000295	0	0	0.032731	0.11	1299.206	0	0	4.246059	0	0	0.264852	0	0	0.060668	0	0	0	0	0	4.333415	0	0	0	0	0	0.97	49.04786	0	0	0	0	0

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_DIU	PM2.5_TIR	PM2.5_BW	PM10_RUN	PM10_IDL	PM10_STR	PM10_DIU	PM10_TIR	PM10_BW	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
Santa Clara	2025	HHDT	Aggregate	Aggregate	Gasoline	2.330359	124.9448	124.9448	0	0	46.62582	5.556909	0	1.379041	0.003103	0	0.001399	0.005	0.033068	0.003375	0	0.001521	0.02	0.09448	2106.229	0	50.03138	0.207413	0	0.000226	0.167059	0	0.041557	1.222197	0	0.00123	0.140217	1.263022	9.434649	1.783427	0	0.001346	0.140217	1.263022	9.434649	0.043157	47.7242	0	2.001616	0.020822	0	0.000495
Santa Clara	2025	HHDT	Aggregate	Aggregate	Diesel	8692.575	1008964	1008964	0	127877.1	1.825194	60.91449	2.931995	0.025335	0.028938	0	0.008772	0.027421	0.02648	0.030247	0	0.035088	0.078345	1608.776	11755.34	0	0.00075	0.235891	0	0.253463	1.852058	0	0.016139	5.078674	0	0	0	0	0	0.018373	5.781684	0	0	0	0	0	0.215507	0.078083	74.00904	0	0.015234	0.111316	0
Santa Clara	2025	HHDT	Aggregate	Aggregate	Electricity	63.3712	6579.675	0	6579.675	825.9972	0	0	0	0	0	0	0.008551	0.014281	0	0	0	0	0.034206	0.040802	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	HHDT	Aggregate	Aggregate	Natural Ga	832.405	55779.38	55779.38	0	7555.504	1.049864	13.18492	0	0.00168	0.025258	0	0.009	0.048303	0.001827	0.02747	0	0.036	0.138007	1375.94	10529.31	0	2.235928	35.17609	0	0.280494	2.146469	0	0.047235	0.530122	0	0	0	0	0	0.299347	35.93114	0	0	0	0	0	0.843784	13.01274	74.75478	0	0	0	0
Santa Clara	2025	LDA	Aggregate	Aggregate	Gasoline	598860.3	22133915	22133915	0	2780384	0.038209	0	0.245539	0.001142	0	0.00188	0.002	0.002655	0.001242	0	0.002044	0.008	0.007587	270.1738	0	68.47346	0.002117	0	0.067825	0.004408	0	0.032293	0.007947	0	0.306311	0.087189	0.224301	1.384954	0.011596	0	0.335372	0.087189	0.224301	1.384954	0.035611	0.6952	0	3.049452	0.002671	0	0.000677
Santa Clara	2025	LDA	Aggregate	Aggregate	Diesel	1620.04	46912.85	46912.85	0	6871.193	0.18842	0	0	0.015236	0	0	0.002	0.002712	0.015925	0	0	0.008	0.007748	229.9477	0	0	0.001193	0	0	0.036228	0	0	0.025693	0	0	0	0	0	0	0.02925	0	0	0	0	0	0.0031	0.319914	0	0	0.002179	0	0
Santa Clara	2025	LDA	Aggregate	Aggregate	Electricity	61443.19	2670452	0	2670452	299852.7	0	0	0	0	0	0	0.002	0.001534	0	0	0	0.008	0.004382	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LDA	Aggregate	Aggregate	Plug-in Hyb	19037.66	825567.7	401013	424554.8	78720.74	0.003187	0	0.11551	0.000578	0	0.001985	0.002	0.001382	0.000629	0	0.002159	0.008	0.003948	135.5854	0	64.10836	0.000432	0	0.042249	0.000569	0	0.020584	0.001378	0	0.173285	0.041164	0.03735	0.440525	0.002011	0	0.189725	0.041164	0.03735	0.440525	0.019241	0.209757	0	1.339893	0.00134	0	0.000634
Santa Clara	2025	LDT1	Aggregate	Aggregate	Gasoline	51680.86	1664706	1664706	0	230186	0.115355	0	0.35972	0.001639	0	0.002543	0.002	0.003241	0.001782	0	0.002766	0.008	0.00926	321.489	0	84.45547	0.005621	0	0.098552	0.008687	0	0.037511	0.02471	0	0.498818	0.156963	0.442299	2.52236	0.038056	0	0.546143	0.156963	0.442299	2.52236	0.036453	1.317416	0	4.886115	0.003178	0	0.000835
Santa Clara	2025	LDT1	Aggregate	Aggregate	Diesel	21.28272	302.8258	302.8258	0	59.13231	1.64381	0	0	0.238169	0	0	0.002	0.00372	0.248938	0	0	0.008	0.010628	414.9442	0	0	0.013797	0	0	0.065375	0	0	0.297038	0	0	0	0	0	0	0.338158	0	0	0	0	0	0.0031	1.585068	0	0	0.003932	0	0
Santa Clara	2025	LDT1	Aggregate	Aggregate	Electricity	234.4578	9323.704	0	9323.704	1109.796	0	0	0	0	0	0	0.002	0.001537	0	0	0	0.008	0.004392	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LDT1	Aggregate	Aggregate	Plug-in Hyb	98.13198	4519.182	1961.286	2557.896	405.7758	0.002848	0	0.11551	0.000353	0	0.001365	0.002	0.001394	0.000383	0	0.001485	0.008	0.003982	121.222	0	67.75681	0.000383	0	0.041987	0.000501	0	0.020339	0.001231	0	0.173285	0.023895	0.020384	0.276746	0.001797	0	0.189725	0.023895	0.020384	0.276746	0.018228	0.187824	0	1.339893	0.001198	0	0.00067
Santa Clara	2025	LDT2	Aggregate	Aggregate	Gasoline	290874.7	10447706	10447706	0	1360241	0.06257	0	0.314364	0.001192	0	0.001919	0.002	0.00313	0.001296	0	0.002087	0.008	0.008944	332.1841	0	85.06833	0.002642	0	0.078494	0.005588	0	0.036037	0.010244	0	0.360071	0.079452	0.214938	1.349256	0.014949	0	0.394233	0.079452	0.214938	1.349256	0.03712	0.795621	0	3.47417	0.003284	0	0.000841
Santa Clara	2025	LDT2	Aggregate	Aggregate	Diesel	1049.952	38652.34	38652.34	0	4980.34	0.039332	0	0	0.004727	0	0	0.002	0.003123	0.004941	0	0	0.008	0.008921	301.0055	0	0	0.000603	0	0	0.047424	0	0	0.01298	0	0	0	0	0	0	0.014777	0	0	0	0	0	0.0031	0.129797	0	0	0.002852	0	0
Santa Clara	2025	LDT2	Aggregate	Aggregate	Electricity	2157.059	73663.77	0	73663.77	10962.38	0	0	0	0	0	0	0.002	0.001527	0	0	0	0.008	0.004362	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LDT2	Aggregate	Aggregate	Plug-in Hyb	2561.885	112327.2	51267.44	61059.78	10593.4	0.002995	0	0.11551	0.000438	0	0.00161	0.002	0.001388	0.000477	0	0.001751	0.008	0.003967	127.4509	0	74.14084	0.000403	0	0.041992	0.000528	0	0.020344	0.001295	0	0.173285	0.026071	0.023359	0.305362	0.001893	0	0.189725	0.026071	0.023359	0.305362	0.019143	0.197358	0	1.339893	0.00126	0	0.000733
Santa Clara	2025	LHDT1	Aggregate	Aggregate	Gasoline	19422.46	728337	728337	0	289365.8	0.152112	0.035118	0.61458	0.001478	0	0.000276	0.002	0.0273	0.001607	0	0.0003	0.008	0.078	855.4024	117.9783	25.70715	0.007214	0.110329	0.031611	0.008613	0.002941	0.049929	0.03557	0.40247	0.15588	0.044275	0.247775	2.616411	0.051904	0.587284	0.170669	0.044275	0.247775	2.616411	0.044934	1.05316	3.759094	3.16195	0.008457	0.001166	0.000254
Santa Clara	2025	LHDT1	Aggregate	Aggregate	Diesel	10387.1	408019.3	408019.3	0	130656.7	1.379237	1.823414	0	0.032347	0.026692	0	0.003	0.0273	0.03381	0.027899	0	0.012	0.078	628.07	129.5472	0	0.007468	0.005098	0	0.098953	0.02041	0	0.160779	0.10976	0	0	0	0	0	0.183036	0.124954	0	0	0	0	0	0.17898	0.435087	0.909745	0	0.005951	0.001228	0
Santa Clara	2025	LHDT1	Aggregate	Aggregate	Electricity	196.402	13079.06	0	13079.06	2746.629	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LHDT2	Aggregate	Aggregate	Gasoline	2512.652	91345.05	91345.05	0	37434.78	0.146187	0.034452	0.600885	0.001346	0	0.00022	0.002	0.03185	0.001464	0	0.000239	0.008	0.091	964.5764	136.4471	25.31105	0.005467	0.108422	0.030581	0.008804	0.002854	0.048245	0.025115	0.395081	0.149459	0.041982	0.228581	2.471298	0.036648	0.576501	0.163639	0.041982	0.228581	2.471298	0.044974	0.850878	3.765161	3.139903	0.009536	0.001349	0.00025
Santa Clara	2025	LHDT2	Aggregate	Aggregate	Diesel	4837.236	188645	188645	0	60846.34	1.139289	1.802658	0	0.030296	0.027005	0	0.003	0.03185	0.031666	0.028226	0	0.012	0.091	750.3571	207.2396	0	0.007043	0.005098	0	0.118219	0.032651	0	0.151622	0.10976	0	0	0	0	0	0.172612	0.124954	0	0	0	0	0	0.188496	0.387904	0.909745	0	0.00711	0.001964	0
Santa Clara	2025	LHDT2	Aggregate	Aggregate	Electricity	50.46202	3193.251	0	3193.251	669.175	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	MCY	Aggregate	Aggregate	Gasoline	28484.89	166414.5	166414.5	0	56969.79	0.557882	0	0.129146	0.001799	0	0.003253	0.001	0.0042	0.001925	0	0.003464	0.004	0.012	187.2679	0	47.30784	0.158292	0	0.177199	0.038984	0	0.007691	1.024683	0	1.305157	3.558651	3.760078	3.860886	1.236542	0	1.419098	3.558651	3.760078	3.860886	0.008851	12.31202	0	7.965438	0.001851	0	0.000468
Santa Clara	2025	MDV	Aggregate	Aggregate	Gasoline	159532.2	5551044	5551044	0	739781.4	0.087905	0	0.391886	0.001179	0	0.001962	0.002	0.003182	0.001282	0	0.002134	0.008	0.009091	402.7635	0	103.4378	0.003431	0	0.094137	0.006921	0	0.039073	0.014165	0	0.463643	0.092515	0.265086	1.620407	0.020668	0	0.50763	0.092515	0.265086	1.620407	0.036883	0.895922	0	3.753621	0.003982	0	0.001023
Santa Clara	2025	MDV	Aggregate	Aggregate	Diesel	2421.364	85326.8	85326.8	0	11351.14	0.044948	0	0	0.004686	0	0	0.002	0.003225	0.004898	0	0	0.008	0.009216	399.4952	0	0	0.000492	0	0	0.062941	0	0	0.010592	0	0	0	0	0	0	0.012058	0	0	0	0	0	0.0031	0.199936	0	0	0.003785	0	0
Santa Clara	2025	MDV	Aggregate	Aggregate	Electricity	2274.547	77934.96	0	77934.96	11571.06	0	0	0	0	0	0	0.002	0.001526	0	0	0	0.008	0.004361	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	MDV	Aggregate	Aggregate	Plug-in Hyb	1542.366	64484.39	29833.21	34651.18	6377.683	0.003036	0	0.11551	0.000507	0	0.00183	0.002	0.001388	0.000551	0	0.00199	0.008	0.003965	129.1743	0	91.64114	0.000407	0	0.041816	0.00053	0	0.02018	0.001313	0	0.173285	0.02949	0.025333	0.327899	0.001916	0	0.189725	0.02949	0.025333	0.327899	0.019431	0.199968	0	1.339893	0.001277	0	0.000906
Santa Clara	2025	MH	Aggregate	Aggregate	Gasoline	2337.876	21506.19	21506.19	0	233.8812	0.37652	0	0.425905	0.001612	0	0.000388	0.003	0.015756	0.001753	0	0.000422	0.012	0.045017	1947.057	0	31.4529	0.013722	0	0.036945	0.023864	0	0.045303	0.059455	0	0.154277	11.38549	0.268831	4.357209	0.086757	0	0.168914	11.38549	0.268831	4.357209	0.044879	1.426924	0	3.382931	0.019249	0	0.000311
Santa Clara	2025	MH	Aggregate	Aggregate	Diesel	994.5437	9603.893	9603.893	0	99.45437	3.976372	0	0	0.086098	0	0	0.004	0.015675	0.08999	0	0	0.016	0.044785	1082.401	0	0	0.005421	0	0	0.170533	0	0	0.116701	0	0	0	0	0	0	0.132856	0	0	0	0	0	0.160635	0.385118	0	0	0.010256	0	0
Santa Clara	2025	MHDT	Aggregate	Aggregate	Gasoline	1412.263	72039.87	72039.87	0	28256.55	0.394798	0.086175	0.424333	0.001347	0	0.000513	0.003	0.015756	0.001465	0	0.000558	0.012	0.045017	1746.959	526.7233	45.37618	0.012585	0.261076	0.04598	0.019987	0.007219	0.032398	0.061949	1.015127	0.253154	0.030988	0.250472	2.558011	0.090397	1.481271	0.277172	0.030988	0.250472	2.558011	0.044991	1.276089	15.1444	5.531626	0.01727	0.005207	0.000449
Santa Clara	2025	MHDT	Aggregate	Aggregate	Diesel	10548.06	435100.6	435100.6	0	125915.2	1.128155	12.48973	1.646559	0.012461	0.024792	0	0.003	0.015941	0.013024	0.025912	0	0.012	0.045545	1141.328	2229.374	0	0.00131	0.010957	0	0.179817	0.351239	0	0.028195	0.235896	0	0	0	0	0	0.032098	0.268549	0	0	0	0	0	0.211891	0.109646	7.535393	0	0.010808	0.021111	0
Santa Clara	2025	MHDT	Aggregate	Aggregate	Electricity	90.80851	4838.906	0	4838.906	1182.343	0	0	0	0	0	0	0.003	0.007951	0	0	0	0.012	0.022718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	MHDT	Aggregate	Aggregate	Natural Ga	98.90628	4590.307	4590.307	0	911.9208	0.12435	6.45266	0	0.002126	0.018594	0	0.003	0.016009	0.001333	0.020223	0	0.012	0.045741	979.0142	5290.545	0	0.751438	16.97256	0	0.199578	1.078512	0	0.010737	0.242504	0	0	0	0	0	0.766898	17.32175	0	0	0	0	0	1.06	2.996166	35.80775	0	0	0	0
Santa Clara	2025	OBUS	Aggregate	Aggregate	Gasoline	430.7023	18962.49	18962.49	0	8617.491	0.460353	0.06398	0.405045	0.000939	0	0.000255	0.003	0.01568	0.001022	0	0.000278	0.012	0.044799	1744.286	377.0226	31.37018	0.012641	0.195762	0.035581	0.02242	0.005219	0.030806	0.061504	0.74652	0.188569	0.033827	0.158433	2.881145	0.089747	1.089321	0.206459	0.033827	0.158433	2.881145	0.04498	1.352776	5.776073	3.953891	0.017244	0.003727	0.00031
Santa Clara	2025	OBUS	Aggregate	Aggregate	Diesel	921.4116	62304.89	62304.89	0	9451.527	1.133246	7.151668	1.532624	0.018916	0.007596	0	0.003	0.018017	0.019772	0.007939	0	0.012	0.051478	1259.126	1532.11	0	0.001844	0.020685	0	0.198376	0.241385	0	0.039711	0.445333	0	0	0	0	0	0.045208	0.506978	0	0	0	0	0	0.216212	0.14449	7.587325	0	0.011923	0.014508	0
Santa Clara	2025	OBUS	Aggregate	Aggregate	Electricity	2.672031	221.771	0	221.771	53.46199	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	OBUS	Aggregate	Aggregate	Natural Ga	8.125306	537.7468	537.7468	0	72.31523	0.164816	1.526623	0	0.001183	0.004157	0	0.003	0.016148	0.001287	0.004521	0	0.012	0.046137	987.912	1189.826	0	0.803903	4.103659	0	0.201392	0.242554	0	0.011486	0.058633	0	0	0	0	0	0.820442	4.188085	0	0	0	0	0	1.06	3.29233	7.933419	0	0	0	0
Santa Clara	2025	SBUS	Aggregate	Aggregate	Gasoline	178.2436	8812.851	8812.851	0	712.9742	0.487257	0.905562	0.722985	0.000866	0	0.000573	0.002	0.015721	0.000942	0	0.000623	0.008	0.044917	806.3455	2576.863	57.67146	0.010523	2.465929	0.074733	0.026439	0.084425	0.066434	0.051046	10.63602	0.42511	0.118631	0.292211	1.797789	0.074486	15.52005	0.465442	0.118631	0.292211	1.797789	0.045	1.308927	82.20747	10.20511	0.007972	0.025475	0.00057
Santa Clara	2025	SBUS	Aggregate	Aggregate	Diesel	673.2048	15283.75	15283.75	0	9748.005	3.614242	21.25646	0.496308	0.018677	0.018235	0	0.003	0.015721	0.019521	0.019059	0	0.012	0.044917	1139.829	2219.616	0	0.002583	0.007936	0	0.179581	0.349701	0	0.055601	0.170862	0	0	0	0	0	0.063298	0.194514	0	0	0	0	0	0.151888	0.17348	4.777291	0	0.010794	0.021018	0
Santa Clara	2025	SBUS	Aggregate	Aggregate	Electricity	4.481168	145.0761	0	145.0761	51.24766	0	0	0	0	0	0	0.002	0.002556	0.00786	0	0	0	0.010226	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	SBUS	Aggregate	Aggregate	Natural Ga	25.28439	627.586	627.586	0	366.118	0.5494	5.260001	0	0.003378	0.011617	0	0.003	0.015721	0.003674	0.012635	0	0.012	0.044917	1252.115	4074.049	0	3.386209	15.12215	0	0.255252	0.830522	0	0.048382	0.216066	0	0	0	0	0	3.455875	15.43326	0	0	0	0	0	1.06	11.41153	21.33281	0	0	0	0
Santa Clara	2025	UBUS	Aggregate	Aggregate	Gasoline	46.21918	4826.658	4826.658	0	184.8767	0.027276	0	0.449893	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	925.8676	0	36.64281	0.001993	0	0.043054	0.004259	0	0.070843	0.005515	0	0.152699	0.04366	0.092112	0.471505	0.008047	0	0.167186	0.04366	0.092112	0.471505	0.045	0.586139	0	5.942314	0.009153	0	0.000362
Santa Clara	2025	UBUS	Aggregate	Aggregate	Diesel	405.3675	44987.37	44987.37	0	1621.47	0.382968	0	0	0.006962	0	0	0.008	0.03238	0.0385	0.007277	0	0	0.032951	0.11	1121.875	0	0	0.003193	0	0	0.176752	0	0	0.06875	0	0	0	0	0	0.078266	0	0	0	0	0	0.22	0.0787	0	0	0.01063	0	0
Santa Clara	2025	UBUS	Aggregate	Aggregate	Electricity	23.31202	2427.54	0	2427.54	93.24809	0	0	0	0	0	0	0.008977	0.01925	0	0	0	0	0.035907	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	UBUS	Aggregate	Aggregate	Natural Ga	58.16247	6762.418	6762.418	0	232.6499	0.060506	0	0	0.000287	0	0	0.008408	0.0385	0.0003	0	0	0	0.033634	0.11	1317.877	0	0	4.320397	0	0	0.268658	0	0	0.06173	0	0	0	0	0	4.409282	0	0	0	0	0	0.97	50.3461	0	0	0	0	0

