250 STOCKTON AVE OFFICE DEVELOPMENT AIR QUALITY ASSESSMENT

San José, California

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Introduction

The purpose of this report is to address air quality and community health risk impacts associated with the proposed office development project located at 250 Stockton Avenue in San José, California. The air quality impacts from this project would be associated with the demolition of the existing land uses, construction of the new buildings and infrastructure, and operation of the project. Air pollutants associated with construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impacts (construction and operation) and the impacts of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description[2]

The approximately 2.4-acre project site is currently occupied by a 45,000-square foot (sf) commercial building with an associated parking lot. The project proposes to demolish the existing use to construct a 908,587-sf, 15-story office building, that would also include four levels of below grade parking. The below grade parking will provide 1,572 parking spaces. A 95-kilowatt (kW) emergency generator powered by a 127-horsepower (hp) will be located on the southeast side of the project site on the ground floor. A single cooling tower will be located on the northwest side of the 14th floor of the proposed building. The project is within the San José Downtown Strategy 2040 Plan area and the Diridon Station Master Plan. The project would use electricity provided by San Jose Clean Energy (SJCE) and be built to achieve LEED Gold certification. Construction is expected to begin in January 2024 and be completed by October 2027.

Setting

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

Air Pollutants of Concern

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

[1] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.
[2] The project land uses have been updated since this analysis. The square footage of the office use has increased slightly. The changes in these land uses would produce negligible differences in the emissions output of the project and would not change the project's impacts discussed further in the report.

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

Toxic Air Contaminants

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

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.[3] See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are the adjacent multi-family residences to the south of the project site. There are more sensitive receptors at farther distances. The project would not introduce new sensitive receptors to the area.

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

Regulatory Setting

Federal Regulations

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

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[4]

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

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

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.[5] 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

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

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

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

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

Bay Area Air Quality Management District (BAAQMD)

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

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards 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.[6] 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

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

community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall CalEnviroScreen score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.[7] 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 located in the San José CARE area but not within a BAAQMD overburdened area as identified by CalEnviroScreen since the Project site is scored at the 57th percentile.

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines*[8] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with 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.

BAAQMD Rules and Regulations

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

- Regulation 1 – General Provisions
  - Rule 1-30: Public Nuisance
- Regulation 2 – Permits
  - Rule 2-1: General Requirements
  - Rule 2-2: New Source Review
  - Rule 2-5: New Source Review of Toxic Air Contaminants
- Regulation 6 – Particulate Matter and Visible Emissions
  - Rule 6-2: Commercial Cooking Equipment
  - Rule 6-3: Wood-Burning Devices
  - Rule 6-7: Odorous Substances
- Regulation 9 – Inorganic Gaseous Pollutants

[7] See BAAQMD: https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofoverburdenedcommunities-pdf.pdf?la=en , accessed 10/1/2021.
[8] Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

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

Permits

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

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

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

New Source Review

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

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

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

Stationary Diesel Airborne Toxic Control Measure

The BAAQMD administers the CARB's Airborne Toxic Control Measure (ACTM) for Stationary Diesel engines (section 93115, title 17 CA Code of Regulations). The project's stationary sources will be new stationary emergency stationary emergency standby diesel engines larger than 50 hp. These limits vary based on maximum engine power. All engines are

limited to PM emission rates of 0.15 g/hp-hour, regardless of size. This ACTM limits engine operation 50 hours per year for routine testing and maintenance.

Offsets

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

Prohibitory Rules

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

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

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

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

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

BACT for Diesel Generator Engines

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

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

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

San José Envision 2040 General Plan

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

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize emissions from new development.

Applicable Policies – Air Pollutant Emission Reduction

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

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-11.5 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.

Downtown Strategy 2040 Plan

The San José Downtown Strategy (DTS) 2040 Plan is an urban design plan that guides development activities planned within the Downtown area. This strategy would increase the amount of new commercial office by an additional three million sf (approximately 10,000 jobs with the new total being 14.2 million sf of commercial by the year 2040. The residential capacity would be increased up to 4,360 units. The amount of new retail development (1.4 million sf) and hotel room (3,600 rooms) capacities of the Downtown Strategy 2000 would be maintained. The integrated Final Environmental Impact Report was published December 2018.

The DTS identified less-than-significant construction period emissions if development projects are in conformance with 2017 BAAQMD CEQA Guidelines, GP Policy MS-13.1, and current City requirements that include various levels of construction emissions control measures. All projects are required to implement the following control measures:

City requirements, all projects will be required to implement the following control measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- 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.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- 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.

Future projects developed under the DTS that incorporate these measures and are below the screening levels would not result in a significant impact related to construction emissions of regional criteria pollutants. Projects that exceed the screening levels would be required to complete additional project level analysis of construction-related emissions of criteria pollutants and may require additional measures to ensure that construction emissions would not exceed the threshold for average daily emissions.

