# WAT KHMER KAMPUCHEA KROM TEMPLE PROJECT CONSTRUCTION COMMUNITY RISK ASSESSMENT

San José, California

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### Introduction

The purpose of this report is to address the potential community risk impacts associated with the construction of the proposed Wat Khmer Kampuchea Krom Temple located at 2740 Ruby Avenue in San José, California. The air quality impacts from this project would be associated with construction of the new buildings. Air pollutant emissions associated with construction of the project were predicted using appropriate computer models. In addition, the potential project construction health risk impacts and the impact of 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). BAAQMD recommends using a 1,000-foot screening radius around the project site for purposes of identifying community health risk from existing sources of TACs.

### **Project Description**

The project site is currently unoccupied. The project proposes to construct a 12,932 square foot temple and community hall with a 69-space parking lot. The community hall will contain 6 dwelling units for the monks' residence. Construction is proposed to begin in June 2022 and be completed by October 2024.

### 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<sub>10</sub>), and fine particulate matter (PM<sub>2.5</sub>).

### Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NOx). 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<sub>10</sub>) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM<sub>2.5</sub>). Elevated concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

<sup>&</sup>lt;sup>1</sup> Bay Area Air Quality Management District, CEQA Air Quality Guidelines, May 2017.

### **Toxic Air Contaminants**

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

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

### Regulatory Setting

### Federal Regulations

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

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO<sub>X</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel onroad vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO<sub>X</sub> 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.<sup>2</sup>

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

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<sup>&</sup>lt;sup>2</sup> USEPA, 2000. Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements. EPA420-F-00-057. December.

(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.<sup>3</sup> In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

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

CARB has also adopted and implemented regulations to reduce DPM and NO<sub>X</sub> emissions from inuse (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<sub>X</sub> 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<sub>X</sub>.

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,

<sup>&</sup>lt;sup>3</sup> California Air Resources Board, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

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

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. 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 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 has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. The project site is not within a CARE area.

The BAAQMD California Environmental Quality Act (CEQA) Air Quality Guidelines<sup>5</sup> were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. Attachment 1 includes detailed community risk modeling methodology.

### 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.

<sup>&</sup>lt;sup>4</sup> See BAAQMD: <a href="https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program">https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program</a>, accessed 2/18/2021.

<sup>&</sup>lt;sup>5</sup> Bay Area Air Quality Management District, 2017. CEQA Air Quality Guidelines. May.

### 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.
- 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.

### *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-11.7 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.

### 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 in the single-family residences adjacent to and surrounding the project site. This project would introduce new sensitive receptors (i.e., residents) to the area.

### Significance Thresholds

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

	<b>Construction Thresholds</b>	Operational Thresholds		
Criteria Air Pollutant	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)	
ROG	54	54	10	
$NO_x$	54	54	10	
$PM_{10}$	82 (Exhaust)	82	15	
PM <sub>2.5</sub>	54 (Exhaust)	54	10	
СО	Not Applicable	9.0 ppm (8-hour a	verage) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	No	t Applicable	
Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence		ces (Cumulative from all 00-foot zone of influence)	
Excess Cancer Risk	10 per one million	100 μ	per one million	
Hazard Index	1.0		10.0	
Incremental annual PM <sub>2.5</sub>	$0.3 \mu g/m^3$		$0.8  \mu \text{g/m}^3$	

### **Construction Community Risk 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 construction community health risk assessment was prepared to address project construction impacts on the surrounding off-site sensitive receptors.

Additionally, the project could introduce new residents 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<sub>2.5</sub> 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<sub>2.5</sub>. 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<sub>2.5</sub>. 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 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. 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.

<sup>&</sup>lt;sup>6</sup> DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

<sup>&</sup>lt;sup>7</sup> See CARB's EMFAC2021 Emissions Inventory at <a href="https://arb.ca.gov/emfac/emissions-inventory">https://arb.ca.gov/emfac/emissions-inventory</a>.

Table 1. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	<b>Square Feet (sf)</b>	Acreage
Place of Worship	12.932	1,000-sf	12,932	
Parking Lot	69	Parking Spaces	21,878	1.86
Condo/Townhouse	6	<b>Dwelling Unit</b>	2,051	

### 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 for both phases, including equipment list and schedule, were based on information provided by the project applicant.

The construction equipment worksheets provided by the applicant included the schedule for each phase. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays was set to the default values in CalEEMod. Where CalEEMod does not provide default values, conservative values were estimated for equipment required and hours operated. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase. The construction schedule assumed that the earliest possible start date would be June 2022 and would be built out over a period of approximately 28 months, or 611 construction workdays. The earliest year of full operation was assumed to be 2025.

### 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 soil material imported and/or exported to the site and the estimate of cement and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for grading were estimated from the provided grading volumes by assuming each truck could carry 10 tons per load. The number of concrete and asphalt total round haul trips were provided 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 EMFAC2014 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 LDT1 and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, including cement trucks, are comprised of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips and 20 miles for hauling (soil import/export). Since CalEEMod does not address cement trucks, these were treated as vendor travel distances. Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On road emissions in Santa Clara County for 2022-2024 was 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		Trips by Tri	ір Туре	
Uses and Construction Phase	Total Worker <sup>1</sup>	Total Vendor <sup>1</sup>	Total Haul <sup>2</sup>	Notes
Vehicle mix <sup>1</sup>	67.0% LDA 6.4% LDT1 26.6% LDT2	7.1% MHDT 92.9% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0	CalEEMod default distance with 5-min truck idle time.
Site Preparation	4,536	-	-	CalEEMod default worker trips.
Grading	7,845	-	16	130-cy soil export. CalEEMod default worker trips.
Trenching	1,310	-	-	CalEEMod default worker trips.
Building Construction	10,336	3,264	428	214 cement round trips. CalEEMod default worker and vendor trips.
Architectural Coating	1,172	-	-	CalEEMod default worker trips.
Paving	3,679	-	-	CalEEMod default worker trips.

Notes: <sup>1</sup> Based on 2022-2024 EMFAC2021 light-duty vehicle fleet mix for Santa Clara County.

### Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions and dividing those emissions by the number of active workdays during that year. Table 4 shows the annualized average daily construction emissions of ROG, NOx, PM<sub>10</sub> exhaust, and PM<sub>2.5</sub> exhaust during construction of the project. As indicated in Table 4, predicted annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

<sup>&</sup>lt;sup>2</sup> Includes grading trips estimated by CalEEMod based on amount of material to be removed.

**Table 2.** Construction Period Emissions

Year	ROG	NOx	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Construction	n Emissions Per	Year (Tons)		
2022	0.09	0.78	0.04	0.03
2023	0.23	1.64	0.08	0.07
2024	0.24	1.45	0.07	0.06
Average Daily Constru	ection Emissions	Per Year (pound:	s/day)	
2022 (143 construction workdays)	1.24	10.90	0.53	0.47
2023 (261 construction workdays)	1.75	12.54	0.58	0.52
2024 (207 construction workdays)	2.34	14.05	0.64	0.59
BAAQMD Thresholds (pounds per day)	54 lbs./day	54 lbs./day	82 lbs./day	54 lbs./day
Exceed Threshold?	No	No	No	No

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

# Mitigation Measure AQ-1: Implement BAAQMD-Recommended Standard and Enhanced Measures to Control Particulate Matter Emissions during Construction.

Measures to reduce fugitive dust (i.e., PM<sub>2.5</sub>) emissions from construction are recommended to and ensure that health impacts to nearby sensitive receptors are minimized. During any construction period ground disturbance, the applicant shall ensure that the project contractor implements both basic and additional measures to control dust and exhaust. Implementation of the dust control 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. The contractor shall implement the following enhanced best management practices:

- 1. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
- 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 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. 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.

- 7. 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.
- 8. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- 9. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
- 10. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- 11. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- 12. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- 13. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
- 14. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- 15. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes. Clear signage shall be provided for construction workers at all access points.

### Effectiveness of Mitigation Measure AQ-1

Mitigation Measure AQ-1 represents standard and enhanced mitigation measures that would achieve greater than an 80 percent reduction in on-site fugitive PM<sub>2.5</sub> emissions. These measures are consistent with recommendations in the BAAMQD CEQA Guidance for providing "best management practices" to control construction emissions.

### **Community Health Risk from Project Construction**

### **Construction Emissions**

The CalEEMod model and EMFAC2021 emissions provided total annual PM<sub>10</sub> exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from onroad vehicles, with total emissions from all construction stages as 0.17 tons (338 pounds). The onroad emissions are a result of haul truck travel during grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive PM<sub>2.5</sub> dust emissions were calculated by CalEEMod as 0.39 tons (774 pounds) for the overall construction period.

### **Dispersion Modeling**

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM<sub>2.5</sub> concentrations at sensitive receptors 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. Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive PM<sub>2.5</sub> 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. The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

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

### AERMOD Inputs and Meteorological Data

The modeling used a five-year data set (2013 - 2017) of hourly meteorological data from the San Jose Airport prepared for use with the AERMOD model by BAAQMD. Construction emissions were modeled as occurring daily between 7:30 a.m. to 5:00 p.m., when the majority of construction activity is expected to occur. Annual DPM and PM<sub>2.5</sub> concentrations from construction activities during the 2022-2024 period were calculated using the model. DPM and PM<sub>2.5</sub> concentrations were calculated at nearby sensitive receptors. Receptor heights of 5 feet (1.5 meters) were used to represent the breathing height on the first floor of nearby single-family residences.<sup>10</sup>

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<sup>&</sup>lt;sup>8</sup> Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.

<sup>&</sup>lt;sup>9</sup> 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

<sup>&</sup>lt;sup>10</sup> Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: <a href="https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en">https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en</a>

### 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<sub>2.5</sub> concentrations were also calculated and identified. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Infant, child, and adult exposures were assumed to occur at all residences during the entire construction period.

The maximum modeled annual PM<sub>2.5</sub> 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 refence exposure level of 5  $\mu$ g/m<sup>3</sup>.

The maximum-modeled annual DPM and PM<sub>2.5</sub> concentrations, which includes both the DPM and fugitive PM<sub>2.5</sub> 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 residential MEI was located at the adjacent single-family home southeast of the construction project site. Table 4 summarizes the maximum cancer risks, PM<sub>2.5</sub> concentrations, and health hazard indexes for project related construction activities affecting the construction MEI. *Attachment 4* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Table 4. Construction Risk Impacts at the Off-site MEI

	Source	Cancer Risk (per million)	Annual PM <sub>2.5</sub> (μg/m³)	Hazard Index
	Project Impact			
Project Construction	Unmitigated	77.22 (infant)	1.45	0.06
	Mitigated*	4.09 (infant)	0.25	< 0.01
	BAAQMD Single-Source Threshold	10	0.3	1.0
Exceed Threshold?	Unmitigated	Yes	Yes	No
	Mitigated*	No	No	No

<sup>\*</sup> Construction equipment with Tier 4 interim engines, electric cranes and portable equipment, and enhanced Best Management Practices as Mitigation.