Attachment 4: Project Construction Emissions and Health Risk Calculations

1207 N Capitol Ave Daycare, San Jose, CA

DPM Emissions and Modeling Emission Rates - Uncontrolled

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 ($g/s/m^2$)
2024	Construction	0.0269	DPM	53.7	0.02296	2.89E-03	5,953	**4.86E-07**

Modeled Operation Hours

hr/day = 9 (7am - 4pm Mon-Fri)

days/yr = 260

hours/year = 2340

1207 N Capitol Ave Daycare, San Jose, CA

PM2.5 Fugitive Dust Emissions for Modeling - Uncontrolled

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 $g/s/m^2$
2024	Construction	FUG	0.0263	52.6	0.02246	2.83E-03	5,953	**4.75E-07**

Modeled Operation Hours

hr/day = 9 (7am - 4pm Mon-Fri)

days/yr = 260

hours/year = 2340

DPM Construction Emissions and Modeling Emission Rates - With Controls

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 ($g/s/m^2$)
2024	Construction	0.0079	DPM	15.9	0.00679	8.55E-04	5,953	**1.44E-07**

Modeled Operation Hours

hr/day =	9	(7am - 4pm Mon-Fri)
days/yr =	260	
hours/year =	2340	

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

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 $g/s/m^2$
2024	Construction	FUG	0.0119	23.8	0.01015	1.28E-03	5,953	**2.15E-07**

Modeled Operation Hours

hr/day =	9	(7am - 4pm Mon-Fri)
days/yr =	260	
hours/year =	2340	

1207 N Capitol Ave Daycare, San Jose, CA
Construction Health Impacts Summary

Maximum Impacts at Residential Construction MEI Location - Uncontrolled

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 ($\mu g/m^3$)
2024	0.0937	0.1538	15.39	0.27	0.019	0.23

Note:
The maximum cancer risk and PM2.5 concentration occur at the same receptor location, but at different floor levels.
Maximum cancer risk occurs at the second floor level (4.5 meter receptor height)
Maximum PM2.5 concentration occurs at the first floor level (1.5 meter receptor height)

Maximum Impacts at Residential Construction MEI Location - With Controls

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 ($\mu g/m^3$)
2024	0.0278	0.0696	4.56	0.08	0.006	0.09

Note:
The maximum cancer risk and PM2.5 concentration occur at the same receptor location, but at different floor levels.
Maximum cancer risk occurs at the second floor level (4.5 meter receptor height)
Maximum PM2.5 concentration occurs at the first floor level (1.5 meter receptor height)

1207 N Capitol Ave Daycare, San Jose, CA - Uncontrolled Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors-1.5 meter receptor height

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

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

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information					
							Modeled					
Exposure Year	**Exposure Duration (years)**	**Age**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Infant/Child Cancer Risk (per million)**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Adult Cancer Risk (per million)**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	-	0.0000	10	0.00	-	-	-	-		
1	1	0 - 1	2024	0.0753	10	12.37	2022	0.0753	1	0.22	0.1538	0.229
2	1	1 - 2		0.0000	10	0.00		0.0000	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						**12.37**				**0.22**		

* Third trimester of pregnancy

1207 N Capitol Ave Daycare, San Jose, CA - Uncontrolled Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors- 4.5 meter receptor height

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

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

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information					
							Modeled					
Exposure Year	**Exposure Duration (years)**	**Age**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Infant/Child Cancer Risk (per million)**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Adult Cancer Risk (per million)**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	-	0.0000	10	0.00	-	-	-	-		
1	1	0 - 1	2024	0.0937	10	15.39	2024	0.0937	1	0.27	0.0989	0.193
2	1	1 - 2		0.0000	10	0.00		0.0000	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						**15.39**				**0.269**		

* Third trimester of pregnancy

1207 N Capitol Ave Daycare, San Jose, CA - Controlled Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors-1.5 meter receptor height