Traffic-related operational emissions of regional criteria air pollutants with measures included to reduce emissions under the DTS were identified as significant and unavoidable. To reduce operational emissions associated with vehicle travel, future development will be required to implement a transportation demand management (TDM) program, consistent with the Downtown Transportation Plan.

The TDM programs may incorporate, but would not be limited to, the following Transportation Control Measures (TCMs):

- Rideshare Measures:
- Implement carpool/vanpool program (e.g., carpool ride matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.)
- Transit Measures:
- Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters, etc.
- Design and locate buildings to facilitate transit access (e.g., locate building entrances near transit stops, eliminate building setbacks, etc.)

- Services Measures:
- Provide on-site shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, convenience market, etc.;
- Provide on-site childcare or contribute to off-site childcare within walking distance.
- Shuttle Measures:
- Establish mid-day shuttle service from work site to food service establishments/commercial areas;
- Provide shuttle service to transit stations/multimodal centers
- Parking Measures:
- Provide preferential parking (e.g., near building entrance, sheltered area, etc.) for carpool and vanpool vehicles;
- Implement parking fees for single occupancy vehicle commuters;
- Implement parking cash-out program for employees (i.e., non-driving employees receive transportation allowance equivalent to value of subsidized parking);
- Bicycle and Pedestrian Measures:
- Provide secure, weather-protected bicycle parking for employees;
- Provide safe, direct access for bicyclists to adjacent bicycle routes;
- Provide showers and lockers for employees bicycling or walking to work;
- Provide secure short-term bicycle parking for retail customers or non-commute trips;
- Provide direct, safe, attractive pedestrian access from Planning Area to transit stops and adjacent development;
- Other Measures:
- Implement compressed work week schedule (e.g., 4 days/40 hours, 9 days/80 hours);
- Implement home-based telecommuting program.

During project-level supplemental review of future individual development projects, the measures will be evaluated for consistency with the Downtown Strategy 2040 and General Plan policies. All feasible and applicable measures will be required as part of project design or as conditions of approval.

Diridon Station Area Plan

Approved by the City Council on June 17, 2014, the Diridon Station Area Plan (DSAP) established long-term goals for the area, including a land use plan, urban design guidelines, a framework for station expansion, transportation and parking strategies, housing strategies, and an art master plan. The City Council's certification of the associated Environmental Impact Report provided clearance for maximum development capacities in the 250-acre area. The total development capacity includes: 4,950,000 s.f. of commercial industrial, 420,000 s.f. of retail and/or restaurant, 2,588 residential units, and 900 hotel rooms.

In 2019, the City initiated a process to amend the DSAP to align it to current market conditions and planning efforts which included a DSAP Amendment Addendum to the Downtown Strategy 2040 Environmental Impact Report as required by CEQA. The City Council approved the amended DSAP on May 25, 2021, following a community engagement process. This included approving increased building height limits, among other changes.

The DSAP identified less-than-significant construction period emissions if development projects are in conformance with 2017 BAAQMD CEQA Guidelines, GP Policy MS-13.1, and current City requirements that include various levels of construction emissions control measures. All projects are required to implement the following control measures:

City requirements, all projects will be required to implement the following control measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- 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.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- 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.

Future projects developed under the DSAP that incorporate these measures and are below the screening levels would not result in a significant impact related to construction emissions of regional criteria pollutants. Projects that exceed the screening levels would be required to complete additional project level analysis of construction-related emissions of criteria pollutants and may require additional measures to ensure that construction emissions would not exceed the threshold for average daily emissions.

Operational emissions of regional criteria air pollutants with measures included to reduce emissions under the DSAP were identified as significant and unavoidable. To reduce operational emissions associated with vehicle travel, future development will be required to implement a Transportation Demand Management (TDM) program, consistent with the Downtown Transportation Plan.

The TDM programs may incorporate, but would not be limited to, the following Transportation Control Measures (TCMs):

- Rideshare Measures:
  - Implement carpool/vanpool program (e.g., carpool ride matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.).
- Transit Measures:
  - Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters, etc.
  - Design and locate buildings to facilitate transit access (e.g., locate building entrances near transit stops, eliminate building setbacks, etc.)
- Services Measures:
  - Provide on-site shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, convenience market, etc.
  - Provide on-site child care or contribute to off-site childcare within walking distance.
- Shuttle Measures:
  - Establish mid-day shuttle service from work site to food service establishments/ commercial areas.
  - Provide shuttle service to transit stations/multimodal centers.
- Parking Measures:
  - Provide preferential parking (e.g., near building entrance, sheltered area, etc.) for carpool and vanpool vehicles.
  - Implement parking fees for single occupancy vehicle commuters.
  - Implement parking cash-out program for employees (i.e., non-driving employees receive transportation allowance equivalent to value of subsidized parking).
- Bicycle and Pedestrian Measures:
  - Provide secure, weather-protected bicycle parking for employees.
  - Provide safe, direct access for bicyclists to adjacent bicycle routes.
  - Provide showers and lockers for employees bicycling or walking to work.
  - Provide secure short-term bicycle parking for retail customers or non-commute trips.
  - Provide direct, safe, attractive pedestrian access from Planning Area to transit stops and adjacent development.
- Other Measures:
  - Implement compressed work week schedule (e.g., 4 days/40 hours, 9 days/80 hours).
  - Implement home-based telecommuting program.