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

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

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site (i.e., influence area). These sources include 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 no roadways within the influence area would have traffic exceeding 10,000 vehicles per day. A review of BAAQMD's stationary source geographic information systems (GIS) map tool identified no stationary sources with the potential to affect the project site and MEI. Figure 2 shows the project area included within the influence area and the location of the MEI. Details of the modeling and community risk calculations are included in *Attachment 5*.

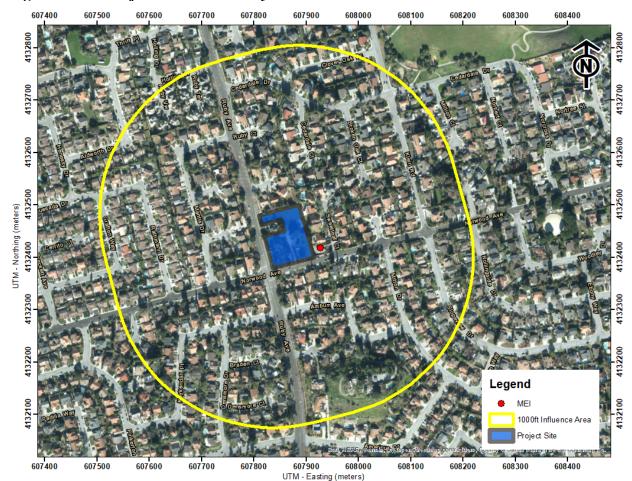


Figure 2. Project Site and Nearby TAC and PM<sub>2.5</sub> Sources

### **BAAQMD Permitted Stationary Sources**

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2018* GIS website.<sup>11</sup> This mapping tool identifies the location of nearby stationary sources and their estimated risk and hazard impacts. No sources within the project's 1,000-foot influence area were identified using this tool.

### Summary of Cumulative Health Risk Impact at Construction MEI

Table 5 reports both the project and cumulative community risk impacts at the sensitive receptors most affected by construction (i.e. the MEI). The project would have an exceedance with respect to community risk caused by project construction activities, since the maximum unmitigated cancer risk and annual PM<sub>2.5</sub> concentration exceed the BAAQMD single-source thresholds. With the implementation of *Mitigation Measure AQ-1 and AQ-2*, the project's cancer risks and annual PM<sub>2.5</sub> concentrations would be lowered to a level below the single-source thresholds. The HI, unmitigated and mitigated, does not exceed its cumulative threshold.

https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

<sup>&</sup>lt;sup>11</sup> BAAQMD, Web:

Table 5. Impacts from Combined Sources at Project MEI

	Source	Cancer Risk (per million)	Annual PM <sub>2.5</sub> (μg/m³)	Hazard Index
	Project Impacts			
Project Construction	Unmitigated	77.22 (infant)	1.45	0.06
	Mitigated	4.09 (infant)	0.25	< 0.01
	BAAQMD Single-Source Threshold	>10.0	>0.3	>1.0
Exceed Threshold?	Unmitigated	Yes	Yes	No
	Mitigated	No	No	No
	BAAQMD Cumulative Source Threshold	>100	>0.8	>10.0
<b>Exceed Threshold?</b>	Unmitigated	No	No	No
	Mitigated	No	No	No

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

A feasible plan to reduce emissions such that increased cancer risk and annual PM<sub>2.5</sub> concentrations from construction would be reduced below significance levels is as follows:

- 1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), 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 88 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. Stationary cranes shall be powered by electricity.
- 3. Install electric line power during early construction phases to avoid use of diesel portable equipment, such as air compressors, concrete saws, and welders.

Alternatively, the applicant could develop a separate feasible plan that reduces on- and near-site construction diesel particulate matter emissions by 88 percent or greater. Such a plan would have to be reviewed and approved by the City.

### Effectiveness of Mitigation Measure AQ-2

CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment met U.S. EPA Tier 4 interim engines standards, cranes, air compressors, concrete saws, and welders would be electrified, and enhanced BAAQMD best management practices for construction were included. With these implemented, the project's construction cancer risk impact, assuming infant exposure, would be reduced by 95 percent to 4.09 per million and the annual PM<sub>2.5</sub>

concentration would be reduced by 81 percent to  $0.25~\mu g/m^3$ . As a result, the project's construction cancer risk and annual PM<sub>2.5</sub> concentration would be reduced below the BAAQMD single-source threshold.

# **On-Site Community Health Risk Impacts – New Project Residents**

A health risk assessment would have been completed to assess the impact existing TAC sources would have on the new proposed sensitive receptors (residents) that that project would introduce. However, there are no existing TAC sources (i.e., roadways with over 10,000 daily vehicles or BAAQMD stationary sources) within 1,000 feet of the project site. Therefore, an on-site community health risk impact was not conducted.

# **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 MEI 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. 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. 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. 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, 95<sup>th</sup> percentile breathing rates are used for the third trimester and infant exposures, and 80<sup>th</sup> percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95<sup>th</sup> percentile 8-hour breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

<sup>&</sup>lt;sup>12</sup> 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.

<sup>&</sup>lt;sup>13</sup> CARB, 2015. Risk Management Guidance for Stationary Sources of Air Toxics. July 23.

<sup>&</sup>lt;sup>14</sup>BAAQMD, 2016. BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. December 2016.

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) =  $CPF \ x \ Inhalation \ Dose \ x \ ASF \ x \ ED/AT \ x \ FAH \ x \ 10^6$ Where:

CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>

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 =  $C_{air} \times DBR \times x \times (EF/365) \times 10^{-6}$ 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:

	Exposure Type 🗲	Infa	nt	Child	Adult
Parameter	Age Range 🗲	3 <sup>rd</sup>	0<2	2 < 16	16 - 30
		Trimester			
DPM Cancer Potency Factor (r	ng/kg-day) <sup>-1</sup>	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day	y) 80 <sup>th</sup> Percentile Rate	273	758	572	261
Daily Breathing Rate (L/kg-day		361	1,090	745	335
8-hour Breathing Rate (L/kg-8	hours) 95 <sup>th</sup> 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/yea	r)	350	350	350	350*
Age Sensitivity Factor		10	10	3	1
Fraction of Time at Home (FA	H)	0.85-1.0	0.85-1.0	0.72-1.0	0.73*
* An 8-hour breathing rate (8H	(rBR) is used for worker and	school child ex	posures.		

### 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<sub>2.5</sub> Concentrations

While not a TAC, fine particulate matter (PM<sub>2.5</sub>) 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<sub>2.5</sub> (project level and cumulative) are in terms of an increase in the annual average concentration. When considering PM<sub>2.5</sub> impacts, the contribution from all sources of PM<sub>2.5</sub> emissions should be included. For projects with potential impacts from nearby local roadways, the PM<sub>2.5</sub> impacts should include those from vehicle exhaust emissions, PM<sub>2.5</sub> generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

# **Attachment 2: CalEEMod Modeling Inputs and Outputs**

		A	Air Quality/l	Noise Cor	nstruc	tion Ir	nforma	ation Data Request
Project N	ame:	WKKK TE						•
	See Equipment Type TAB for type,	horsepower an	d load factor					
	Project Size	6	Dwelling Units	1.86	total project	acres disturi	bed	
			s.f. residential			-		Pile Driving? Y/N? NO
						-		File Diffilig. The RO
			s.f. retail			to the state of th		
			s.f. office/commercial					Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N?TBD
		12,932	s.f. other, specify:	CHURCH/TEMPLE				IF YES (if BOTH separate values)>
			s.f. parking garage		spaces			Kilowatts/Horsepower: TEMP POWER (PG&E) ON SITE
						-		Fuel Type: ELEC.
		21878	s.f. parking lot	69	spaces	ſ		
								TBD
	Construction Hours	7.30	am to	5.00	pm			
					Total	Avg.		
Quantity	Description	HP	Load Factor	Hours/day	Work Days	Hours per day	Annual Hours	Comments
-au.itity	2000.iption		2000 7 00101		Lays			Somitorito
	Demolition	Start Date:		Total phase:		***************************************		Overall Import/Export Volumes
N/A	Concrete/Industrial Saws	End Date: N/A						Demolition Volume
N/A	Excavators	N/A						Square footage of buildings to be demolished
	Rubber-Tired Dozers Tractors/Loaders/Backhoes	N/A N/A						(or total tons to be hauled)
	Site Preparation	Start Date:	6/15/2022	Total phase:	567			
		End Date:	8/15/2024	-				
1	Graders Rubber Tired Dozers	2	0.41 0.4	8	108 108	1.52 1.52	164.57 164.57	
1	Tractors/Loaders/Backhoes	3	0.37	8	108	1.52	164.57	
	Grading / Excavation	Start Date:	6/15/2022	Total phase:	523			
	•	End Date:	6/15/2024					Soil Hauling Volume
1	Excavators Graders	158 187	0.38 0.41	8	108 108	1.65 1.65	178.42 178.42	Export volume = 130 CU.YARDS Import volume = 0/TBD
1	Rubber Tired Dozers	247	0.4	8	108	1.65	178.42	
2	Concrete/Industrial Saws Tractors/Loaders/Backhoes	81 97	0.73 0.37	8	108 108	1.65 1.65	178.42 178.42	
_	Other Equipment?	Ü,	0.07		100	1.00	170.12	
	Trenching/Foundation	Start Date:	6/15/2022	Total phase:	262			
	Trending, Foundation	End Date:	6/15/2023	rotal phace.	202			
1	Tractor/Loader/Backhoe Excavators	97 158	0.37 0.38	8	86 86	2.63 2.63	225.83 225.83	
	Other Equipment?	100	0.50	,	00	2.00	220.00	
	Building - Exterior	Start Date:	9/15/2022	Total phase:	544			Cement Trucks? 214 Total Round-Trips
		End Date:	10/15/2024					
1	Cranes Forklifts	231 89	0.29 0.2	6 8	20 250	0.22 3.68	4.41 919.12	Electric? (Y/N) N Liquid Propane (LPG)? (Y/N) N
	Generator Sets	84	0.74	N/A ON SCALE				Or temporary line power? (Y/N) _ Y - PG&E TEMP. POWER
3	Tractors/Loaders/Backhoes Welders	97 46	0.37 0.45	8	250 275	3.68 4.04	919.12 1112.13	
	Other Equipment?							
Building - Inte	erior/Architectural Coating	Start Date:	9/1/2023	Total phase:	293			
1	Air Compressors	End Date: 78	10/15/2024 0.48		250	6.83	1706.48	
	Aerial Lift	62	0.46	TBD 8	250	0.03	1700.40	
	Other Equipment?							
	Paving	Start Date:		Total phase:	283		-	
1	Cement and Mortar Mixers	Start Date: 9	10/15/2024 0.56	8	220	6.22	1368.20	
1	Pavers	130	0.42	8	220	6.22	1368.20	
1	Paving Equipment Rollers	132 80	0.36 0.38	8	220 220	6.22 6.22	1368.20 1368.20	
1	Tractors/Loaders/Backhoes	97	0.38	8	220	6.22	1368.20	
	Other Equipment?							
	Additional Phases		N/A	Total phase:				
	-	Start Date:	N/A		-		-	