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

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

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult		
				DPM Conc (ug/m3)	Age	Cancer	Modeled		Age	Cancer		
Exposure Year	Exposure Duration (years)	Age	Year	Annual	Sensitivity Factor	Risk (per million)	DPM Conc (ug/m3) Year	Annual	Sensitivity Factor	Risk (per million)	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	-	0.0000	10	0.00	-	-	-	-		
1	1	0 - 1	2024	0.0223	10	3.67	2024	0.0223	1	0.06	0.0696	0.092
2	1	1 - 2		0.0000	10	0.00		0.0000	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						**3.67**				**0.06**		

* Third trimester of pregnancy

1207 N Capitol Ave Daycare, San Jose, CA - Controlled Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors- 4.5 meter receptor height

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

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

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult		
				DPM Conc (ug/m3)	Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer		
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	-	0.0000	10	0.00	-	-	-	-		
1	1	0 - 1	2024	0.0278	10	4.56	2024	0.0278	1	0.08	0.0447	0.073
2	1	1 - 2		0.0000	10	0.00		0.0000	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						**4.56**				**0.08**		

* Third trimester of pregnancy

Attachment 5: Community Risk Modeling Information and Calculations

I-680 Emission Calculations

File Name:	Santa Clara (SF) - 2025 - Annual I-680 Trucksl.EF
CT-EMFAC2017 Version:	1.0.2.27401
Run Date:	9/22/2022 3:19
Area:	Santa Clara (SF)
Analysis Year:	2025
Season:	Annual

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.018	0.502	0.498
Truck 2	0.036	0.936	0.048
Non-Truck	0.946	0.015	0.951

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	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph
PM2.5	0.00857	0.0056	0.003816	0.002744	0.002099	0.001715	0.001502	0.001409	0.001409	0.001487	0.00164	0.001867	0.00218	0.002275
TOG	0.175195	0.115197	0.077195	0.054531	0.041281	0.032962	0.02761	0.024252	0.022343	0.021599	0.021923	0.023408	0.026275	0.028379
Diesel PM	0.001011	0.000839	0.000653	0.000527	0.000461	0.00044	0.000455	0.000504	0.000584	0.000696	0.000838	0.001007	0.00120	0.00120
DEOG	0.014858	0.010603	0.005651	0.002945	0.00209	0.001666	0.001377	0.001184	0.001069	0.001022	0.001036	0.001106	0.001216	0.001334

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

Pollutant Name	Emission Factor
TOG	1.245523

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

Pollutant Name	Emission Factor
PM2.5	0.002185

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

Pollutant Name	Emission Factor
PM2.5	0.017198

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

Pollutant Name	Emission Factor
PM2.5	0.008354

END

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Interstate 680 Traffic
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NB680	Northbound I-680	SE-NW	3	764	0.47	17.0	55.7	3.4	variable	79,800
DPM_SB680	Southbound I-680	NW-SE	3	729	0.45	17.0	55.7	3.4	variable	79,800
										159,600

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	55	20
Emissions per Vehicle (g/VMT)	0.00120	0.00101	0.00084	0.000527

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and DPM Emissions - DPM_NB680

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.93%	3139	4.97E-04	9	6.41%	5112	5.65E-04	17	5.55%	4429	5.88E-04
2	2.62%	2093	3.31E-04	10	7.36%	5877	9.30E-04	18	3.16%	2519	3.34E-04
3	2.85%	2275	3.60E-04	11	6.34%	5058	8.00E-04	19	2.36%	1882	2.98E-04
4	3.31%	2639	4.17E-04	12	6.92%	5521	8.73E-04	20	0.87%	691	1.09E-04
5	2.17%	1729	2.73E-04	13	6.29%	5021	7.94E-04	21	3.09%	2465	3.90E-04
6	3.36%	2684	4.25E-04	14	6.23%	4975	7.87E-04	22	4.12%	3284	5.19E-04
7	6.00%	4785	7.57E-04	15	5.15%	4111	6.50E-04	23	2.58%	2055	3.25E-04
8	4.58%	3656	4.04E-04	16	3.84%	3064	4.85E-04	24	0.92%	736	1.16E-04
								Total		79,800	

2025 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB680

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.93%	3139	4.74E-04	9	6.41%	5112	6.47E-04	17	5.55%	4429	2.94E-04
2	2.62%	2093	3.16E-04	10	7.36%	5877	8.87E-04	18	3.16%	2519	1.67E-04
3	2.85%	2275	3.43E-04	11	6.34%	5058	7.63E-04	19	2.36%	1882	2.84E-04
4	3.31%	2639	3.98E-04	12	6.92%	5521	8.33E-04	20	0.87%	691	1.04E-04
5	2.17%	1729	2.61E-04	13	6.29%	5021	7.58E-04	21	3.09%	2465	3.72E-04
6	3.36%	2684	4.05E-04	14	6.23%	4975	7.51E-04	22	4.12%	3284	4.96E-04
7	6.00%	4785	7.22E-04	15	5.15%	4111	6.21E-04	23	2.58%	2055	3.10E-04
8	4.58%	3656	4.63E-04	16	3.84%	3064	4.63E-04	24	0.92%	736	1.11E-04
								Total		79,800	

Analysis Year = ***2025***

Vehicle Type	2020 Caltrans Vehicles (veh/day)	2025 Vehicles (veh/day)
Truck 1 (MDT)	2,783	2,922
Truck 2 (HDT)	5,425	5,697
Non-Truck	143,792	150,982
All	**152,000**	**159,600**

Increase From 2020 1.05
Vehicles/Direction **79,800**
Avg Vehicles/Hour/Direction 3,325

Traffic Data Year = ***2020***

2020 Caltrans Truck AADT (% trucks) and 2020 Caltrans Traffic Volumes	AADT Total	Total Truck	Trucks by Axle 2	3	4	5
I-680	152,000	8,208	2,783	903	517	4,006
			33.90%	11.00%	6.30%	48.80%
	Percent of Total Vehicles	5.40%	1.83%	0.59%	0.34%	2.64%

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

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Interstate 680 Traffic
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2025

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
PM25_NB680	Northbound I-680	SE-NW	3	764	0.47	17.0	56	1.3	variable	79,800
PM25_SB680	Southbound I-680	NW-SE	3	729	0.45	17.0	56	1.3	variable	79,800
									Total	159,600

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	55	20
Emissions per Vehicle (g/VMT)	0.00218	0.00187	0.00164	0.00274

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and PM2.5 Emissions - PM25_NB680

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	917	2.64E-04	9	7.11%	5677	1.23E-03	17	7.39%	5896	1.45E-03
2	0.42%	337	9.67E-05	10	4.39%	3501	1.01E-03	18	8.18%	6525	1.61E-03
3	0.41%	326	9.36E-05	11	4.66%	3720	1.07E-03	19	5.69%	4544	1.31E-03
4	0.26%	207	5.96E-05	12	5.89%	4698	1.35E-03	20	4.28%	3412	9.80E-04
5	0.50%	396	1.14E-04	13	6.15%	4908	1.41E-03	21	3.25%	2597	7.46E-04
6	0.91%	724	2.08E-04	14	6.04%	4819	1.38E-03	22	3.30%	2631	7.56E-04
7	3.79%	3023	8.69E-04	15	7.01%	5595	1.61E-03	23	2.46%	1964	5.64E-04
8	7.77%	6198	1.34E-03	16	7.14%	5698	1.64E-03	24	1.86%	1488	4.27E-04
								Total		79,800	

2025 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_SB680

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	917	2.52E-04	9	7.11%	5677	1.33E-03	17	7.39%	5896	2.04E-03
2	0.42%	337	9.23E-05	10	4.39%	3501	9.60E-04	18	8.18%	6525	2.25E-03
3	0.41%	326	8.93E-05	11	4.66%	3720	1.02E-03	19	5.69%	4544	1.25E-03
4	0.26%	207	5.69E-05	12	5.89%	4698	1.29E-03	20	4.28%	3412	9.35E-04
5	0.50%	396	1.09E-04	13	6.15%	4908	1.35E-03	21	3.25%	2597	7.12E-04
6	0.91%	724	1.98E-04	14	6.04%	4819	1.32E-03	22	3.30%	2631	7.21E-04
7	3.79%	3023	8.29E-04	15	7.01%	5595	1.53E-03	23	2.46%	1964	5.39E-04
8	7.77%	6198	1.46E-03	16	7.14%	5698	1.56E-03	24	1.86%	1488	4.08E-04
								Total		79,800	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Interstate 680 Traffic
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NB680	Northbound I-680	SE-NW	3	764	0.47	17.0	56	1.3	variable	79,800
TEXH_SB680	Southbound I-680	NW-SE	3	729	0.45	17.0	56	1.3	variable	79,800
									Total	159,600

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	55	20
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.02628	0.02341	0.02192	0.05453
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00122	0.00111	0.001036	0.00295
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02506	0.02230	0.02089	0.05159

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB680

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	917	3.03E-03	9	7.11%	5677	1.56E-02	17	7.39%	5896	1.73E-02
2	0.42%	337	1.11E-03	10	4.39%	3501	1.16E-02	18	8.18%	6525	1.92E-02
3	0.41%	326	1.08E-03	11	4.66%	3720	1.23E-02	19	5.69%	4544	1.50E-02
4	0.26%	207	6.85E-04	12	5.89%	4698	1.55E-02	20	4.28%	3412	1.13E-02
5	0.50%	396	1.31E-03	13	6.15%	4908	1.62E-02	21	3.25%	2597	8.58E-03
6	0.91%	724	2.39E-03	14	6.04%	4819	1.59E-02	22	3.30%	2631	8.69E-03
7	3.79%	3023	9.98E-03	15	7.01%	5595	1.85E-02	23	2.46%	1964	6.49E-03
8	7.77%	6198	1.71E-02	16	7.14%	5698	1.88E-02	24	1.86%	1488	4.91E-03
								Total		79,800	

2025 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB680

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	917	2.89E-03	9	7.11%	5677	1.59E-02	17	7.39%	5896	3.83E-02
2	0.42%	337	1.06E-03	10	4.39%	3501	1.10E-02	18	8.18%	6525	4.23E-02
3	0.41%	326	1.03E-03	11	4.66%	3720	1.17E-02	19	5.69%	4544	1.43E-02
4	0.26%	207	6.54E-04	12	5.89%	4698	1.48E-02	20	4.28%	3412	1.08E-02
5	0.50%	396	1.25E-03	13	6.15%	4908	1.55E-02	21	3.25%	2597	8.19E-03
6	0.91%	724	2.28E-03	14	6.04%	4819	1.52E-02	22	3.30%	2631	8.29E-03
7	3.79%	3023	9.53E-03	15	7.01%	5595	1.76E-02	23	2.46%	1964	6.19E-03
8	7.77%	6198	1.74E-02	16	7.14%	5698	1.80E-02	24	1.86%	1488	4.69E-03
								Total		79,800	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Interstate 680 Traffic
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NB680	Northbound I-680	SE-NW	3	764	0.47	17.0	56	1.3	variable	79,800
TEVAP_SB680	Southbound I-680	NW-SE	3	729	0.45	17.0	56	1.3	variable	79,800
									Total	159,600

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	55	20
Emissions per Vehicle per Hour (g/hour)	1.24552	1.24552	1.24552	1.24552
Emissions per Vehicle per Mile (g/VMT)	0.01916	0.02076	0.02265	0.06228

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB680

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	917	2.32E-03	9	7.11%	5677	1.69E-02	17	7.39%	5896	1.61E-02
2	0.42%	337	8.50E-04	10	4.39%	3501	8.84E-03	18	8.18%	6525	1.79E-02
3	0.41%	326	8.23E-04	11	4.66%	3720	9.40E-03	19	5.69%	4544	1.15E-02
4	0.26%	207	5.24E-04	12	5.89%	4698	1.19E-02	20	4.28%	3412	8.62E-03
5	0.50%	396	1.00E-03	13	6.15%	4908	1.24E-02	21	3.25%	2597	6.56E-03
6	0.91%	724	1.83E-03	14	6.04%	4819	1.22E-02	22	3.30%	2631	6.65E-03
7	3.79%	3023	7.64E-03	15	7.01%	5595	1.41E-02	23	2.46%	1964	4.96E-03
8	7.77%	6198	1.85E-02	16	7.14%	5698	1.44E-02	24	1.86%	1488	3.76E-03
								Total		79,800	

2025 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB680

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	917	2.21E-03	9	7.11%	5677	1.48E-02	17	7.39%	5896	4.62E-02
2	0.42%	337	8.11E-04	10	4.39%	3501	8.44E-03	18	8.18%	6525	5.11E-02
3	0.41%	326	7.85E-04	11	4.66%	3720	8.97E-03	19	5.69%	4544	1.10E-02
4	0.26%	207	5.00E-04	12	5.89%	4698	1.13E-02	20	4.28%	3412	8.22E-03
5	0.50%	396	9.56E-04	13	6.15%	4908	1.18E-02	21	3.25%	2597	6.26E-03
6	0.91%	724	1.74E-03	14	6.04%	4819	1.16E-02	22	3.30%	2631	6.34E-03
7	3.79%	3023	7.29E-03	15	7.01%	5595	1.35E-02	23	2.46%	1964	4.73E-03
8	7.77%	6198	1.62E-02	16	7.14%	5698	1.37E-02	24	1.86%	1488	3.59E-03
								Total		79,800	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Interstate 680 Traffic
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NB680	Northbound I-680	SE-NW	3	764	0.47	17.0	56	1.3	variable	79,800
FUG_SB680	Southbound I-680	NW-SE	3	729	0.45	17.0	56	1.3	variable	79,800
									Total	159,600

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	55	20
Tire Wear - Emissions per Vehicle (g/VMT)	0.00219	0.00219	0.00219	0.00219
Brake Wear - Emissions per Vehicle (g/VMT)	0.01720	0.01720	0.01720	0.01720
Road Dust - Emissions per Vehicle (g/VMT)	0.00835	0.00835	0.00835	0.00835
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02774	0.02774	0.02774	0.02774

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB680

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	917	3.35E-03	9	7.11%	5677	2.08E-02	17	7.39%	5896	2.16E-02
2	0.42%	337	1.23E-03	10	4.39%	3501	1.28E-02	18	8.18%	6525	2.39E-02
3	0.41%	326	1.19E-03	11	4.66%	3720	1.36E-02	19	5.69%	4544	1.66E-02
4	0.26%	207	7.59E-04	12	5.89%	4698	1.72E-02	20	4.28%	3412	1.25E-02
5	0.50%	396	1.45E-03	13	6.15%	4908	1.79E-02	21	3.25%	2597	9.50E-03
6	0.91%	724	2.65E-03	14	6.04%	4819	1.76E-02	22	3.30%	2631	9.62E-03
7	3.79%	3023	1.11E-02	15	7.01%	5595	2.05E-02	23	2.46%	1964	7.18E-03
8	7.77%	6198	2.27E-02	16	7.14%	5698	2.08E-02	24	1.86%	1488	5.44E-03
								Total		79,800	

2025 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB680

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	917	3.20E-03	9	7.11%	5677	1.98E-02	17	7.39%	5896	2.06E-02
2	0.42%	337	1.17E-03	10	4.39%	3501	1.22E-02	18	8.18%	6525	2.28E-02
3	0.41%	326	1.14E-03	11	4.66%	3720	1.30E-02	19	5.69%	4544	1.59E-02
4	0.26%	207	7.24E-04	12	5.89%	4698	1.64E-02	20	4.28%	3412	1.19E-02
5	0.50%	396	1.38E-03	13	6.15%	4908	1.71E-02	21	3.25%	2597	9.06E-03
6	0.91%	724	2.53E-03	14	6.04%	4819	1.68E-02	22	3.30%	2631	9.18E-03
7	3.79%	3023	1.05E-02	15	7.01%	5595	1.95E-02	23	2.46%	1964	6.85E-03
8	7.77%	6198	2.16E-02	16	7.14%	5698	1.99E-02	24	1.86%	1488	5.19E-03
								Total		79,800	

N Capitol Avenue and Berryessa Road Emission Calculations

File Name:	Santa Clara (SF) - 2025 - Annual-BAAQMD Trucks.EF
CT-EMFAC2017 Version:	1.0.2.27401
Run Date:	9/16/2022 14:14
Area:	Santa Clara (SF)
Analysis Year:	2025
Season:	Annual

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.015	0.502	0.498
Truck 2	0.02	0.936	0.048
Non-Truck	0.965	0.015	0.951

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	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph
PM2.5	0.008489	0.005501	0.00373	0.002665	0.00202	0.001628	0.001397	0.001277	0.00124	0.001271	0.001366	0.001527	0.001762
TOG	0.172619	0.113109	0.076066	0.0539	0.040836	0.03264	0.027389	0.02411	0.022258	0.021553	0.0219	0.023386	0.026243
Diesel PM	0.000788	0.00065	0.000505	0.000405	0.00035	0.000326	0.000328	0.000351	0.000395	0.000458	0.000541	0.00064	0.000753
DEOG	0.011815	0.008534	0.004522	0.002284	0.001598	0.001271	0.001051	0.000904	0.000813	0.000771	0.000772	0.000811	0.000874

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

Pollutant Name	Emission Factor
TOG	1.255395

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

Pollutant Name	Emission Factor
PM2.5	0.002108

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

Pollutant Name	Emission Factor
PM2.5	0.016801

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

Pollutant Name	Emission Factor
PM2.5	0.014826

END

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
North Capitol Avenue Traffic
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NBCAP	Northbound N Capitol	SE-NW	2	895	0.56	13.3	43.7	3.4	30	8,045
DPM_SBCAP	Southbound N Capitol	NW-SE	2	895	0.56	13.3	43.7	3.4	30	8,045
										16,090

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00033			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and DPM Emissions - DPM_NBCAP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.93%	316	1.59E-05	9	6.41%	515	2.60E-05	17	5.55%	447	2.25E-05
2	2.62%	211	1.06E-05	10	7.36%	592	2.98E-05	18	3.16%	254	1.28E-05
3	2.85%	229	1.15E-05	11	6.34%	510	2.57E-05	19	2.36%	190	9.55E-06
4	3.31%	266	1.34E-05	12	6.92%	557	2.80E-05	20	0.87%	70	3.51E-06
5	2.17%	174	8.78E-06	13	6.29%	506	2.55E-05	21	3.09%	248	1.25E-05
6	3.36%	271	1.36E-05	14	6.23%	502	2.53E-05	22	4.12%	331	1.67E-05
7	6.00%	482	2.43E-05	15	5.15%	414	2.09E-05	23	2.58%	207	1.04E-05
8	4.58%	369	1.86E-05	16	3.84%	309	1.56E-05	24	0.92%	74	3.74E-06
								Total		8,045	

2025 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SBCAP

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.93%	316	1.59E-05	9	6.41%	515	2.60E-05	17	5.55%	447	2.25E-05
2	2.62%	211	1.06E-05	10	7.36%	592	2.98E-05	18	3.16%	254	1.28E-05
3	2.85%	229	1.15E-05	11	6.34%	510	2.57E-05	19	2.36%	190	9.55E-06
4	3.31%	266	1.34E-05	12	6.92%	557	2.80E-05	20	0.87%	70	3.51E-06
5	2.17%	174	8.78E-06	13	6.29%	506	2.55E-05	21	3.09%	248	1.25E-05
6	3.36%	271	1.36E-05	14	6.23%	502	2.53E-05	22	4.12%	331	1.67E-05
7	6.00%	482	2.43E-05	15	5.15%	414	2.09E-05	23	2.58%	207	1.04E-05
8	4.58%	369	1.86E-05	16	3.84%	309	1.56E-05	24	0.92%	74	3.74E-06
								Total		8,045	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
North Capitol Avenue Traffic
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2025

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
PM25_NBCAP	Northbound N Capitol	SE-NW	2	895	0.56	13.3	44	1.3	30	8,045
PM25_SBCAP	Southbound N Capitol	NW-SE	2	895	0.56	13.3	44	1.3	30	8,045
									Total	16,090

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00163			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and PM2.5 Emissions - PM25_NBCAP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	92	2.33E-05	9	7.11%	572	1.44E-04	17	7.39%	594	1.49E-04
2	0.42%	34	8.53E-06	10	4.39%	353	8.88E-05	18	8.18%	658	1.65E-04
3	0.41%	33	8.26E-06	11	4.66%	375	9.43E-05	19	5.69%	458	1.15E-04
4	0.26%	21	5.26E-06	12	5.89%	474	1.19E-04	20	4.28%	344	8.65E-05
5	0.50%	40	1.01E-05	13	6.15%	495	1.24E-04	21	3.25%	262	6.58E-05
6	0.91%	73	1.84E-05	14	6.04%	486	1.22E-04	22	3.30%	265	6.67E-05
7	3.79%	305	7.66E-05	15	7.01%	564	1.42E-04	23	2.46%	198	4.98E-05
8	7.77%	625	1.57E-04	16	7.14%	574	1.44E-04	24	1.86%	150	3.77E-05
								Total		8,045	

2025 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_SBCAP

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	92	2.33E-05	9	7.11%	572	1.44E-04	17	7.39%	594	1.49E-04
2	0.42%	34	8.53E-06	10	4.39%	353	8.88E-05	18	8.18%	658	1.65E-04
3	0.41%	33	8.26E-06	11	4.66%	375	9.43E-05	19	5.69%	458	1.15E-04
4	0.26%	21	5.26E-06	12	5.89%	474	1.19E-04	20	4.28%	344	8.65E-05
5	0.50%	40	1.01E-05	13	6.15%	495	1.24E-04	21	3.25%	262	6.58E-05
6	0.91%	73	1.84E-05	14	6.04%	486	1.22E-04	22	3.30%	265	6.67E-05
7	3.79%	305	7.66E-05	15	7.01%	564	1.42E-04	23	2.46%	198	4.98E-05
8	7.77%	625	1.57E-04	16	7.14%	574	1.44E-04	24	1.86%	150	3.77E-05
								Total		8,045	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
North Capitol Avenue Traffic
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NBCAP	Northbound N Capitol	SE-NW	2	895	0.56	13.3	44	1.3	30	8,045
TEXH_SBCAP	Southbound N Capitol	NW-SE	2	895	0.56	13.3	44	1.3	30	8,045
									Total	16,090

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.03264			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00127			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.03137			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NBCAP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	92	4.48E-04	9	7.11%	572	2.77E-03	17	7.39%	594	2.88E-03
2	0.42%	34	1.64E-04	10	4.39%	353	1.71E-03	18	8.18%	658	3.19E-03
3	0.41%	33	1.59E-04	11	4.66%	375	1.82E-03	19	5.69%	458	2.22E-03
4	0.26%	21	1.01E-04	12	5.89%	474	2.30E-03	20	4.28%	344	1.67E-03
5	0.50%	40	1.94E-04	13	6.15%	495	2.40E-03	21	3.25%	262	1.27E-03
6	0.91%	73	3.54E-04	14	6.04%	486	2.35E-03	22	3.30%	265	1.29E-03
7	3.79%	305	1.48E-03	15	7.01%	564	2.73E-03	23	2.46%	198	9.59E-04
8	7.77%	625	3.03E-03	16	7.14%	574	2.78E-03	24	1.86%	150	7.27E-04
								Total		8,045	

2025 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SBCAP

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	92	4.48E-04	9	7.11%	572	2.77E-03	17	7.39%	594	2.88E-03
2	0.42%	34	1.64E-04	10	4.39%	353	1.71E-03	18	8.18%	658	3.19E-03
3	0.41%	33	1.59E-04	11	4.66%	375	1.82E-03	19	5.69%	458	2.22E-03
4	0.26%	21	1.01E-04	12	5.89%	474	2.30E-03	20	4.28%	344	1.67E-03
5	0.50%	40	1.94E-04	13	6.15%	495	2.40E-03	21	3.25%	262	1.27E-03
6	0.91%	73	3.54E-04	14	6.04%	486	2.35E-03	22	3.30%	265	1.29E-03
7	3.79%	305	1.48E-03	15	7.01%	564	2.73E-03	23	2.46%	198	9.59E-04
8	7.77%	625	3.03E-03	16	7.14%	574	2.78E-03	24	1.86%	150	7.27E-04
								Total		8,045	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
North Capitol Avenue Traffic
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NBCAP	Northbound N Capitol	SE-NW	2	895	0.56	13.3	44	1.3	30	8,045
TEVAP_SBCAP	Southbound N Capitol	NW-SE	2	895	0.56	13.3	44	1.3	30	8,045
									Total	16,090