		Construction (	Criteria Air Pollut	ants		
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year			Tons		MT	
		Construc	tion Equipment			
2022	0.08	0.74	0.03	0.03	98.75	
2023	0.21	1.59	0.07	0.07	243.60	
2024	0.23	1.42	0.06	0.06	246.65	
			EMFAC			
2022	0.01	0.04	0.003	0.002	28.46	
2023	0.02	0.05	0.004	0.002	61.79	
2024	0.01	0.04	0.004	0.001	48.19	
	7	Total Construct	tion Emissions by	Year		
2022	0.09	0.78	0.04	0.03	127.22	
2023	0.23	1.64	0.08	0.07	305.39	
2024	0.24	1.45	0.07	0.06	294.84	
		Total Const	ruction Emissions			
Tons	0.56	3.87	0.18	0.16	727.44	
Pounds/Workdays		Average I	Daily Emissions		Work	days
2022	1.24	10.90	0.53	0.47		143
2023	1.75	12.54	0.58	0.52		261
2024	2.34	14.05	0.64	0.59		207
Threshold - lbs/day	54.0	54.0	82.0	54.0		
		Total Const	ruction Emissions			
Pounds	5.32	37.48	1.75	1.58	0.00	
Average	1.83	12.67	0.59	0.53	0.00	611.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

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

# 21-050 Ruby Ave Buddhist Temple Santa Clara County, Annual

# 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	12.93	1000sqft	1.86	12,932.00	0
Parking Lot	69.00	Space	0.00	21,878.00	0
Condo/Townhouse	6.00	Dwelling Unit	0.00	2,051.00	17

### 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	Pacific Gas and Electric Co	ompany			
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage and square footage provided by applicant

Construction Phase - Construction schedule provided by applicant

Off-road Equipment - Default quantities where applicable, otherwise assumed 1 unit amount, hours/day provided by applicant.

Off-road Equipment - Default quantities where applicable, otherwise assumed 1 unit amount, hours/day provided by applicant.

Off-road Equipment - Default quantities where applicable, otherwise assumed 1 unit amount, hours/day provided by applicant.

Off-road Equipment - Default quantities where applicable, otherwise assumed 1 unit amount, hours/day provided by applicant.

Off-road Equipment - Default quantities where applicable, otherwise assumed 1 unit amount, hours/day provided by applicant.

Off-road Equipment - Default quantities where applicable, otherwise assumed 1 unit amount, hours/day provided by applicant.

Trips and VMT - All trips entered into EMFAC2021

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

Grading - Default acreage

Construction Off-road Equipment Mitigation - Enhanced BMPs, Tier 4 interim engines, Electric cranes and portable equipment

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	0.00	1,313.00
tblAreaCoating	Area_Parking	0	1313
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	0	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	0	61
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
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	2.00
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	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

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# 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
1 1	Tier	:	
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	293.00
tblConstructionPhase	NumDays	200.00	544.00
tblConstructionPhase	NumDays	4.00	523.00
tblConstructionPhase	NumDays	10.00	283.00
tblConstructionPhase	NumDays	2.00	567.00
tblGrading	MaterialExported	0.00	130.00
tblTripsAndVMT	HaulingTripNumber	16.00	0.00
tblTripsAndVMT	WorkerTripNumber	4.00	0.00
·	WorkerTripNumber	:	
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00

# 2.0 Emissions Summary

# 2.1 Overall Construction <u>Unmitigated Construction</u>

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

Year					tor	ns/yr							MT	/yr		
2022	0.0795	0.7425	0.6277	1.1400e-003	0.1700	0.0342	0.2041	0.0921	0.0319	0.1239	0.0000	98.0661	98.0661	0.0274	0.0000	98.7520
2023	0.2077	1.5869	1.6121	2.8500e-003	0.3065	0.0708	0.3773	0.1671	0.0666	0.2337	0.0000	242.0273	242.0273	0.0630	0.0000	243.6023
2024	0.2274	1.4174	1.7295	2.8800e-003	0.1680	0.0630	0.2310	0.0910	0.0594	0.1503	0.0000	245.0901	245.0901	0.0622	0.0000	246.6454
Maximum	0.2274	1.5869	1.7295	2.8800e-003	0.3065	0.0708	0.3773	0.1671	0.0666	0.2337	0.0000	245.0901	245.0901	0.0630	0.0000	246.6454

# **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					tor	ns/yr							МТ	/yr		
2022	0.0156	0.3205	0.5852	9.0000e-004	0.0663	1.4700e- 003	0.0678	0.0180	1.4700e- 003	0.0194	0.0000	79.0199	79.0199	0.0256	0.0000	79.6588
2023	0.0606	0.7435	1.3414	2.0200e-003	0.1195	3.2700e- 003	0.1228	0.0326	3.2700e- 003	0.0359	0.0000	177.2545	177.2545	0.0570	0.0000	178.6803
2024	0.0953	0.7983	1.4088	2.0400e-003	0.0655	3.2500e- 003	0.0688	0.0177	3.2500e- 003	0.0210	0.0000	178.1554	178.1554	0.0568	0.0000	179.5757
Maximum	0.0953	0.7983	1.4088	2.0400e-003	0.1195	3.2700e- 003	0.1228	0.0326	3.2700e- 003	0.0359	0.0000	178.1554	178.1554	0.0570	0.0000	179.5757

	ROG	NOx	СО	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	66.65	50.30	15.97	27.80	61.00	95.24	68.08	80.50	94.94	84.99	0.00	25.76	25.76	8.67	0.00	25.65

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-15-2022	9-14-2022	0.3049	0.1371

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

2	9-15-2022	12-14-2022	0.4353	0.1676
3	12-15-2022	3-14-2023	0.3916	0.1657
4	3-15-2023	6-14-2023	0.3911	0.1694
5	6-15-2023	9-14-2023	0.3663	0.1326
6	9-15-2023	12-14-2023	0.6195	0.3135
7	12-15-2023	3-14-2024	0.5941	0.3135
8	3-15-2024	6-14-2024	0.5947	0.3170
9	6-15-2024	9-14-2024	0.4379	0.2443
10	9-15-2024	9-30-2024	0.0659	0.0383
		Highest	0.6195	0.3170

# 2.2 Overall Operational <u>Unmitigated Operational</u>

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/yr							МТ	/yr		
Area	0.0838	8.4000e-004	0.0643	4.0000e-005		2.9800e- 003	2.9800e-003		2.9800e- 003	2.9800e-003	0.2735	0.1866	0.4601	5.1000e- 004	2.0000e-005	0.4783
Energy	2.3800e- 003	0.0214	0.0160	1.3000e-004		1.6500e- 003	1.6500e-003		1.6500e- 003	1.6500e-003	0.0000	36.6849	36.6849	2.5700e- 003	6.9000e-004	36.9546
Mobile	0.0594	0.0609	0.5386	1.0900e-003	0.1246	7.9000e- 004	0.1254	0.0333	7.3000e- 004	0.0340	0.0000	100.9667	100.9667	6.8600e- 003	4.9300e-003	102.6073
Waste						0.0000	0.0000		0.0000	0.0000	15.5207	0.0000	15.5207	0.9173	0.0000	38.4519
Water						0.0000	0.0000		0.0000	0.0000	0.2524	0.6830	0.9354	0.0260	6.3000e-004	1.7725
Total	0.1456	0.0831	0.6189	1.2600e-003	0.1246	5.4200e- 003	0.1300	0.0333	5.3600e- 003	0.0386	16.0466	138.5212	154.5678	0.9532	6.2700e-003	180.2646

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

# **Mitigated Operational**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/yr							МТ	/yr		
Area	0.0838	8.4000e-004	0.0643	4.0000e-005		2.9800e- 003	2.9800e-003		2.9800e- 003	2.9800e-003	0.2735	0.1866	0.4601	5.1000e- 004	2.0000e-005	0.4783
Energy	2.3800e- 003	0.0214	0.0160	1.3000e-004		1.6500e- 003	1.6500e-003		1.6500e- 003	1.6500e-003	0.0000	36.6849	36.6849	2.5700e- 003	6.9000e-004	36.9546
Mobile	0.0594	0.0609	0.5386	1.0900e-003	0.1246	7.9000e- 004	0.1254	0.0333	7.3000e- 004	0.0340	0.0000	100.9667	100.9667	6.8600e- 003	4.9300e-003	102.607
Waste						0.0000	0.0000		0.0000	0.0000	15.5207	0.0000	15.5207	0.9173	0.0000	38.4519
Water						0.0000	0.0000		0.0000	0.0000	0.2524	0.6830	0.9354	0.0260	6.3000e-004	1.7725
Total	0.1456	0.0831	0.6189	1.2600e-003	0.1246	5.4200e- 003	0.1300	0.0333	5.3600e- 003	0.0386	16.0466	138.5212	154.5678	0.9532	6.2700e-003	180.264

	ROG	NOx	СО	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
I	1	Site Preparation	Site Preparation	6/15/2022	8/15/2024	5	567	
I		•	Grading	6/15/2022	6/15/2024	5	523	
	3	Trenching	Trenching	6/15/2022	6/15/2023	5	262	

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

2	Building Construction	Building Construction	9/15/2022	10/15/2024	5	544	
Ę	5 Architectural Coating	Architectural Coating	9/1/2023	10/15/2024	5	293	
6	Paving	Paving	9/15/2023	10/15/2024	5	283	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 4,153; Residential Outdoor: 1,384; Non-Residential Indoor: 19,398; Non-Residential Outdoor: 6,466; Striped Parking Area: 1,313

### **OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	1.50	187	0.41
Site Preparation	Rubber Tired Dozers	1	1.50	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	1.50	97	0.37
Grading	Concrete/Industrial Saws	1	1.60	81	0.73
Grading	Excavators	1	1.60	158	0.38
Grading	Graders	1	1.60	187	0.41
Grading	Rubber Tired Dozers	1	1.60	247	0.40
Grading	Tractors/Loaders/Backhoes	2	1.60	97	0.37
Trenching	Excavators	1	2.60	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	2.60	97	0.37
Building Construction	Cranes	1	0.20	231	0.29
Building Construction	Forklifts	1	3.70	89	0.20
Building Construction	Tractors/Loaders/Backhoes	1	3.70	97	0.37
Building Construction	Welders	3	4.00	46	0.45
Architectural Coating	Air Compressors	1	6.80	78	0.48
Paving	Cement and Mortar Mixers	1	6.20	9	0.56
Paving	Pavers	1	6.20	130	0.42