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30	0	0	0
Emissions per Vehicle per Hour (g/hour)	1.25540			
Emissions per Vehicle per Mile (g/VMT)	0.04185			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NBCAP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	92	5.98E-04	9	7.11%	572	3.70E-03	17	7.39%	594	3.84E-03
2	0.42%	34	2.19E-04	10	4.39%	353	2.28E-03	18	8.18%	658	4.25E-03
3	0.41%	33	2.12E-04	11	4.66%	375	2.42E-03	19	5.69%	458	2.96E-03
4	0.26%	21	1.35E-04	12	5.89%	474	3.06E-03	20	4.28%	344	2.22E-03
5	0.50%	40	2.58E-04	13	6.15%	495	3.20E-03	21	3.25%	262	1.69E-03
6	0.91%	73	4.72E-04	14	6.04%	486	3.14E-03	22	3.30%	265	1.71E-03
7	3.79%	305	1.97E-03	15	7.01%	564	3.65E-03	23	2.46%	198	1.28E-03
8	7.77%	625	4.04E-03	16	7.14%	574	3.71E-03	24	1.86%	150	9.69E-04
								Total		8,045	

2025 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SBCAP

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	92	5.98E-04	9	7.11%	572	3.70E-03	17	7.39%	594	3.84E-03
2	0.42%	34	2.19E-04	10	4.39%	353	2.28E-03	18	8.18%	658	4.25E-03
3	0.41%	33	2.12E-04	11	4.66%	375	2.42E-03	19	5.69%	458	2.96E-03
4	0.26%	21	1.35E-04	12	5.89%	474	3.06E-03	20	4.28%	344	2.22E-03
5	0.50%	40	2.58E-04	13	6.15%	495	3.20E-03	21	3.25%	262	1.69E-03
6	0.91%	73	4.72E-04	14	6.04%	486	3.14E-03	22	3.30%	265	1.71E-03
7	3.79%	305	1.97E-03	15	7.01%	564	3.65E-03	23	2.46%	198	1.28E-03
8	7.77%	625	4.04E-03	16	7.14%	574	3.71E-03	24	1.86%	150	9.69E-04
								Total		8,045	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
North Capitol Avenue Traffic
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NBCAP	Northbound N Capitol	SE-NW	2	895	0.56	13.3	44	1.3	30	8,045
FUG_SBCAP	Southbound N Capitol	NW-SE	2	895	0.56	13.3	44	1.3	30	8,045
									Total	16,090

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01680			
Road Dust - Emissions per Vehicle (g/VMT)	0.01483			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03374			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NBCAP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	92	4.82E-04	9	7.11%	572	2.98E-03	17	7.39%	594	3.10E-03
2	0.42%	34	1.77E-04	10	4.39%	353	1.84E-03	18	8.18%	658	3.43E-03
3	0.41%	33	1.71E-04	11	4.66%	375	1.95E-03	19	5.69%	458	2.39E-03
4	0.26%	21	1.09E-04	12	5.89%	474	2.47E-03	20	4.28%	344	1.79E-03
5	0.50%	40	2.08E-04	13	6.15%	495	2.58E-03	21	3.25%	262	1.36E-03
6	0.91%	73	3.80E-04	14	6.04%	486	2.53E-03	22	3.30%	265	1.38E-03
7	3.79%	305	1.59E-03	15	7.01%	564	2.94E-03	23	2.46%	198	1.03E-03
8	7.77%	625	3.26E-03	16	7.14%	574	2.99E-03	24	1.86%	150	7.82E-04
								Total		8,045	

2025 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SBCAP

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	92	4.82E-04	9	7.11%	572	2.98E-03	17	7.39%	594	3.10E-03
2	0.42%	34	1.77E-04	10	4.39%	353	1.84E-03	18	8.18%	658	3.43E-03
3	0.41%	33	1.71E-04	11	4.66%	375	1.95E-03	19	5.69%	458	2.39E-03
4	0.26%	21	1.09E-04	12	5.89%	474	2.47E-03	20	4.28%	344	1.79E-03
5	0.50%	40	2.08E-04	13	6.15%	495	2.58E-03	21	3.25%	262	1.36E-03
6	0.91%	73	3.80E-04	14	6.04%	486	2.53E-03	22	3.30%	265	1.38E-03
7	3.79%	305	1.59E-03	15	7.01%	564	2.94E-03	23	2.46%	198	1.03E-03
8	7.77%	625	3.26E-03	16	7.14%	574	2.99E-03	24	1.86%	150	7.82E-04
								Total		8,045	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Berryessa Road Traffic
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_BERRY	Berryessa Road	SW-NE	2	713	0.44	13.3	43.7	3.4	30	34,235

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00033			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and DPM Emissions - DPM_BERRY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.93%	1347	5.41E-05	9	6.41%	2193	8.80E-05	17	5.55%	1900	7.63E-05
2	2.62%	898	3.60E-05	10	7.36%	2521	1.01E-04	18	3.16%	1080	4.34E-05
3	2.85%	976	3.92E-05	11	6.34%	2170	8.71E-05	19	2.36%	807	3.24E-05
4	3.31%	1132	4.54E-05	12	6.92%	2369	9.51E-05	20	0.87%	296	1.19E-05
5	2.17%	742	2.98E-05	13	6.29%	2154	8.65E-05	21	3.09%	1057	4.25E-05
6	3.36%	1152	4.62E-05	14	6.23%	2134	8.57E-05	22	4.12%	1409	5.66E-05
7	6.00%	2053	8.24E-05	15	5.15%	1764	7.08E-05	23	2.58%	882	3.54E-05
8	4.58%	1568	6.30E-05	16	3.84%	1315	5.28E-05	24	0.92%	316	1.27E-05
								Total		34,235	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Berryessa Road Traffic
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2025

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
PM25_BERRY	Berryessa Road	SW-NE	2	713	0.44	13.3	44	1.3	30	34,235

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00163			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and PM2.5 Emissions - PM25_BERRY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	394	7.89E-05	9	7.11%	2435	4.88E-04	17	7.39%	2530	5.07E-04
2	0.42%	144	2.89E-05	10	4.39%	1502	3.01E-04	18	8.18%	2799	5.61E-04
3	0.41%	140	2.80E-05	11	4.66%	1596	3.20E-04	19	5.69%	1949	3.91E-04
4	0.26%	89	1.78E-05	12	5.89%	2015	4.04E-04	20	4.28%	1464	2.93E-04
5	0.50%	170	3.41E-05	13	6.15%	2106	4.22E-04	21	3.25%	1114	2.23E-04
6	0.91%	311	6.23E-05	14	6.04%	2067	4.14E-04	22	3.30%	1129	2.26E-04
7	3.79%	1297	2.60E-04	15	7.01%	2400	4.81E-04	23	2.46%	843	1.69E-04
8	7.77%	2659	5.33E-04	16	7.14%	2445	4.90E-04	24	1.86%	638	1.28E-04
								Total		34,235	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Berryessa Road Traffic
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_BERRY	Berryessa Road	SW-NE	2	713	0.44	13.3	44	1.3	30	34,235

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.03264			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00127			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.03137			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_BERRY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	394	1.52E-03	9	7.11%	2435	9.41E-03	17	7.39%	2530	9.77E-03
2	0.42%	144	5.58E-04	10	4.39%	1502	5.80E-03	18	8.18%	2799	1.08E-02
3	0.41%	140	5.40E-04	11	4.66%	1596	6.17E-03	19	5.69%	1949	7.53E-03
4	0.26%	89	3.44E-04	12	5.89%	2015	7.79E-03	20	4.28%	1464	5.65E-03
5	0.50%	170	6.57E-04	13	6.15%	2106	8.13E-03	21	3.25%	1114	4.30E-03
6	0.91%	311	1.20E-03	14	6.04%	2067	7.99E-03	22	3.30%	1129	4.36E-03
7	3.79%	1297	5.01E-03	15	7.01%	2400	9.27E-03	23	2.46%	843	3.25E-03
8	7.77%	2659	1.03E-02	16	7.14%	2445	9.44E-03	24	1.86%	638	2.47E-03
								Total		34,235	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Berryessa Road Traffic
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_BERRY	Berryessa Road	SW-NE	2	713	0.44	13.3	44	1.3	30	34,235

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30	0	0	0
Emissions per Vehicle per Hour (g/hour)	1.25540			
Emissions per Vehicle per Mile (g/VMT)	0.04185			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_BERRY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	394	2.03E-03	9	7.11%	2435	1.26E-02	17	7.39%	2530	1.30E-02
2	0.42%	144	7.44E-04	10	4.39%	1502	7.74E-03	18	8.18%	2799	1.44E-02
3	0.41%	140	7.20E-04	11	4.66%	1596	8.23E-03	19	5.69%	1949	1.00E-02
4	0.26%	89	4.59E-04	12	5.89%	2015	1.04E-02	20	4.28%	1464	7.54E-03
5	0.50%	170	8.77E-04	13	6.15%	2106	1.09E-02	21	3.25%	1114	5.74E-03
6	0.91%	311	1.60E-03	14	6.04%	2067	1.07E-02	22	3.30%	1129	5.82E-03
7	3.79%	1297	6.68E-03	15	7.01%	2400	1.24E-02	23	2.46%	843	4.34E-03
8	7.77%	2659	1.37E-02	16	7.14%	2445	1.26E-02	24	1.86%	638	3.29E-03
								Total		34,235	

1207 N Capitol Ave Daycare, San Jose, CA - Roadway Modeling Emissions
Berryessa Road Traffic
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_BERRY	Berryessa Road	SW-NE	2	713	0.44	13.3	44	1.3	30	34,235

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01680			
Road Dust - Emissions per Vehicle (g/VMT)	0.01483			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03374			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_BERRY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	394	1.64E-03	9	7.11%	2435	1.01E-02	17	7.39%	2530	1.05E-02
2	0.42%	144	6.00E-04	10	4.39%	1502	6.24E-03	18	8.18%	2799	1.16E-02
3	0.41%	140	5.81E-04	11	4.66%	1596	6.63E-03	19	5.69%	1949	8.10E-03
4	0.26%	89	3.70E-04	12	5.89%	2015	8.37E-03	20	4.28%	1464	6.08E-03
5	0.50%	170	7.07E-04	13	6.15%	2106	8.75E-03	21	3.25%	1114	4.63E-03
6	0.91%	311	1.29E-03	14	6.04%	2067	8.59E-03	22	3.30%	1129	4.69E-03
7	3.79%	1297	5.39E-03	15	7.01%	2400	9.97E-03	23	2.46%	843	3.50E-03
8	7.77%	2659	1.10E-02	16	7.14%	2445	1.02E-02	24	1.86%	638	2.65E-03
								Total		34,235	

Roadway Cancer Risk Calculations at Construction MEI

1207 N Capitol Ave Daycare - I-680 Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Off-Site Maximum Residential Cancer Risk Receptor (4.5 meter receptor height)

Emissions Year	2025
Receptor Information	
Number of Receptors	1
Receptor Height =	4.5 meters above ground level
Receptor distances =	receptor at residential cancer risk MEI location
Meteorological Conditions	
BAAQMDSan Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

	Concentration ($\mu g/m^3$)		
Emission Years	**DPM**	**Exhaust TOG**	**Evaporative TOG**
2024-2053	0.00550	0.10364	0.08806

1207 N Capitol Ave Daycare - N Capitol Ave Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Off-Site Maximum Residential Cancer Risk Receptor (4.5 meter receptor height)

Emissions Year	2025
Receptor Information	
Number of Receptors	1
Receptor Height =	4.5 meters above ground level
Receptor distances =	receptor at residential cancer risk MEI location
Meteorological Conditions	
BAAQMDSan Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

	Concentration ($\mu g/m^3$)		
Emission Years	**DPM**	**Exhaust TOG**	**Evaporative TOG**
2024-2053	0.00087	0.0639	0.0856

1207 N Capitol Ave Daycare - Berryessa Road Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Off-Site Maximum Residential Cancer Risk Receptor (4.5 meter receptor height)

Emissions Year	2025
Receptor Information	
Number of Receptors	1
Receptor Height =	4.5 meters above ground level
Receptor distances =	receptor at residential cancer risk MEI location
Meteorological Conditions	
BAAQMDSan Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

	Concentration ($\mu g/m^3$)		
Emission Years	**DPM**	**Exhaust TOG**	**Evaporative TOG**
2024-2053	0.00040	0.0267	0.0356

1207 N Capitol Ave Daycare - I-680 Traffic Maximum Cancer Risk at Project Cancer Risk MEI
Off-Site Maximum Residential Cancer Risk Receptor (4.5 meter receptor height)
30-Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Values

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

	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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information				Cancer Risk (per million)				
					Annual TAC Conc (ug/m3)							
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	Total	Hazard Index
0	2024	0.25	-0.25 - 0*	10	0.0055	0.1036	0.0881	0.075	0.008	0.000	0.08	-
1	2024	1	1	10	0.0055	0.1036	0.0881	0.90	0.097	0.005	1.01	0.0011
2	2025	1	2	10	0.0055	0.1036	0.0881	0.90	0.097	0.005	1.01	
3	2026	1	3	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
4	2027	1	4	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
5	2028	1	5	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
6	2029	1	6	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
7	2030	1	7	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
8	2031	1	8	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
9	2032	1	9	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
10	2033	1	10	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
11	2034	1	11	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
12	2035	1	12	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
13	2036	1	13	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
14	2037	1	14	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
15	2038	1	15	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
16	2039	1	16	3	0.0055	0.1036	0.0881	0.14	0.015	0.001	0.16	
17	2040	1	17	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
18	2041	1	18	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
19	2042	1	19	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
20	2043	1	20	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
21	2044	1	21	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
22	2045	1	22	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
23	2046	1	23	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
24	2047	1	24	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
25	2048	1	25	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
26	2049	1	26	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
27	2050	1	27	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
28	2051	1	28	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
29	2052	1	29	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
30	2053	1	30	1	0.0055	0.1036	0.0881	0.02	0.002	0.000	0.018	
Total Increased Cancer Risk			**Total**					4.09	0.440	0.022	**4.56**	

* Third trimester of pregnancy

1207 N Capitol Ave Daycare - North Capitol Ave Traffic Maximum Cancer Risk at Project Cancer Risk MEI
Off-Site Maximum Residential Cancer Risk Receptor (4.5 meter receptor height)
30-Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Values

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

	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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information								
					Annual TAC Conc (ug/m3)			Cancer Risk (per million)				
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	Total	Hazard Index
0	2024	0.25	-0.25 - 0*	10	0.0009	0.0639	0.0856	0.012	0.005	0.000	0.02	-
1	2024	1	1	10	0.0009	0.0639	0.0856	0.14	0.060	0.005	0.21	0.0002
2	2025	1	2	10	0.0009	0.0639	0.0856	0.14	0.060	0.005	0.21	
3	2026	1	3	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
4	2027	1	4	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
5	2028	1	5	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
6	2029	1	6	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
7	2030	1	7	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
8	2031	1	8	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
9	2032	1	9	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
10	2033	1	10	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
11	2034	1	11	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
12	2035	1	12	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
13	2036	1	13	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
14	2037	1	14	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
15	2038	1	15	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
16	2039	1	16	3	0.0009	0.0639	0.0856	0.02	0.009	0.001	0.03	
17	2040	1	17	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
18	2041	1	18	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
19	2042	1	19	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
20	2043	1	20	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
21	2044	1	21	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
22	2045	1	22	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
23	2046	1	23	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
24	2047	1	24	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
25	2048	1	25	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
26	2049	1	26	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
27	2050	1	27	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
28	2051	1	28	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
29	2052	1	29	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
30	2053	1	30	1	0.0009	0.0639	0.0856	0.00	0.001	0.000	0.004	
Total Increased Cancer Risk			**Total**					0.65	0.272	0.021	**0.94**	

* Third trimester of pregnancy

1207 N Capitol Ave Daycare - Berryessa Road Traffic Maximum Cancer Risk at Project Cancer Risk MEI
Off-Site Maximum Residential Cancer Risk Receptor (4.5 meter receptor height)
30-Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Values

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

	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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information								
					Annual TAC Conc (ug/m3)			Cancer Risk (per million)				
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	Total	Hazard Index
0	2024	0.25	-0.25 - 0*	10	0.0004	0.0267	0.0356	0.005	0.002	0.000	0.01	-
1	2024	1	1	10	0.0004	0.0267	0.0356	0.07	0.025	0.002	0.09	0.0001
2	2025	1	2	10	0.0004	0.0267	0.0356	0.07	0.025	0.002	0.09	
3	2026	1	3	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
4	2027	1	4	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
5	2028	1	5	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
6	2029	1	6	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
7	2030	1	7	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
8	2031	1	8	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
9	2032	1	9	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
10	2033	1	10	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
11	2034	1	11	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
12	2035	1	12	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
13	2036	1	13	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
14	2037	1	14	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
15	2038	1	15	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
16	2039	1	16	3	0.0004	0.0267	0.0356	0.01	0.004	0.000	0.01	
17	2040	1	17	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
18	2041	1	18	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
19	2042	1	19	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
20	2043	1	20	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
21	2044	1	21	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
22	2045	1	22	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
23	2046	1	23	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
24	2047	1	24	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
25	2048	1	25	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
26	2049	1	26	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
27	2050	1	27	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
28	2051	1	28	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
29	2052	1	29	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
30	2053	1	30	1	0.0004	0.0267	0.0356	0.00	0.000	0.000	0.002	
Total Increased Cancer Risk			**Total**					0.30	0.113	0.009	**0.42**	

* Third trimester of pregnancy

Roadway PM2.5 Concentrations at Construction MEI

1207 N Capitol Ave Daycare - I-680 Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Off-Site Maximum Residential PM2.5 Concentration Receptor (1.5 meter receptor height)

Emissions Year	2025
Receptor Information	
Number of Receptors	1
Receptor Height =	1.5 meters above ground level
Receptor distances =	receptor at residential PM2.5 concentration MEI location
Meteorological Conditions	
BAAQMDSan Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

	PM2.5 Concentrations ($\mu g/m^3$)
Emission Years	**Total PM2.5**
2024-2053	0.1244

1207 N Capitol Ave Daycare - N Capitol Ave - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Off-Site Maximum Residential PM2.5 Concentration Receptor (1.5 meter receptor height)

Emissions Year	2025
Receptor Information	
Number of Receptors	1
Receptor Height =	1.5 meters above ground level
Receptor distances =	receptor at residential PM2.5 concentration MEI location
Meteorological Conditions	
BAAQMDSan Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

	PM2.5 Concentrations ($\mu g/m^3$)
Emission Years	**Total PM2.5**
2024-2053	0.0827

1207 N Capitol Ave Daycare - Berryessa Road Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Off-Site Maximum Residential PM2.5 Concentration Receptor (1.5 meter receptor height)

Emissions Year	2025
Receptor Information	
Number of Receptors	1
Receptor Height =	1.5 meters above ground level
Receptor distances =	receptor at residential PM2.5 concentration MEI location
Meteorological Conditions	
BAAQMDSan Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

	PM2.5 Concentrations ($\mu g/m^3$)
Emission Years	**Total PM2.5**
2024-2053	0.0311

Roadway PM2.5 Concentrations and Cancer Risk at Project Site

1207 N Capitol Ave Daycare - I-680 Traffic - TACs & PM2.5
Maximum Cancer Risk and PM2.5 Concentration
AERMOD Risk Modeling Parameters and Maximum Concentrations
Impacts at Project Daycare Site (6 weeks to 5 years old)

Emissions Years	2025
Receptor Information	
Number of Receptors	76
Receptor Height =	1.0 meters
Receptor distances =	6 meter spacing at site
Meteorological Conditions	
BAAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

Emission Years	Concentration (µg/m^3)		
	DPM	Exhaust TOG	Evaporative TOG
2025	0.00596	0.11930	0.10178

Emission Years	PM2.5 Concentrations (µg/m^3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2025	0.1370	0.12701	0.0100

Maximum Daycare Child PM2.5 Concentration (µg/m^3)* =	**0.05**

* Concentration adjusted for exposure duration at daycare

1207 N Capitol Ave Daycare - N Capitol Ave Traffic - TACs & PM2.5
Maximum Cancer Risk and PM2.5 Concentration
AERMOD Risk Modeling Parameters and Maximum Concentrations
Impacts at Project Daycare Site (6 weeks to 5 years old)

Emissions Years	2025
Receptor Information	
Number of Receptors	76
Receptor Height =	1.0 meters
Receptor distances =	6 meter spacing at site
Meteorological Conditions	
BAAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

Emission Years	Concentration (µg/m^3)		
	DPM	Exhaust TOG	Evaporative TOG
2025	0.00215	0.21869	0.29294

Emission Years	PM2.5 Concentrations (µg/m^3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2025	0.2476	0.23624	0.0114

Maximum Daycare Child PM2.5 Concentration (µg/m^3)* =	**0.08**

* Concentration adjusted for exposure duration at daycare

1207 N Capitol Ave Daycare - Berryessa Road Traffic - TACs & PM2.5
Maximum Cancer Risk and PM2.5 Concentration
AERMOD Risk Modeling Parameters and Maximum Concentrations
Impacts at Project Daycare Site (6 weeks to 5 years old)

Emissions Years	2025
Receptor Information	
Number of Receptors	76
Receptor Height =	1.0 meters
Receptor distances =	6 meter spacing at site
Meteorological Conditions	
BAAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

Emission Years	Concentration (µg/m^3)		
	DPM	Exhaust TOG	Evaporative TOG
2025	0.00059	0.04030	0.05376

Emission Years	PM2.5 Concentrations (µg/m^3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2025	0.0455	0.04338	0.0021

Maximum Daycare Child PM2.5 Concentration (µg/m^3)* =	**0.02**

* Concentration adjusted for exposure duration at daycare

1207 N Capitol Ave Daycare - I-680 Traffic Cancer Risk & PM2.5
Maximum Daycare Infant/Child Cancer Risk
Infant & Child Exposures (1.0 meter receptor heights)
Impacts at Project Daycare Site (6 weeks to 5 years old)

Cancer Risk Calculation Method

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

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

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

Where: C_{air} = concentration in air ($\mu g/m^3$)
DAF = Daycare Adjustment Factor (unitless) for source operation and exposures different than 8 hours/day
= (24/SHR) x (7days/SDay) x (ScHR/8 hrs)
SHR = Hours of emission source operation
SDay = Modeled number of days per week of source operaion
DHR = Daycare operation hours while emission source in operation
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

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

	Infant	Child
Age -->	0 - <2	2 - <16
Parameter		
ASF	10	3
8-Hr BR* =	1200	520
DHR =	12	12
SHR =	24	24
SDay =	7	7
A =	1	1
EF =	250	250
AT =	70	70
DAF =	1.50	1.50

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

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Age	Year	Exposure Duration (years)	Exposure Type	Maximum - Exposure Information: Age Sensitivity Factor	Annual TAC Conc (ug/m3): DPM	Exhaust TOG	Evaporative TOG	Cancer Risk (per million): DPM	Exhaust TOG	Evaporative TOG	Total	Maximum Hazard Index
0 - 1	2025	1	Infant	10	0.0060	0.1193	0.1018	1.1547	0.1320	0.0066	1.2933	0.00119
1 - 2	2026	1	Infant	10	0.0060	0.1193	0.1018	1.1547	0.1320	0.0066	1.2933	
2 - 3	2027	1	Child	3	0.0060	0.1193	0.1018	0.1501	0.0172	0.0009	0.1681	
3 - 4	2028	1	Child	3	0.0060	0.1193	0.1018	0.1501	0.0172	0.0009	0.1681	
4 - 5	2029	1	Child	3	0.0060	0.1193	0.1018	0.1501	0.0172	0.0009	0.1681	
Total Increased Cancer Risk								2.760	0.315	0.016	**3.09**	