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Paving	Paving Equipment	1	6.20	132	0.36
Paving	Rollers	1	6.20	80	0.38
Paving	Tractors/Loaders/Backhoes	1	6.20	0.7	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
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### **3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Site Preparation - 2022

**Unmitigated Construction On-Site** 

	ROG	NOx	CO	SO2	Fuaitive	Exhaust	PM10 Total	Fuaitive	Exhaust	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
					PM10	PM10		PM2.5	PM2.5							
					FIVITO	FIVITO		FIVIZ.J	FIVIZ.J							

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Category					tor	ns/yr				MT	/yr					
Fugitive Dust					0.0817	0.0000	0.0817	0.0445	0.0000	0.0445	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0190	0.2108	0.1011	2.4000e-004		9.0500e- 003	9.0500e-003		8.3200e- 003	8.3200e-003	0.0000	21.5212	21.5212	6.9600e- 003	0.0000	21.6952
Total	0.0190	0.2108	0.1011	2.4000e-004	0.0817	9.0500e- 003	0.0908	0.0445	8.3200e- 003	0.0528	0.0000	21.5212	21.5212	6.9600e- 003	0.0000	21.6952

# **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/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	Fuaitive	Exhaust	PM10 Total	Fugitive	Exhaust	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	1100		00	002	i agiavo	Extradot	i wiro rotar	i agiavo	Extradot	i iviz.o i otal	DIO OOL	110.0 002	10101 002	0	1120	0020
					PM10	PM10		PM2.5	PM2.5							
					FIVITO	FIVITO		FIVIZ.J	FIVIZ.J							

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Category					tor	ns/yr				MT	/yr					
Fugitive Dust					0.0319	0.0000	0.0319	8.6700e- 003	0.0000	8.6700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2500e- 003	0.0717	0.1393	2.4000e-004		4.0000e- 004	4.0000e-004		4.0000e- 004	4.0000e-004	0.0000	21.5212	21.5212	6.9600e- 003	0.0000	21.6952
Total	4.2500e- 003	0.0717	0.1393	2.4000e-004	0.0319	4.0000e- 004	0.0323	8.6700e- 003	4.0000e- 004	9.0700e-003	0.0000	21.5212	21.5212	6.9600e- 003	0.0000	21.6952

### **Mitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ns/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

# 3.2 Site Preparation - 2023

# **Unmitigated Construction On-Site**

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

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## 21-050 Ruby Ave Buddhist Temple - Santa Clara County, Annual

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

Category					tor	ns/yr				MT	/yr					
Fugitive Dust					0.1478	0.0000	0.1478	0.0808	0.0000	0.0808	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0297	0.3246	0.1714	4.5000e-004		0.0134	0.0134		0.0123	0.0123	0.0000	39.1268	39.1268	0.0127	0.0000	39.4432
Total	0.0297	0.3246	0.1714	4.5000e-004	0.1478	0.0134	0.1611	0.0808	0.0123	0.0931	0.0000	39.1268	39.1268	0.0127	0.0000	39.4432

#### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ns/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

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10 Total	Fuaitive	Exhaust	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	1100	NOX	CO	002	PM10	PM10	I WITO TOTAL	PM2.5	PM2.5	1 WZ.O Total	DIO- 002	14510- 002	10141 002	OH	1420	0020
								2.0								

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

Category					tor	ns/yr				MT	/yr					
Fugitive Dust					0.0576	0.0000	0.0576	0.0158	0.0000	0.0158	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7300e- 003	0.1303	0.2532	4.5000e-004	• • • • • • • • • • • • • • • • • • • •	7.3000e- 004	7.3000e-004		7.3000e- 004	7.3000e-004	0.0000	39.1268	39.1268	0.0127	0.0000	39.4431
Total	7.7300e- 003	0.1303	0.2532	4.5000e-004	0.0576	7.3000e- 004	0.0584	0.0158	7.3000e- 004	0.0165	0.0000	39.1268	39.1268	0.0127	0.0000	39.4431

#### **Mitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ns/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

## 3.2 Site Preparation - 2024

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

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## 21-050 Ruby Ave Buddhist Temple - Santa Clara County, Annual

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

Category					tor	ns/yr					MT	/yr				
Fugitive Dust					0.0936	0.0000	0.0936	0.0510	0.0000	0.0510	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0184	0.1958	0.1080	2.8000e-004		8.0300e- 003	8.0300e-003		7.3900e- 003	7.3900e-003	0.0000	24.6775	24.6775	7.9800e- 003	0.0000	24.8770
Total	0.0184	0.1958	0.1080	2.8000e-004	0.0936	8.0300e- 003	0.1016	0.0510	7.3900e- 003	0.0584	0.0000	24.6775	24.6775	7.9800e- 003	0.0000	24.8770

### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/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

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

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

Category					tor	ns/yr					MT	/yr				
Fugitive Dust					0.0365	0.0000	0.0365	9.9500e- 003	0.0000	9.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8800e- 003	0.0822	0.1597	2.8000e-004		4.6000e- 004	4.6000e-004		4.6000e- 004	4.6000e-004	0.0000	24.6775	24.6775	7.9800e- 003	0.0000	24.8770
Total	4.8800e- 003	0.0822	0.1597	2.8000e-004	0.0365	4.6000e- 004	0.0370	9.9500e- 003	4.6000e- 004	0.0104	0.0000	24.6775	24.6775	7.9800e- 003	0.0000	24.8770

#### **Mitigated Construction Off-Site**

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

## 3.3 Grading - 2022

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

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#### 21-050 Ruby Ave Buddhist Temple - Santa Clara County, Annual

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

Category					tor	ns/yr				MT	/yr					
Fugitive Dust					0.0882	0.0000	0.0882	0.0476	0.0000	0.0476	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0306	0.3143	0.2388	4.7000e-004		0.0143	0.0143		0.0133	0.0133	0.0000	41.0389	41.0389	0.0112	0.0000	41.3191
Total	0.0306	0.3143	0.2388	4.7000e-004	0.0882	0.0143	0.1026	0.0476	0.0133	0.0609	0.0000	41.0389	41.0389	0.0112	0.0000	41.3191

### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/yr							МТ	/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

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

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

Category					tor	ns/yr					MT	/yr				
Fugitive Dust					0.0344	0.0000	0.0344	9.2800e- 003	0.0000	9.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4400e- 003	0.1284	0.2381	3.8000e-004		6.2000e- 004	6.2000e-004		6.2000e- 004	6.2000e-004	0.0000	33.3504	33.3504	0.0108	0.0000	33.6200
Total	6.4400e- 003	0.1284	0.2381	3.8000e-004	0.0344	6.2000e- 004	0.0350	9.2800e- 003	6.2000e- 004	9.9000e-003	0.0000	33.3504	33.3504	0.0108	0.0000	33.6200

#### **Mitigated Construction Off-Site**

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

## 3.3 Grading - 2023

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

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

Category					tor	ıs/yr					MT	/yr				
Fugitive Dust					0.1587	0.0000	0.1587	0.0863	0.0000	0.0863	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0492	0.4936	0.4206	8.5000e-004		0.0215	0.0215		0.0201	0.0201	0.0000	74.6235	74.6235	0.0203	0.0000	75.1310
Total	0.0492	0.4936	0.4206	8.5000e-004	0.1587	0.0215	0.1802	0.0863	0.0201	0.1064	0.0000	74.6235	74.6235	0.0203	0.0000	75.1310

### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/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

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

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

Category					tor	ns/yr				MT	/yr					
Fugitive Dust					0.0619	0.0000	0.0619	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0117	0.2334	0.4329	6.9000e-004		1.1300e- 003	1.1300e-003		1.1300e- 003	1.1300e-003	0.0000	60.6443	60.6443	0.0196	0.0000	61.1346
Total	0.0117	0.2334	0.4329	6.9000e-004	0.0619	1.1300e- 003	0.0630	0.0168	1.1300e- 003	0.0180	0.0000	60.6443	60.6443	0.0196	0.0000	61.1346

#### **Mitigated Construction Off-Site**

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

## 3.3 Grading - 2024

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

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

Category					tor	ns/yr							MT	/yr		
Fugitive Dust					0.0744	0.0000	0.0744	0.0400	0.0000	0.0400	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0220	0.2160	0.1941	3.9000e-004	•••••	9.2200e- 003	9.2200e-003		8.5900e- 003	8.5900e-003	0.0000	34.4435	34.4435	9.3600e- 003	0.0000	34.6775
Total	0.0220	0.2160	0.1941	3.9000e-004	0.0744	9.2200e- 003	0.0836	0.0400	8.5900e- 003	0.0485	0.0000	34.4435	34.4435	9.3600e- 003	0.0000	34.6775

#### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/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

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

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

Category					tor	ns/yr							MT	/yr		
Fugitive Dust					0.0290	0.0000	0.0290	7.7900e- 003	0.0000	7.7900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4000e- 003	0.1077	0.1998	3.2000e-004		5.2000e- 004	5.2000e-004		5.2000e- 004	5.2000e-004	0.0000	27.9916	27.9916	9.0500e- 003	0.0000	28.2179
Total	5.4000e- 003	0.1077	0.1998	3.2000e-004	0.0290	5.2000e- 004	0.0295	7.7900e- 003	5.2000e- 004	8.3100e-003	0.0000	27.9916	27.9916	9.0500e- 003	0.0000	28.2179

#### **Mitigated Construction Off-Site**

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

#### 3.4 Trenching - 2022

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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## 21-050 Ruby Ave Buddhist Temple - 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					МТ	/yr				
Off-Road	8.5300e- 003	0.0802	0.1277	1.9000e-004	=	900e- )03	4.0900e-003	3.7600e- 003	3.7600e-003	0.0000	16.8910	16.8910	5.4600e- 003	0.0000	17.0276
Total	8.5300e- 003	0.0802	0.1277	1.9000e-004	-	900e- )03	4.0900e-003	3.7600e- 003	3.7600e-003	0.0000	16.8910	16.8910	5.4600e- 003	0.0000	17.0276

#### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ıs/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

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

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Off-Road	3.0900e- 003	0.0844	0.1455	1.9000e-004	3.1000e- 004	3.1000e-004	3.1000e- 004	3.1000e-004	0.0000	16.8910	16.8910	5.4600e- 003	0.0000	17.0276
Total	3.0900e-	0.0844	0.1455	11.9000e-004		3.1000e-004	: :	3.1000e-004	0.0000	16.8910	16.8910	5.4600e-	0.0000	17.0276
. Ottal	003	0.0044	0.1400	1.00000	004	0.10000 004	004	0.10000 004	0.0000	10.0010	10.0010	003	0.0000	11.0210

#### **Mitigated Construction Off-Site**

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

# **3.4 Trenching - 2023**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ıs/yr				МТ	/yr					
	6.5800e- 003	0.0596		1.6000e-004		003	2.9300e-003		003	2.7000e-003		14.0637	14.0637	4.5500e- 003	0.0000	14.1774

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

Total	6.5800e-	0.0596	0.1062	1.6000e-004	2.9300e-	2.9300e-003	2.7000e-	2.7000e-003	0.0000	14.0637	14.0637	4.5500e-	0.0000	14.1774
	003				003		003					003		

#### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ıs/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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	-/yr		
Off-Road	2.5800e- 003	0.0702	0.1211	1.6000e-004		2.6000e- 004	2.6000e-004		2.6000e- 004	2.6000e-004	0.0000	14.0636	14.0636	4.5500e- 003	0.0000	14.1774
Total	2.5800e- 003	0.0702	0.1211	1.6000e-004		2.6000e- 004	2.6000e-004		2.6000e- 004	2.6000e-004	0.0000	14.0636	14.0636	4.5500e- 003	0.0000	14.1774

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

#### **Mitigated Construction Off-Site**

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

# 3.5 Building Construction - 2022 <u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive I 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/y	yr							МТ	/yr		
Off-Road	0.0213	0.1371	0.1602	2.4000e-004	6	6.7100e- 003	6.7100e-003		6.4600e- 003	6.4600e-003	0.0000	18.6150	18.6150	3.8100e- 003	0.0000	18.7101
Total	0.0213	0.1371	0.1602	2.4000e-004	6	6.7100e- 003	6.7100e-003		6.4600e- 003	6.4600e-003	0.0000	18.6150	18.6150	3.8100e- 003	0.0000	18.7101

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

#### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/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

	ROG	NOx	CO	SO2	Fugitive 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								МТ	-/yr		
Off-Road	1.8500e- 003	0.0361	0.0624	8.0000e-005		1.3000e- 004	1.3000e-004		1.3000e- 004	1.3000e-004	0.0000	7.2573	7.2573	2.3500e- 003	0.0000	7.3160
Total	1.8500e- 003	0.0361	0.0624	8.0000e-005		1.3000e- 004	1.3000e-004		1.3000e- 004	1.3000e-004	0.0000	7.2573	7.2573	2.3500e- 003	0.0000	7.3160

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

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

# 3.5 Building Construction - 2023 <u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0660	0.4394	0.5362	8.0000e-004		0.0194	0.0194		0.0187	0.0187	0.0000	62.8742	62.8742	0.0125	0.0000	63.1859
Total	0.0660	0.4394	0.5362	8.0000e-004		0.0194	0.0194		0.0187	0.0187	0.0000	62.8742	62.8742	0.0125	0.0000	63.1859

### **Unmitigated Construction Off-Site**

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

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

#### **Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ıs/yr							МТ	/yr		
Off-Road	6.2600e- 003	0.1218	0.2107	2.8000e-004		4.6000e- 004	4.6000e-004		4.6000e- 004	4.6000e-004	0.0000	24.5236	24.5236	7.9300e- 003	0.0000	24.7219
Total	6.2600e- 003	0.1218	0.2107	2.8000e-004		4.6000e- 004	4.6000e-004		4.6000e- 004	4.6000e-004	0.0000	24.5236	24.5236	7.9300e- 003	0.0000	24.7219

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Category					tor	ns/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

# 3.5 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					tor	ıs/yr							МТ	/yr		
Off-Road	0.0489	0.3351	0.4244	6.3000e-004		0.0134	0.0134		0.0129	0.0129	0.0000	50.0658	50.0658	9.7200e- 003	0.0000	50.3089
Total	0.0489	0.3351	0.4244	6.3000e-004		0.0134	0.0134		0.0129	0.0129	0.0000	50.0658	50.0658	9.7200e- 003	0.0000	50.3089

#### **Unmitigated Construction Off-Site**

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

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Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	B															
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

#### **Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	4.9900e- 003	0.0970	0.1677	2.2000e-004		3.6000e- 004	3.6000e-004		3.6000e- 004	3.6000e-004	0.0000	19.5328	19.5328	6.3200e- 003	0.0000	19.6907
Total	4.9900e- 003	0.0970	0.1677	2.2000e-004		3.6000e- 004	3.6000e-004		3.6000e- 004	3.6000e-004	0.0000	19.5328	19.5328	6.3200e- 003	0.0000	19.6907

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ıs/yr				МТ	/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

# 3.6 Architectural Coating - 2023 <u>Unmitigated Construction On-Site</u>

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Archit. Coating	0.0254					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.3400e- 003	0.0635	0.0883	1.4000e-004		3.4500e- 003	3.4500e-003		3.4500e- 003	3.4500e-003	0.0000	12.4429	12.4429	7.4000e- 004	0.0000	12.4615
Total	0.0347	0.0635	0.0883	1.4000e-004		3.4500e- 003	3.4500e-003		3.4500e- 003	3.4500e-003	0.0000	12.4429	12.4429	7.4000e- 004	0.0000	12.4615

#### **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					tor	ıs/yr				МТ	/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

## **Mitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ıs/yr							МТ	/yr		
Archit. Coating	0.0254					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0254	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/yr				МТ	/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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

# 3.6 Architectural Coating - 2024 <u>Unmitigated Construction On-Site</u>

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Archit. Coating	0.0611					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0212	0.1430	0.2123	3.5000e-004		7.1500e- 003	7.1500e-003		7.1500e- 003	7.1500e-003	0.0000	29.9497	29.9497	1.6900e- 003	0.0000	29.9918
Total	0.0823	0.1430	0.2123	3.5000e-004		7.1500e- 003	7.1500e-003		7.1500e- 003	7.1500e-003	0.0000	29.9497	29.9497	1.6900e- 003	0.0000	29.9918

#### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/yr				МТ	/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	D												0			
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	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ıs/yr							МТ	/yr		
Archit. Coating	0.0611					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0611	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ıs/yr				МТ	/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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

## 3.7 Paving - 2023

## **Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0214	0.2061	0.2896	4.5000e-004		0.0102	0.0102		9.3900e- 003	9.3900e-003	0.0000	38.8963	38.8963	0.0123	0.0000	39.2034
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0214	0.2061	0.2896	4.5000e-004		0.0102	0.0102		9.3900e- 003	9.3900e-003	0.0000	38.8963	38.8963	0.0123	0.0000	39.2034

#### **Unmitigated Construction Off-Site**

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

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	D												0			
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

## **Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	6.9700e- 003	0.1877	0.3237	4.5000e-004		7.0000e- 004	7.0000e-004		7.0000e- 004	7.0000e-004	0.0000	38.8962	38.8962	0.0123	0.0000	39.2033
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.9700e- 003	0.1877	0.3237	4.5000e-004		7.0000e- 004	7.0000e-004		7.0000e- 004	7.0000e-004	0.0000	38.8962	38.8962	0.0123	0.0000	39.2033

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ıs/yr				МТ	/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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

## 3.7 Paving - 2024

## **Unmitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.0559	0.5277	0.7906	1.2200e-003		0.0253	0.0253		0.0233	0.0233	0.0000	105.9537	105.9537	0.0335	0.0000	106.7902
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0559	0.5277	0.7906	1.2200e-003		0.0253	0.0253		0.0233	0.0233	0.0000	105.9537	105.9537	0.0335	0.0000	106.7902

#### **Unmitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ıs/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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

## **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					ton	s/yr							МТ	/yr		
Off-Road	0.0190	0.5113	0.8815	1.2200e-003		1.9100e- 003	1.9100e-003		1.9100e- 003	1.9100e-003	0.0000	105.9536	105.9536	0.0335	0.0000	106.7901
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0190	0.5113	0.8815	1.2200e-003		1.9100e- 003	1.9100e-003		1.9100e- 003	1.9100e-003	0.0000	105.9536	105.9536	0.0335	0.0000	106.7901

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

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

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

## 4.0 Operational Detail - Mobile

### **4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					toi	ns/yr							МТ	-/yr		
J	0.0594	0.0609		1.0900e-003		7.9000e- 004	0.1254	0.0333	7.3000e- 004	0.0340	0.0000		100.9667	003	4.9300e-003	
	0.0594	0.0609		1.0900e-003		7.9000e- 004	0.1254		7.3000e- 004	0.0340	0.0000	100.9667	100.9667	6.8600e- 003	4.9300e-003	102.6073

## **4.2 Trip Summary Information**

	Ave	erage Daily Trip Ra	te	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	43.92	48.84	37.68	101,002	101,002
Parking Lot	0.00	0.00	0.00		
Place of Worship	89.86	77.45	357.26	236,247	236,247
Total	133.78	126.29	394.94	337,250	337,250

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

#### **4.3 Trip Type Information**

		Miles			Trip %			Trip Purpos	e %
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
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.573651	0.055882	0.186012	0.115369	0.020252	0.005158	0.008030	0.006377	0.000893	0.000372	0.024386	0.000900	0.002720
Parking Lot	0.573651	0.055882	0.186012	0.115369	0.020252	0.005158	0.008030	0.006377	0.000893	0.000372	0.024386	0.000900	0.002720
Place of Worship	0.573651	0.055882	0.186012	0.115369	0.020252	0.005158	0.008030	0.006377	0.000893	0.000372	0.024386	0.000900	0.002720

## 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					ton	s/yr							МТ	/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13.0919	13.0919	2.1200e- 003	2.6000e-004	13.2213
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13.0919	13.0919	2.1200e- 003	2.6000e-004	13.2213
NaturalGas Mitigated	2.3800e- 003	0.0214	0.0160	1.3000e-004		1.6500e- 003	1.6500e-003		1.6500e- 003	1.6500e-003	0.0000	23.5931	23.5931	4.5000e- 004	4.3000e-004	23.7333

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

NaturalGas =	2.3800e-	0.0214	0.0160	1.3000e-004	<u></u>	1.6500e-	1.6500e-003	 1.6500e-	1.6500e-003	0.0000	23.5931	23.5931	4.5000e-	4.3000e-004	23.7333
Unmitigated	003					003		003					004		

# 5.2 Energy by Land Use - NaturalGas <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	СО	SO2	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					tor	ns/yr							МТ	√yr		
Condo/Townhouse	103558	5.6000e- 004	4.7700e-003	2.0300e-003	3.0000e- 005		3.9000e-004	3.9000e- 004		3.9000e- 004	3.9000e-004	0.0000	5.5262	5.5262	1.1000e-004	1.0000e- 004	5.5591
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
Place of Worship	338560	1.8300e- 003	0.0166	0.0139	1.0000e- 004		1.2600e-003	1.2600e- 003		1.2600e- 003	1.2600e-003	0.0000	18.0668	18.0668	3.5000e-004	3.3000e- 004	18.1742
Total		2.3900e- 003	0.0214	0.0160	1.3000e- 004		1.6500e-003	1.6500e- 003		1.6500e- 003	1.6500e-003	0.0000	23.5931	23.5931	4.6000e-004	4.3000e- 004	23.7333