1207 N Capitol Ave Daycare - N Capitol Ave Traffic Cancer Risk & PM2.5
Maximum Daycare Infant/Child Cancer Risk
Infant & Child Exposures (1.0 meter receptor heights)
Impacts at Project Daycare Site (6 weeks to 5 years old)

Cancer Risk Calculation Method

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

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

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

Where: C_{air} = concentration in air ($\mu g/m^3$)
DAF = Daycare Adjustment Factor (unitless) for source operation and exposures different than 8 hours/day
= (24/SHR) x (7days/SDay) x (ScHR/8 hrs)
SHR = Hours of emission source operation
SDay = Modeled number of days per week of source operaion
DHR = Daycare operation hours while emission source in operation
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

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

	Infant	Child
Age -->	0 - <2	2 - <16
Parameter		
ASF	10	3
8-Hr BR* =	1200	520
DHR =	12	12
SHR =	24	24
SDay =	7	7
A =	1	1
EF =	250	250
AT =	70	70
DAF =	1.50	1.50

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

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Age	Year	Exposure Duration (years)	Exposure Type	Maximum - Exposure Information: Age Sensitivity Factor	Annual TAC Conc (ug/m3): DPM	Exhaust TOG	Evaporative TOG	Cancer Risk (per million): DPM	Exhaust TOG	Evaporative TOG	Total	Maximum Hazard Index
0 - 1	2025	1	Infant	10	0.0022	0.2187	0.2929	0.4165	0.2419	0.0191	0.6776	0.00043
1 - 2	2026	1	Infant	10	0.0022	0.2187	0.2929	0.4165	0.2419	0.0191	0.6776	
2 - 3	2027	1	Child	3	0.0022	0.2187	0.2929	0.0541	0.0315	0.0025	0.0881	
3 - 4	2028	1	Child	3	0.0022	0.2187	0.2929	0.0541	0.0315	0.0025	0.0881	
4 - 5	2029	1	Child	3	0.0022	0.2187	0.2929	0.0541	0.0315	0.0025	0.0881	
Total Increased Cancer Risk								0.996	0.578	0.046	**1.62**	

1207 N Capitol Ave Daycare - Berryessa Road Traffic Cancer Risk & PM2.5
Maximum Daycare Infant/Child Cancer Risk
Infant & Child Exposures (1.0 meter receptor heights)
Impacts at Project Daycare Site (6 weeks to 5 years old)

Cancer Risk Calculation Method

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

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

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

Where: C_{air} = concentration in air $(\mu g/m^3)$
DAF = Daycare Adjustment Factor (unitless) for source operation and exposures different than 8 hours/day
= (24/SHR) x (7days/SDay) x (ScHR/8 hrs)
SHR = Hours of emission source operation
SDay = Modeled number of days per week of source operaion
DHR = Daycare operation hours while emission source in operation
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

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

	Infant	Child
Age -->	0 - <2	2 - <16
Parameter		
ASF	10	3
8-Hr BR* =	1200	520
DHR =	12	12
SHR =	24	24
SDay =	7	7
A =	1	1
EF =	250	250
AT =	70	70
DAF =	1.50	1.50

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

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Age	Year	Exposure Duration (years)	Exposure Type	Maximum - Exposure Information: Age Sensitivity Factor	Annual TAC Conc (ug/m3): DPM	Exhaust TOG	Evaporative TOG	Cancer Risk (per million): DPM	Exhaust TOG	Evaporative TOG	Total	Maximum Hazard Index
0 - 1	2025	1	Infant	10	0.0006	0.0403	0.0538	0.1143	0.0446	0.0035	0.1624	0.00012
1 - 2	2026	1	Infant	10	0.0006	0.0403	0.0538	0.1143	0.0446	0.0035	0.1624	
2 - 3	2027	1	Child	3	0.0006	0.0403	0.0538	0.0149	0.0058	0.0005	0.0211	
3 - 4	2028	1	Child	3	0.0006	0.0403	0.0538	0.0149	0.0058	0.0005	0.0211	
4 - 5	2029	1	Child	3	0.0006	0.0403	0.0538	0.0149	0.0058	0.0005	0.0211	
Total Increased Cancer Risk								0.273	0.107	0.008	**0.39**	

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Risk & Hazard Stationary Source Inquiry Form

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

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

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

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

Table A: Requester Contact Information

Date of Request	**8/4/2022**
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	cdivine@illingworthrodkin.com
Project Name	1207 N Capitol Daycare
Address	1207 N Capitol Ave
City	San Jose
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Daycare
Project Size (# of units or building square feet)	252 students
Comments:	

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

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

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

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

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

5. List the stationary source information in Table B ue section only.

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

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

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Matthew Hanson at 415-749-8733, or mhanson@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	Plant No.	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
770	112552_1	Arco Facility #07079	1143 N Capitol Ave	20.28	0.10	-		Gas Dispensing Facility		2020 Dataset, CARB GDF Tool	1.21	0.06	-
+1000	111785_1	Capitol Chevron	1111 N CAPITOL AVE	13.80	0.07	-		Gas Dispensing Facility		2020 Dataset, CARB GDF Tool	0.21	0.01	-
+1000	111828_1	Shell SS#68206	1140 N Capitol Ave	37.37	0.18	-		Gas Dispensing Facility		2020 Dataset, CARB GDF Tool	0.57	0.02	-

Construction MEIs

Footnotes:

1. Maximally exposed individual

Project Site

Distance from Receptor (feet) or MEI[1]	FACID (Plant No.)	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
475	112552_1	2.82	0.20	-
820	111785_1	0.33	0.04	-
850	111828_1	1.00	0.05	-

2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of 0.003 or less.
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010.
    Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should reflect
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

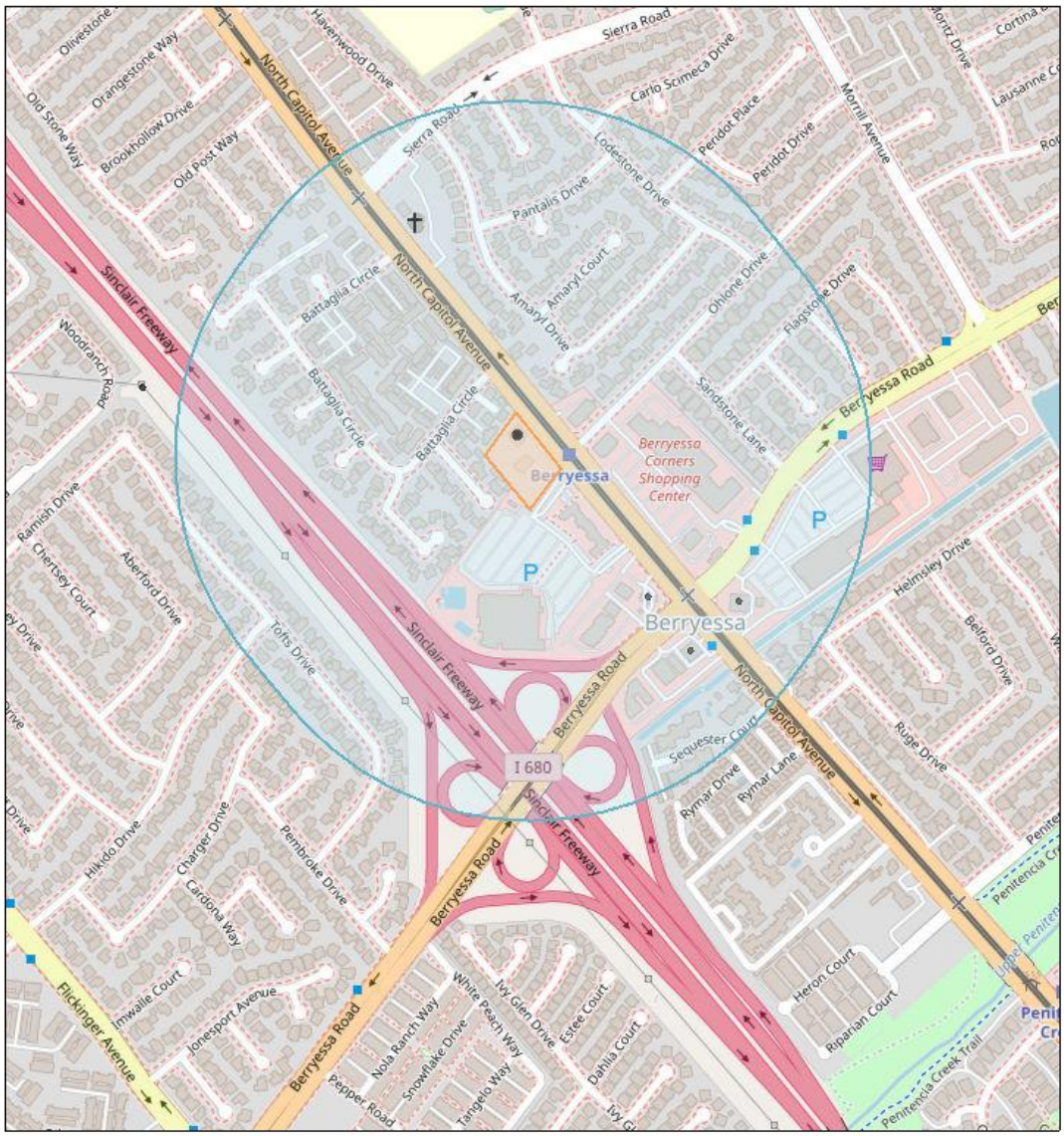
Date last updated:
03/13/2018

Screening Report

Area of Interest (AOI) Information

Area : 6,910,352.58 ft²

Jul 12 2022 11:30:04 Pacific Daylight Time



• Permitted Stationary Sources

Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Stationary Sources	3	N/A	N/A

Permitted Stationary Sources

#	FacID	FacName	Address	City	Street
1	112552_1	Arco Facility #07079	1143 N Capitol Ave	San Jose	CA
2	111785_1	Capitol Chevron	1111 N CAPITOL AVE	SAN JOSE	CA
3	111828_1	Shell SS#68206	1140 N Capitol Ave	San Jose	CA

#	Zip	County	Latitude	Longitude	Details
1	95,132.00	Santa Clara	37.39	-121.86	Gas Dispensing Facility
2	95,133.00	Santa Clara	37.39	-121.86	Gas Dispensing Facility
3	95,133.00	Santa Clara	37.39	-121.86	Gas Dispensing Facility

#	NAICS	Sector	Sub_Sector	Industry	ChronicHI
1	447,110.00	Retail Trade	Gasoline Stations	Gasoline Stations with Convenience Stores	0.0971205
2	447,110.00	Retail Trade	Gasoline Stations	Gasoline Stations with Convenience Stores	0.0661029
3	447,110.00	Retail Trade	Gasoline Stations	Gasoline Stations with Convenience Stores	0.1789864

#	PM2_5	Cancer Risk {expression/expr0}	Chronic Hazard Index {expression/expr1}	PM2.5 {expression/expr2}	Count
1	0.0000000	20.279	0.097	*No Data*	1
2	0.0000000	13.802	0.066	*No Data*	1
3	0.0000000	37.372	0.179	*No Data*	1

NOTE: A larger buffer than 1000 feet may be warranted depending on proximity to significant sources.