#### **Mitigated**

	NaturalGa s Use	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	/yr		
Condo/Townhouse	103558	5.6000e- 004	4.7700e-003 2	2.0300e-003	3.0000e- 005		3.9000e-004	3.9000e- 004		3.9000e- 004	3.9000e-004	0.0000	5.5262	5.5262	1.1000e-004	1.0000e- 004	5.5591
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

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Place of Worship	338560	1.8300e-	0.0166	0.0139	1.0000e-	 1.2600e-003	1.2600e-	1.2600e-	1.2600e-003	0.0000	18.0668	18.0668	3.5000e-004	3.3000e-	18.1742
		003			004		003	003						004	
Total		2.3900e- 003	0.0214	0.0160	1.3000e- 004	1.6500e-003	1.6500e- 003	1.6500e- 003	1.6500e-003	0.0000	23.5931	23.5931	4.6000e-004	4.3000e- 004	23.7333

# 5.3 Energy by Land Use - Electricity <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		М٦	Γ/yr	
Condo/Townhouse	29090.8	2.6916	4.4000e-004	5.0000e-005	2.7182
Parking Lot	7657.3	0.7085	1.1000e-004	1.0000e-005	0.7155
Place of Worship	104749	9.6918	1.5700e-003	1.9000e-004	9.7876
Total		13.0919	2.1200e-003	2.5000e-004	13.2213

#### **Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		M <sup>-</sup>	T/yr	
Condo/Townhouse	29090.8	2.6916	4.4000e-004	5.0000e-005	2.7182

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

Parking Lot	7657.3	0.7085	1.1000e-004 1.0000e-005	0.7155
Place of Worship	104749	9.6918	1.5700e-003 1.9000e-004	9.7876
Total		13.0919	2.1200e-003 2.5000e-004	13.2213

#### 6.0 Area Detail

## **6.1 Mitigation Measures Area**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	-/yr		
Mitigated		8.4000e-004		4.0000e-005		003	2.9800e-003		003	2.9800e-003				004	2.0000e-005	
Unmitigated		8.4000e-004		4.0000e-005			2.9800e-003			2.9800e-003		0.1866			2.0000e-005	

# **6.2 Area by SubCategory**

## **Unmitigated**

	ROG	NOx	СО	SO2	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	SubCategory tons/yr												MT	/yr		

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## 21-050 Ruby Ave Buddhist Temple - Santa Clara County, Annual

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

Architectural Coating	8.6400e- 003				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0599				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0138	3.2000e-004	0.0191	4.0000e-005	2.7300e- 003	2.7300e-003	2.7300e- 003	2.7300e-003	0.2735	0.1124	0.3859	4.4000e- 004	2.0000e-005	0.4022
Landscaping	1.4100e- 003	5.2000e-004	0.0453	0.0000	2.5000e- 004	2.5000e-004	2.5000e- 004	2.5000e-004	0.0000	0.0742	0.0742	7.0000e- 005	0.0000	0.0761
Total	0.0838	8.4000e-004	0.0643	4.0000e-005	2.9800e- 003	2.9800e-003	2.9800e- 003	2.9800e-003	0.2735	0.1866	0.4601	5.1000e- 004	2.0000e-005	0.4783

#### **Mitigated**

	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	-/yr		
Architectural Coating	8.6400e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0599					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0138	3.2000e-004	0.0191	4.0000e-005		2.7300e- 003	2.7300e-003		2.7300e- 003	2.7300e-003	0.2735	0.1124	0.3859	4.4000e- 004	2.0000e-005	0.4022
Landscaping	1.4100e- 003	5.2000e-004	0.0453	0.0000		2.5000e- 004	2.5000e-004		2.5000e- 004	2.5000e-004	0.0000	0.0742	0.0742	7.0000e- 005	0.0000	0.0761
Total	0.0838	8.4000e-004	0.0643	4.0000e-005		2.9800e- 003	2.9800e-003		2.9800e- 003	2.9800e-003	0.2735	0.1866	0.4601	5.1000e- 004	2.0000e-005	0.4783

## 7.0 Water Detail

## 7.1 Mitigation Measures Water

Page 1 of 1

Date: 6/9/2021 11:02 AM

21-050 Ruby Ave Buddhist Temple - Santa Clara County, Annual

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

	Total CO2	CH4	N2O	CO2e
Category		M	T/yr	
Mitigated	0.9354	0.0260	6.3000e- 004	1.7725
Unmitigated	0.9354	0.0260	6.3000e- 004	1.7725

7.2 Water by Land Use <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	0.390924 / 0.246452	0.3996	0.0128	3.1000e-004	0.8104
Parking Lot	0/0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.404566 / 0.632782	0.5358	0.0133	3.2000e-004	0.9622
Total		0.9354	0.0260	6.3000e-004	1.7725

Date: 6/9/2021 11:02 AM

#### 21-050 Ruby Ave Buddhist Temple - Santa Clara County, Annual

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

Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Mgal	MT/yr			
0.390924 / 0.246452	0.3996	0.0128	3.1000e-004	0.8104
0/0	0.0000	0.0000	0.0000	0.0000
0.404566 / 0.632782	0.5358	0.0133	3.2000e-004	0.9622
	0.9354	0.0260	6.3000e-004	1.7725
	Mgal  0.390924 / 0.246452  0/0  0.404566 /	0.390924 / 0.3996 0.246452 0.0000 0.404566 / 0.5358 0.632782	Mgal         MT           0.390924 / 0.246452         0.3996 0.0128           0/0 0.0000 0.0000         0.0000           0.404566 / 0.5358 0.0133         0.632782	Mgal         MT/yr           0.390924 / 0.246452         0.3996 0.0128 3.1000e-004           0 / 0 0.0000 0.0000 0.0000         0.0000 0.0000           0.404566 / 0.5358 0.0133 3.2000e-004 0.632782         0.0133 3.2000e-004

#### 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e		
	MT/yr					
Mitigated	15.5207	0.9173	0.0000	38.4519		
Ommigated	15.5207	0.9173	0.0000	38.4519		

## 8.2 Waste by Land Use

Date: 6/9/2021 11:02 AM

21-050 Ruby Ave Buddhist Temple - Santa Clara County, Annual

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

#### **Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	2.76	0.5603	0.0331	0.0000	1.3880
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	73.7	14.9604	0.8841	0.0000	37.0638
Total		15.5207	0.9173	0.0000	38.4519

## **Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	2.76	0.5603	0.0331	0.0000	1.3880
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	73.7	14.9604	0.8841	0.0000	37.0638
Total		15.5207	0.9173	0.0000	38.4519

Date: 6/9/2021 11:02 AM

Fuel Type

**Boiler Rating** 

#### 21-050 Ruby Ave Buddhist Temple - Santa Clara County, Annual

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

### 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type			
	-			-					
10.0 Stationary Equipment									
Fire Pumps and Emergency Generators									
Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type			
Boilers					-	-			

Heat Input/Year

Heat Input/Day

# Equipment Type User Defined Equipment

Equipment Type	Number

Number

### 11.0 Vegetation

## **Attachment 3: EMFAC2021 Calculations**

#### **CalEEMod Construction Inputs**

	<u>CalEEMod</u>	CalEEMod	Tota	ıl 7	Γotal	CalEEMod										
	WORKER	VENDOR	Wor	ker ۱	/endor	HAULING	Worker	Trip \	Vendor Trip	Hauling T	rip Worker Vehicle	Vendor Vehicle	Hauling Vehicle	Worker	Vendor	Hauling
Phase	TRIPS	TRIPS	Trips	s 7	Trips	TRIPS	Length	L	ength	Length	Class	Class	Class	VMT	VMT	VMT
Site Preparation		8	0	4536	0		0	10.8	7.	3	20 LD_Mix	HDT_Mix	HHDT	48988.8		0
Grading	1	15	0	7845	0	1	6	10.8	7.	3	20 LD_Mix	HDT_Mix	HHDT	84726		320
Trenching/Foundation		5	0	1310	0		0	10.8	7.	3	20 LD_Mix	HDT_Mix	HHDT	14148		0
Paving	1	13	0	3679	0		0	10.8	7.	3	20 LD_Mix	HDT_Mix	HHDT	39733.2	C	0
Building Construction	1	19	6	10336	3264	42	8	10.8	7.	3	20 LD_Mix	HDT_Mix	HHDT	111628.8	23827.2	8560
Architectural Coating		4	0	1172	0		0	10.8	7.	3	20 LD_Mix	HDT_Mix	HHDT	12657.6		0

Number of Days Per Year			
2022	<mark>6/15/22</mark>	12/31/22	200
2023	1/1/23	12/31/23	365
2024	<mark>1/1/24</mark>	10/15/24	289

289 207854 **611** *Total Workdays* 

143 261

Phase	Start Date	End Date	Days/Week	Workdays
Site Preparation	6/15/2022	8/15/2024	5	567
Grading	6/15/2022	6/15/2024	5	523
Trenching/Foundation	6/15/2022	6/15/2023	5	262
Paving	9/15/2023	10/15/2024	5	283
Building Construction	9/15/2022	10/15/2024	5	544
Architectural Coating	9/1/2023	10/15/2024	5	293

## **Summary of Construction Traffic Emissions (EMFAC2021)**

					Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	
<b>Pollutants</b>	ROG	NOx	СО	SO2	PM10	PM10	Total	PM2.5	PM2.5	Total	NBio- CO2
YEAR					To	ns					Metric Tons
					Cri	iteria Polluta	ants				
2022	0.0090	0.0367	0.0794	0.0003	0.0266	0.0034	0.0300	0.0040	0.0019	0.0059	28.4649
2023	0.0200	0.0490	0.1814	0.0006	0.0485	0.0045	0.0530	0.0073	0.0018	0.0091	61.7887
2024	0.0149	0.0368	0.1345	0.0005	0.0384	0.0035	0.0420	0.0058	0.0014	0.0072	48.1912
				Toxi	ic Air Conta	minants (1 I	Mile Trip Le	ength)			
2022	0.0071	0.0109	0.0281	0.0000	0.0025	0.0004	0.0029	0.0004	0.0002	0.0006	3.9476
2023	0.0182	0.0173	0.0660	0.0001	0.0046	0.0005	0.0051	0.0007	0.0002	0.0009	7.9099
2024	0.0137	0.0133	0.0493	0.0001	0.0036	0.0004	0.0040	0.0005	0.0002	0.0007	6.1658

Adjustment	Factors fo	r EMFAC2017 C	asoline L	ight Duty	/ Vehicles	5
Year	NOx	TOG	TOG	PM	CO	CO2
	Exhaust	Evaporative	Exhaust	Exhaust	Exhaust	Exhaust
NA	1	11	1	1	1	1
2021	1.0002	1.0001	1.0002	1.0009	1.0005	1.0023
2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065
2023	1.0007	1.0006	1.0007	1.0032	1.0027	1.0126
2024	1.0012	1.0010	1.0011	1.0051	1.0044	1.0207
2025	1.0018	1.0016	1.0016	1.0074	1.0065	1.0309
2026	1.0023	1.0022	1.0020	1.0091	1.0083	1.0394
2027	1.0028	1.0028	1.0024	1.0105	1.0102	1.0475
2028	1.0034	1.0035	1.0028	1.0117	1.0120	1.0554
2029	1.0040	1.0042	1.0032	1.0129	1.0138	1.0629
2030	1.0047	1.0051	1.0037	1.0142	1.0156	1.0702
2031	1.0054	1.0061	1.0042	1.0155	1.0173	1.0770
2032	1.0061	1.0072	1.0047	1.0169	1.0189	1.0834
2033	1.0068	1.0083	1.0052	1.0182	1.0204	1.0893
2034	1.0075	1.0095	1.0058	1.0196	1.0218	1.0947
2035	1.0081	1.0108	1.0063	1.0210	1.0232	1.0997
2036	1.0088	1.0121	1.0069	1.0223	1.0244	1.1041
2037	1.0094	1.0134	1.0074	1.0236	1.0255	1.1080
2038	1.0099	1.0148	1.0079	1.0248	1.0265	1.1114
2039	1.0104	1.0161	1.0085	1.0259	1.0274	1.1143
2040	1.0109	1.0174	1.0090	1.0270	1.0281	1.1168
2041	1.0113	1.0186	1.0095	1.0279	1.0288	1.1189
2042	1.0116	1.0198	1.0099	1.0286	1.0294	1.1207
2043	1.0119	1.0207	1.0103	1.0293	1.0299	1.1221
2044	1.0122	1.0216	1.0106	1.0299	1.0303	1.1233
2045	1.0124	1.0225	1.0109	1.0303	1.0306	1.1243
2046	1.0125	1.0233	1.0111	1.0308	1.0309	1.1251
2047	1.0127	1.0240	1.0113	1.0311	1.0311	1.1258
2048	1.0128	1.0246	1.0115	1.0314	1.0313	1.1263
2049	1.0128	1.0252	1.0116	1.0316	1.0315	1.1268
2050	1.0129	1.0257	1.0117	1.0318	1.0316	1.1272
Enter Year: 2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065

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

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

Enter NA in the date field if adjustments do not apply

Source: EMPACIZE2 [vf. 0.1] Emission Rates
Region Type Country
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Celerator Fava: 2002
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Senta Clara 2022 HHDT Agriceate Agricular Science 3,877367 105,1913 105,1913 0 7657795 0 9,2462772 0 1,235102 0,00578 0 0,001845 0 0
Senta Clara 2022 HHDT Aggregate Descei 8126-53 984491.3 94491.3 0 118998.6 0 2444518 57.79787 2544856 0027777 009592 1577.544 12677.87 0 0001458 0236832 0 0254298 1997403 0 001398 5098937 0 0 0 0 035574 5,694752 0 0 0 0 0,0001459 025982 70.47019 0 0015885 0 120052
Santa Clara 2022 HHDT Agreeate Natural Gs 6607755 47681.36 47681.3
Senta Clara 2022 LDA Agriceante Seasonine 604/0478 22274250 22274250 0 2805961 0 0053791 0 0227421 000125 0 0002055 0.00137 0 0002242 0.008 0.007588 287.1374 0 73.33113 0002975 0 0.001554 0 0.031731 0.098272 0.249754 1.530333 0.017001 0 0.417946 0.098272 0.249754 1.530333 0.012027 0.04754 0.0002742 0.00000000000000000000000000000000000
Santa Clara 2022 LDA Agrievable Agricultural Santa Clara 2022 LDA Agricultur
Santa Clara 2022 LDA Agrievable Agriculate A
Santa Clara 2022 LOA Agreemate Agree
Santa Clara 2022 LOT1 Agreeable Agreemate Segrings Sept 54,08 1779154 0779154
Santa Clara 2022 LOT1 Agreeable Agreemate Discust Description 2022 LOT1 Agreeable Agreemate Discust 28.88602 444.5778 0 84.95747 0 1.664075 0 0 0.0031 1.669282 0 0 0.003939 0
Santa Clara 2022 LIDT1 Aggregate Aggregate Electricity 182:9928 6367.047 0 6367.047 863.9347 2458.206 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Santa Clara 2022 LDT1 Aggregate Aggregate Plays in Play 24.31577 1158.953 555.2266 603.7259 100.5457 182.3432 0.003147 0.00042 0.0001472 0.002 0.003176 0.00043 0 0.0042675 0.000571 0 0.00
Santa Clara 2022 LOTZ Aggregate Aggr
Santa Clara 2022 LDT2 Aggregate Aggregate Aggregate Discel 933.788 355923 055923 055923 055923 0 0 0 0 0.0031 0.132603 0 0.0000617 0 0 0.0031 0.132603 0 0 0.0000617 0 0 0.0031 0.132603 0 0 0.0000617 0 0 0.0031 0.132603 0 0 0.0000617 0 0 0.0031 0.132603 0 0 0.0000617 0 0 0.0031 0.132603 0 0 0.0000617 0 0 0.0031 0.132603 0 0 0.0000617 0 0 0.0031 0.132603 0 0 0.0000617 0 0 0.0031 0.132603 0 0 0.0000617 0 0 0.0031 0.132603 0 0 0 0 0 0 0.0031 0 0 0.0031 0 0 0 0 0 0 0.0031 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Santa Clara 2022 LDT2 Appropriate Appropriate Encrincing 669:5585 23693.95 0 23693.95 0 23693.95 0 23693.95 0 23693.95 0 23693.95 0 23693.95 0 23693.95 0 200.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Santa Clara 2022 LOTZ Aggregate Aggregate Aggregate Aggregate Plug-in-live 2256 28 7825.59 28723.51 29102.47 5194.718 8789.814 0.003259 0 0.011551 0.000565 0 0.001911 0.002 0.001912 0.000565 0 0.001911 0.002 0.001912 0.000565 0 0.001913 0.001913 0
Santa Clara 2022 LHOT1 Aggregate Aggregate Gazoline 19023-54 6929-92 0 283422.4 0 0.22563 0.0888 0.08085 0.001666 0 0.000355 0.002 0.0273 0.001812 0 0.000356 0.008 0.078 910.666 121.4496 25.8752 0.010696 0.11838 0.036173 0.012587 0.003945 0.053797 0.287419 3.005479 0.078711 0.648234 0.199044 0.053097 0.287419 3.005479 0.078711 0.648234 0.199044 0.053097 0.287419 3.005479 0.04851 1.310703 3.790518 3.03062 0.009003 0.001201 0.0000255
Santa Clara 2022 LHDT1 Aggregate Aggregate Discal 9466.887 36494.13 36494.1
Santa Clara 2022 LiviDTZ Aggregate Aggregate Aggregate Aggregate Gasceline 2479.119 89333.8 89333.8 0 0 36935.18 0 0 0.000288 0.000 0.00033 0.017781 0.003903 0.00390
Santa Clara 2022 LHDTZ Aggregate Aggregate Discael 4276.175 167672 0 53788.9 0 1.623621 2.114348 0 0.038809 0.027077 0 0.003 0.03185 0.038473 0.028302 0 0.012 0.091 773.4619 214.911 0 0.00832 0.005098 0 0.179126 0.10976 0 0 0 0 0.20923 0.124954 0 0 0 0 0.1727 0.476085 0.909745 0 0.007329 0.002036
Santa Clara 2022 MCV Aggregate Aggregate Gazeline 27595.09 162924 162924 0 55190.18 0 0.60517 0 0.449774 0.0012772 0 0.003375 0.004 0.004 0.0012188.9834 0 50.99901 0.173457 0 0.19335 0.0441009 0 0.008761 1.156556 0 1.442993 3.560376 3.734124 3.980024 0.08765 3.734124 3.980024 0.08075 13.58248 0 8.107621 0.001868 0 0.000976
Santa Clara 2022 MOV Aggregate Aggregate Aggregate Aggregate Gascoline 150747.3 5216512 0 697659.3 0 0.136789 0 0.0517519 0.0001357 0 0.0002255 0.002 0.0003193 0.000475 0 0.0001109 0.000110 0 0.014579 0.000518 0 0.119963 0.000481 0 0.045397 0.021781 0 0.614759 0.106179 0.293735 1.762049 0.034617 1.174347 0 4.66825 0.004293 0 0.00110
Santa Clara 2022 MOV Apprepare Apprepare Desert 2337.328 86668.85 011158.46 0 0.03815 0 0 0.005454 0 0 0.009909 417.1884 0 0 0.000553 0 0 0.065728 0 0 0.011906 0 0 0 0 0 0.013554 0 0 0 0.0031 0.20344 0 0 0.003993 0
Santa Claria 2022 MOV Aggregate Aggregate Electricity 623.6975 22215.8 0 22215.8 0 22215.8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Santa Clara 2022 MDV Aggregate Aggregate Playin Hyb. 789.5612 33722.81 17285.18 16437.63 3254.836 4964.654 0.003363 0 0.11551 0.000723 0 0.002574 0.008 0.003913 142.8094 0 9.85867 0.000458 0 0.027078 0.001454 0 0.173285 0.039014 0.029758 0.381921 0.002122 0 0.18972 0.039158 0.381921 0.002122 0 0.18972 0.001454 0 0.000786 0 0.000
Santa Clara 2022 MH Aggregate Aggregate Gasoline 264.2884 23105.28 0 264.3141 0 0.551445 0 0.004165 0.001032 0 0.088576 13.95792 0.32254 4.985527 0.047425 0 0.184599 13.95792 0.32254 4.985527 0.04425 0 0.08459 13.95792 0.32254 4.985527 0.04425 0 0.000303
Santa Claria 2022 MH Aggregate Aggregate Desire 940,8008 9155,21 9155,21 0 94,08008 0 4.438358 0 0 0.104654 0 0 0.006 0.044785 1080.89 0 0 0.070295 0 0 0.170295 0 0 0 0 0 0 0.143759 0 0 0 0 0 0.143863 0.424501 0 0 0.010242 0
Santa Clara 2022 MHDT Aggregate Aggr
Santa Claria 2022 MHDT Aggregate Aggregate Desirel 10189-55 428042.3 0 121266.8 0 1.73167 15.28688 1.483339 0.020297 0.042841 0 0.003 0.015948 0.021098 0.021008 0 0.052238 0.288556 0 0 0 0 0.05947 0.328613 0 0 0 0 0.196531 0.168917 7.277505 0 0.010968 0.022008
Santa Clara 2022 MHOT Aggregate Aggregate Natural Ga 84.48052 3914.205 0 796.8889 0 0.162027 6.474875 0 0.001029 0.016219 0 0.003 0.016011 0.001119 0.01764 0 0.012 0.045746 1002.329 5210.514 0 0.725882 17.91735 0 0.204331 1.062197 0 0.010371 0.256004 0 0 0 0 0.740815 18.28597 0 0 0 1 0.6 2.991529 30.51881 0 0 0
Santa Claria 2022 0805 Aggregate Agg
Santa Claria 2022 0805 Aggregate Aggregate Descel 852.1659 61336.68 0 8739.295 0 1.430263 8.188956 1.463102 0.021712 0.009363 0 0.003 0.01808 0.022694 0.009786 0 0.01219 0.015165 0 0.000000000000000000000000000000000
Santa Claria 2022 08US Aggregate Aggregate Natural Ga 6.124/19 392.3599 0 54.50529 0 0.261572 1.567279 0 0.003172 0.003187 0 0.003 0.016148 0.000785 0.003466 0 0.012 0.046137 1035.05 1183.472 0 0.750937 4.605624 0 0.211002 0.241259 0 0.010729 0.065805 0 0 0 0 0 0.05687 4.700378 0 0 0 0 0 1.06 3.149633 5.746939 0 0 0
Santa Claria 2022 SBUS Aggregate Aggregate Gazonine 160.4139 7959.43 7
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Source: EMPACIZE2 [vf. 0.1] Emission Rates
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Source: EMPACIZE2 [v.f. 0.1] Emission Rates
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# Attachment 4: Project Construction Emissions and Health Risk Calculations