2022 CARB & CAPCOA Gasoline Service Station Industrywide Risk Assessment Look-up Tool
Version 1.0 - February 18, 2022

Required Value	User Defined Input	Instructions
Annual Throughput (gallons/year)	2400000	Enter your gas station's annual throughput in gallons of gasoline dispensed per year.
Hourly Dispensing Throughput (gallons/hour)	700	The tool will calculate the maximum hourly vehicle fueling throughput based on annual throughput as defined by Table 10 of the 2020 Gasoline Service Station Industrywide Risk Assessment Technical Guidance Document (Technical Guidance). If a different value is desired please enter it into cell L4.
Hourly Loading Throughput (gallons/hour)	8800	The tool will calculate the maximum hourly loading throughput based on annual throughput as defined by Table 10 of the Technical Guidance. If a different value is desired please enter it into cell L5.
Meteorological Data	San Jose	Select appropriate meteorological data. Met sets provided include 2 rural (Redding and Lancaster) and 4 urban (Fresno, Ontario, San Diego, and San Jose) locations. Use whichever best correlates to your location. If you would like to use site-specific meteorological data please refer to the Variable Met Tool.
Distance to Nearest Resident (meters)	345	Enter the distance to the nearest residential receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Nearest Business (meters)	345	Enter the distance to the nearest worker receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Acute Receptor (meters)	345	Enter the distance where acute impacts are expected in meters as measured from the edge of the station canopy. This can be the distance to the property boundary, nearest resident, nearest worker, or any other user defined location. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Control Scenario	EVR Phase I & EVR Phase II	Select the appropriate control scenario for your gas station. Please refer to technical Guidance for an explanation of the different control scenarios. Almost all gas stations in California are equipped with EVR Phase I and EVR Phase II controls.
Include Building Downwash Adjustments	yes	Building downwash may over estimate risk results. High results should be investigated further through site-specific health risk assessment.

Risk Value	Results
Max Residential Cancer Risk (chances/million)	0.21
Max Worker Cancer Risk (chances/million)	0.02
Chronic HI	0.00
Acute HI	0.01

2022 CARB & CAPCOA Gasoline Service Station Industrywide Risk Assessment Look-up Tool
Version 1.0 - February 18, 2022

Required Value	User Defined Input	Instructions
Annual Throughput (gallons/year)	2400000	Enter your gas station's annual throughput in gallons of gasoline dispensed per year.
Hourly Dispensing Throughput (gallons/hour)	700	The tool will calculate the maximum hourly vehicle fueling throughput based on annual throughput as defined by Table 10 of the 2020 Gasoline Service Station Industrywide Risk Assessment Technical Guidance Document (Technical Guidance). If a different value is desired please enter it into cell L4.
Hourly Loading Throughput (gallons/hour)	8800	The tool will calculate the maximum hourly loading throughput based on annual throughput as defined by Table 10 of the Technical Guidance. If a different value is desired please enter it into cell L5.
Meteorological Data	San Jose	Select appropriate meteorological data. Met sets provided include 2 rural (Redding and Lancaster) and 4 urban (Fresno, Ontario, San Diego, and San Jose) locations. Use whichever best correlates to your location. If you would like to use site-specific meteorological data please refer to the Variable Met Tool.
Distance to Nearest Resident (meters)	250	Enter the distance to the nearest residential receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Nearest Business (meters)	250	Enter the distance to the nearest worker receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Acute Receptor (meters)	250	Enter the distance where acute impacts are expected in meters as measured from the edge of the station canopy. This can be the distance to the property boundary, nearest resident, nearest worker, or any other user defined location. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Control Scenario	EVR Phase I & EVR Phase II	Select the appropriate control scenario for your gas station. Please refer to technical Guidance for an explanation of the different control scenarios. Almost all gas stations in California are equipped with EVR Phase I and EVR Phase II controls.
Include Building Downwash Adjustments	yes	Building downwash may over estimate risk results. High results should be investigated further through site-specific health risk assessment.

Risk Value	Results
Max Residential Cancer Risk (chances/million)	0.33
Max Worker Cancer Risk (chances/million)	0.03
Chronic HI	0.00
Acute HI	0.04

2022 CARB & CAPCOA Gasoline Service Station Industrywide Risk Assessment Look-up Tool
Version 1.0 - February 18, 2022

Required Value	User Defined Input	Instructions
Annual Throughput (gallons/year)	8410000	Enter your gas station's annual throughput in gallons of gasoline dispensed per year.
Hourly Dispensing Throughput (gallons/hour)	2000	The tool will calculate the maximum hourly vehicle fueling throughput based on annual throughput as defined by Table 10 of the 2020 Gasoline Service Station Industrywide Risk Assessment Technical Guidance Document (Technical Guidance). If a different value is desired please enter it into cell L4.
Hourly Loading Throughput (gallons/hour)	8800	The tool will calculate the maximum hourly loading throughput based on annual throughput as defined by Table 10 of the Technical Guidance. If a different value is desired please enter it into cell L5.
Meteorological Data	San Jose	Select appropriate meteorological data. Met sets provided include 2 rural (Redding and Lancaster) and 4 urban (Fresno, Ontario, San Diego, and San Jose) locations. Use whichever best correlates to your location. If you would like to use site-specific meteorological data please refer to the Variable Met Tool.
Distance to Nearest Resident (meters)	355	Enter the distance to the nearest residential receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Nearest Business (meters)	355	Enter the distance to the nearest worker receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Acute Receptor (meters)	355	Enter the distance where acute impacts are expected in meters as measured from the edge of the station canopy. This can be the distance to the property boundary, nearest resident, nearest worker, or any other user defined location. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Control Scenario	EVR Phase I & EVR Phase II	Select the appropriate control scenario for your gas station. Please refer to technical Guidance for an explanation of the different control scenarios. Almost all gas stations in California are equipped with EVR Phase I and EVR Phase II controls.
Include Building Downwash Adjustments	yes	Building downwash may over estimate risk results. High results should be investigated further through site-specific health risk assessment.

Risk Value	Results
Max Residential Cancer Risk (chances/million)	0.57
Max Worker Cancer Risk (chances/million)	0.05
Chronic HI	0.00
Acute HI	0.02

2022 CARB & CAPCOA Gasoline Service Station Industrywide Risk Assessment Look-up Tool
Version 1.0 - February 18, 2022

Required Value	User Defined Input	Instructions
Annual Throughput (gallons/year)	8410000	Enter your gas station's annual throughput in gallons of gasoline dispensed per year.
Hourly Dispensing Throughput (gallons/hour)	2000	The tool will calculate the maximum hourly vehicle fueling throughput based on annual throughput as defined by Table 10 of the 2020 Gasoline Service Station Industrywide Risk Assessment Technical Guidance Document (Technical Guidance). If a different value is desired please enter it into cell L4.
Hourly Loading Throughput (gallons/hour)	8800	The tool will calculate the maximum hourly loading throughput based on annual throughput as defined by Table 10 of the Technical Guidance. If a different value is desired please enter it into cell L5.
Meteorological Data	San Jose	Select appropriate meteorological data. Met sets provided include 2 rural (Redding and Lancaster) and 4 urban (Fresno, Ontario, San Diego, and San Jose) locations. Use whichever best correlates to your location. If you would like to use site-specific meteorological data please refer to the Variable Met Tool.
Distance to Nearest Resident (meters)	260	Enter the distance to the nearest residential receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Nearest Business (meters)	260	Enter the distance to the nearest worker receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Acute Receptor (meters)	260	Enter the distance where acute impacts are expected in meters as measured from the edge of the station canopy. This can be the distance to the property boundary, nearest resident, nearest worker, or any other user defined location. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Control Scenario	EVR Phase I & EVR Phase II	Select the appropriate control scenario for your gas station. Please refer to technical Guidance for an explanation of the different control scenarios. Almost all gas stations in California are equipped with EVR Phase I and EVR Phase II controls.
Include Building Downwash Adjustments	yes	Building downwash may over estimate risk results. High results should be investigated further through site-specific health risk assessment.

Risk Value	Results
Max Residential Cancer Risk (chances/million)	1.00
Max Worker Cancer Risk (chances/million)	0.08
Chronic HI	0.00
Acute HI	0.05

2022 CARB & CAPCOA Gasoline Service Station Industrywide Risk Assessment Look-up Tool
Version 1.0 - February 18, 2022

Required Value	User Defined Input	Instructions
Annual Throughput (gallons/year)	7600000	Enter your gas station's annual throughput in gallons of gasoline dispensed per year.
Hourly Dispensing Throughput (gallons/hour)	2000	The tool will calculate the maximum hourly vehicle fueling throughput based on annual throughput as defined by Table 10 of the 2020 Gasoline Service Station Industrywide Risk Assessment Technical Guidance Document (Technical Guidance). If a different value is desired please enter it into cell L4.
Hourly Loading Throughput (gallons/hour)	8800	The tool will calculate the maximum hourly loading throughput based on annual throughput as defined by Table 10 of the Technical Guidance. If a different value is desired please enter it into cell L5.
Meteorological Data	San Jose	Select appropriate meteorological data. Met sets provided include 2 rural (Redding and Lancaster) and 4 urban (Fresno, Ontario, San Diego, and San Jose) locations. Use whichever best correlates to your location. If you would like to use site-specific meteorological data please refer to the Variable Met Tool.
Distance to Nearest Resident (meters)	235	Enter the distance to the nearest residential receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Nearest Business (meters)	235	Enter the distance to the nearest worker receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Acute Receptor (meters)	235	Enter the distance where acute impacts are expected in meters as measured from the edge of the station canopy. This can be the distance to the property boundary, nearest resident, nearest worker, or any other user defined location. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Control Scenario	EVR Phase I & EVR Phase II	Select the appropriate control scenario for your gas station. Please refer to technical Guidance for an explanation of the different control scenarios. Almost all gas stations in California are equipped with EVR Phase I and EVR Phase II controls.
Include Building Downwash Adjustments	yes	Building downwash may over estimate risk results. High results should be investigated further through site-specific health risk assessment.

Risk Value	Results
Max Residential Cancer Risk (chances/million)	1.21
Max Worker Cancer Risk (chances/million)	0.10
Chronic HI	0.00
Acute HI	0.06

2022 CARB & CAPCOA Gasoline Service Station Industrywide Risk Assessment Look-up Tool
Version 1.0 - February 18, 2022

Required Value	User Defined Input	Instructions
Annual Throughput (gallons/year)	7600000	Enter your gas station's annual throughput in gallons of gasoline dispensed per year.
Hourly Dispensing Throughput (gallons/hour)	2000	The tool will calculate the maximum hourly vehicle fueling throughput based on annual throughput as defined by Table 10 of the 2020 Gasoline Service Station Industrywide Risk Assessment Technical Guidance Document (Technical Guidance). If a different value is desired please enter it into cell L4.
Hourly Loading Throughput (gallons/hour)	8800	The tool will calculate the maximum hourly loading throughput based on annual throughput as defined by Table 10 of the Technical Guidance. If a different value is desired please enter it into cell L5.
Meteorological Data	San Jose	Select appropriate meteorological data. Met sets provided include 2 rural (Redding and Lancaster) and 4 urban (Fresno, Ontario, San Diego, and San Jose) locations. Use whichever best correlates to your location. If you would like to use site-specific meteorological data please refer to the Variable Met Tool.
Distance to Nearest Resident (meters)	145	Enter the distance to the nearest residential receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Nearest Business (meters)	145	Enter the distance to the nearest worker receptor in meters as measured from the edge of the station canopy. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Distance to Acute Receptor (meters)	145	Enter the distance where acute impacts are expected in meters as measured from the edge of the station canopy. This can be the distance to the property boundary, nearest resident, nearest worker, or any other user defined location. Please note that the value must be between 10 and 1000 meters. The distance you input will round down to the nearest receptor distance used in the Technical Guidance (e.g., 19m will return value at 10m distance).
Control Scenario	EVR Phase I & EVR Phase II	Select the appropriate control scenario for your gas station. Please refer to technical Guidance for an explanation of the different control scenarios. Almost all gas stations in California are equipped with EVR Phase I and EVR Phase II controls.
Include Building Downwash Adjustments	yes	Building downwash may over estimate risk results. High results should be investigated further through site-specific health risk assessment.

Risk Value	Results
Max Residential Cancer Risk (chances/million)	2.82
Max Worker Cancer Risk (chances/million)	0.23
Chronic HI	0.01
Acute HI	0.20