Ruby Ave Buddhist Temple, 2740 Ruby Ave, San Jose, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction		DPM	Area	D	PM Emissi	ons	Modeled Area	DPM Emission Rate
Year	Activity	(ton/year)	Source	(lb/yr)	(lb/hr)	(g/s)	$(m^2)$	$(g/s/m^2)$
2022	Construction	0.0346	CON_DPM	69.1	0.01993	2.51E-03	7,440	3.38E-07
2023	Construction	0.0713	CON_DPM	142.6	0.04111	5.18E-03	7,440	6.96E-07
2024	Construction	0.0634	CON_DPM	126.8	0.03655	4.61E-03	7,440	6.19E-07
Total		0.1692		338.4	0.0976	0.0123		

Construction Hours

hr/day = 9.5 (7:30am - 5pm)

days/yr = 365

hours/year = 3467.5

Ruby Ave Buddhist Temple, 2740 Ruby Ave, San Jose, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction		Area		PM2.5	Emissions		Modeled Area	PM2.5 Emission Rate
Year	Activity	Source	(ton/year)	(lb/yr)	(lb/hr)	(g/s)	$(m^2)$	$g/s/m^2$
2022	Construction	CON_FUG	0.1042	208.4	0.06009	7.57E-03	7,440	1.02E-06
2023	Construction	CON_FUG	0.1795	359.0	0.10353	1.30E-02	7,440	1.75E-06
2024	Construction	CON_FUG	0.1032	206.5	0.05955	7.50E-03	7,440	1.01E-06
Total			0.3869	773.8	0.2232	0.0281		

Construction Hours

 $hr/day = 9.5 \quad (7:30am - 5pm)$ 

days/yr = 365

hours/year = 3467.5

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction		DPM	Area	n	PM Emissi	ons	Modeled Area	DPM Emission Rate
Year	Activity	(ton/year)	Source	(lb/yr)	(lb/hr)	(g/s)	$-\frac{\text{Area}}{(\text{m}^2)}$	$(g/s/m^2)$
2022	Construction	0.0018	CON_DPM	3.6	0.00105	1.32E-04	7,440	1.78E-08
2023	Construction	0.0037	CON_DPM	7.5	0.00216	2.72E-04	7,440	3.66E-08
2024	Construction	0.0036	CON_DPM	7.3	0.00209	2.63E-04	7,440	3.54E-08
Total		0.0092		18.4	0.0053	0.0007		

Construction Hours  $hr/day = 9.5 \qquad (7:30am - 5pm)$  days/yr = 365 hours/year = 3467.5

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

Construction		Area		PM2.5	Emissions		Modeled Area	PM2.5 Emission Rate
Year	Activity	Source	(ton/year)	(lb/yr)	(lb/hr)	(g/s)	$(m^2)$	$g/s/m^2$
2022	Construction	CON_FUG	0.0184	36.8	0.01060	1.34E-03	7,440	1.80E-07
2023	Construction	CON_FUG	0.0333	66.6	0.01920	2.42E-03	7,440	3.25E-07
2024	Construction	CON_FUG	0.0182	36.5	0.01052	1.33E-03	7,440	1.78E-07
Total			0.0699	139.8	0.0403	0.0051		

Construction Hours
hr/day = 9.5 (7:30am - 5pm)
days/yr = 365
hours/year = 3467.5

### Ruby Ave Buddhist Temple, 2740 Ruby Ave, San Jose, CA Construction Health Impact Summary

**Maximum Impacts at MEI Location - Without Mitigation** 

	Maximum Cond	centrations			Maximum
Emissions Year	Exhaust PM10/DPM (μg/m³)	Fugitive PM2.5 (μg/m <sup>3</sup> )	Cancer Risk (per million) Infant/Child	Hazard Index (-)	Annual PM2.5 Concentration (μg/m³)
	(F-8, )	(Fig )			(F.S )
2022	0.1371	0.6813	24.38	0.03	0.82
2023	0.2822	1.1689	46.36	0.06	1.45
2024	0.2510	0.6747	6.49	0.05	0.93
Total	-	-	77.22	-	-
Maximum	0.2822	1.1689	-	0.06	1.45

**Maximum Impacts at MEI Location - With Mitigation** 

	Maximum Cond	centrations			Maximum
Emissions	Exhaust PM10/DPM	Fugitive PM2.5	Cancer Risk (per million)	Hazard Index	Annual PM2.5 Concentration
Year	$(\mu g/m^3)$	$(\mu g/m^3)$	Infant/Child	(-)	$(\mu g/m^3)$
2022	0.0072	0.1202	1.28	0.001	0.13
2023	0.0148	0.2325	2.44	0.003	0.25
2024	0.0144	0.1343	0.37	0.003	0.15
Total	-	-	4.09	-	-
Maximum	0.0148	0.2325	-	0.003	0.25

<sup>-</sup> Tier 4 Interim Engine, Electric Cranes, Air Compressors, Concrete Saws, and Welders, and Enhanced BMPs Mitigati

#### Ruby Ave Buddhist Temple, 2740 Ruby Ave, San Jose, CA - Construction Impacts - Without Mitigation Maximum DPM Cancer Risk and PM2.5 Calculations From Construction Impacts at Off-Site MEI Location - 1.5 meter receptor height

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>
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)

 $A = Inhalation \ absorption \ factor$ 

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

#### Values

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

<sup>\* 95</sup>th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child	- Exposure l	nformation	Infant/Child	Adult - Exp	os ure Infor	mation	Adult
	Exposure				Age	Cancer	Model		Age	Cancer
Exposure	Duration		DPM Conc	(ug/m3)	Sensitivity	Risk	DPM Conc	(ug/m3)	Sensitivity	Risk
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)
0	0.25	-0.25 - 0*	2022	0.1371	10	1.86	2022	0.1371	-	-
1	1	0 - 1	2022	0.1371	10	22.51	2022	0.1371	1	0.39
2	1	1 - 2	2023	0.2822	10	46.36	2023	0.2822	1	0.81
3	1	2 - 3	2024	0.2510	3	6.49	2024	0.2510	1	0.72
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 Increas	ed Cancer R	tisk				77.22				1.92
	ter of pregnan									

Maximum

Fugitive

PM2.5

0.68

1.17

0.67

Total

PM2.5

0.82

1.45

0.93

Hazard

Index

0.027

0.056

0.050

# Ruby Ave Buddhist Temple, 2740 Ruby Ave, San Jose, CA - Construction Impacts - With Mitigation Maximum DPM Cancer Risk and PM2.5 Calculations From Construction Impacts at Off-Site MEI Location - 1.5 meter receptor height

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>

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)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

#### Values

	I	Adult		
Age>	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
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AT =	70	70	70	70
FAH=	1.00	1.00	1.00	0.73

<sup>\* 95</sup>th 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 - Exp	os ure Infor	mation	Adult
	Exposure				Age	Cancer	Model	ed	Age	Cancer
Exposure	Duration		DPM Conc	(ug/m3)	Sensitivity	Risk	DPM Conc	(ug/m3)	Sensitivity	Risk
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)
0	0.25	-0.25 - 0*	2022	0.0072	10	0.10	2022	0.0072	-	-
1	1	0 - 1	2022	0.0072	10	1.19	2022	0.0072	1	0.02
2	1	1 - 2	2023	0.0148	10	2.44	2023	0.0148	1	0.04
3	1	2 - 3	2024	0.0144	3	0.37	2024	0.0144	1	0.04
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 Increas	ed Cancer R	lisk				4.1				0.10

I	Maximum	
Hazard	Fugitive	Total
Index	PM2.5	PM2.5
0.001	0.12	0.13
0.003	0.23	0.25
0.003	0.13	0.15

<sup>\*</sup> Third trimester of pregnancy

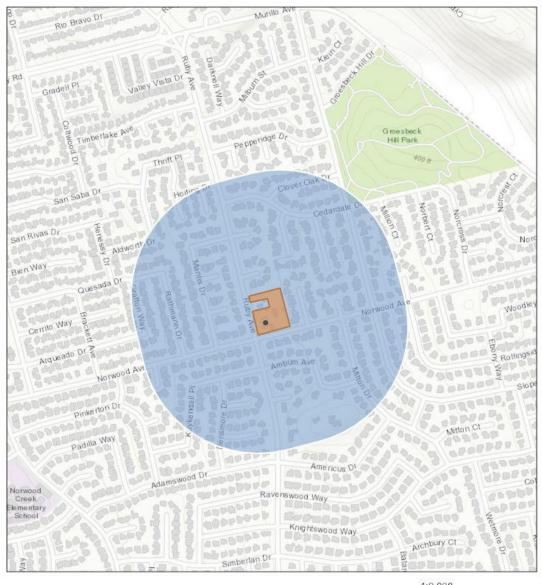


## Stationary Source Risk & Hazards Screening Report

### Area of Interest (AOI) Information

Area: 4,456,144.08 ft2

May 12 2021 16:27:16 Pacific Daylight Time



1:9,028 0 0.05 0.1 0.2 mi 0 0.07 0.15 0.3 km

City of San Jose, County of Santa Clara, Bureau of Land Management, Esn, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

## Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Facilities 2018	0	N/A	N/A

Note: The estimated risk and hazard impacts from these sources would be expected to be substantially lower when site specific Health Risk Screening Assessments are conducted.

The screening level map is not recommended for evaluating sensitive land uses such as schools, senior centers, day cares, and health facilities.

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