During project-level supplemental review of future individual development projects, the measures will be evaluated for consistency with the DSAP and General Plan policies. All feasible and applicable measures will be required as part of project design or as conditions of approval.

Significance Thresholds

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

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	**Construction Thresholds**	**Operational Thresholds**	
	Average Daily Emissions (lbs./day)	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	None	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1000-foot zone of influence)**	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental annual $PM_{2.5}$	0.3 µg/m^3	0.8 µg/m^3	

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less.

Source: Bay Area Air Quality Management District, 2017

AIR QUALITY IMPACTS AND MITIGATION MEASURES

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

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

The 2017 Clean Air Plan, adopted by BAAQMD in April 2017, includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Plans must show consistency with the control measures listed within the Clean Air Plan. At the project-level, there are no consistency measures or thresholds. The Project is part of the DSAP in downtown San José that underwent environmental review that found the Plan to not conflict with the 2017 Clean Air Plan. Therefore, the project would not conflict with the latest Clean Air planning efforts. Additionally, 1) the Project would have construction and operational emissions below the BAAQMD thresholds (see Impact 2 below), 2) the project would be considered urban infill, and 3) the project would be located near transit with regional connections.

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

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

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative

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

emissions. The project land use types 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.[10] The CalEEMod model output along with construction inputs are included in *Attachment 2* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 3*.

CalEEMod Inputs

Land Use Inputs

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

Table 2. Summary of Project Land Use Inputs[11]

Project Land Uses	Size	Units	Square Feet	Acreage
General Office Building	908.59	1,000-sf	908,587	2.4
Strip Mall	7.83	1,000-sf	7,825	
Enclosed Parking with Elevator	1,572	Parking Space	335,177	

Construction Inputs

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

The construction equipment worksheets included the schedule for each phase. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays were provided by the applicant. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase. The construction schedule assumed that the earliest possible start date would be January 2024 and would be built out over a period of approximately 46 months, or 989 construction workdays. The earliest year of full operation was assumed to be 2028.

Construction Traffic Emissions

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2017 motor vehicle emission factor model. This model has been superseded by the EMFAC2021 model; however, CalEEMod has not been updated to include EMFAC2021. Construction would produce traffic in the form of worker trips and truck traffic. The traffic-

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

[11] The project's land uses have been updated since this analysis. The strip mall land use square footage would decrease to 0-sf and the office square footage would increase to 910,263-sf. However, construction activities (i.e., schedule, equipment usage, hours used) would remain unchanged. As a result, operational emissions would likely decrease minimally and impacts from construction would be unchanged. These changes would not impact the findings discussed in this report.

related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil material imported and/or exported to the site, and the estimate of cement and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips were estimated from the provided demolition and 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 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 defaults, 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 (demolition material export and soil import/export). Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On-road emission rates from the years 2024-2027 for Santa Clara County were used. Table 3 provides the traffic inputs that were combined with the EMFAC2021 emission database to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2021 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker[1]	Total Vendor[1]	Total Haul[2]	
Vehicle mix[1]	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0	CalEEMod default distance with 5-min truck idle time.
Demolition	330	-	498	94,000-sf existing building and 320-cy of pavement demolition. CalEEMod default worker trips.
Site Preparation	160	-	-	CalEEMod default worker trips.
Grading	1,890	-	17,690	141,520-cy soil export. CalEEMod default worker trips.
Trenching	2,800	-	-	CalEEMod default worker trips.
Building Construction	108,500	51,250	11,000	5,500 concrete round trips. CalEEMod default worker and vendor trips.
Architectural Coating	13,050	-	-	CalEEMod default worker and vendor trips.
Paving	520	-	-	CalEEMod default worker trips.

Notes: [1] Based on 2024-2027 EMFAC2021 light-duty vehicle fleet mix for Santa Clara County.
[2] Includes demolition and grading trips estimated by CalEEMod based on amount of material to be removed. Cement and trips estimated based on data provided by the applicant.

Summary of Computed Construction Period Emissions

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

Table 4. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2024	0.20	1.87	0.09	0.07
2025	0.11	0.95	0.05	0.03
2026	0.16	1.55	0.08	0.06
2027	4.93	0.81	0.04	0.02
Average Daily Construction Emissions Per Year (pounds/day)				
2024 (262 construction workdays)	1.49	14.29	0.72	0.51
2025 (261 construction workdays)	0.81	7.26	0.42	0.22
2026 (261 construction workdays)	1.25	11.91	0.63	0.43
2027 (205 construction workdays)	48.06	7.92	0.43	0.24
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

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

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

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

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

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

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

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

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

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

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

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

Effectiveness of Mitigation Measure AQ-1

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

Operational Period Emissions

The impact of operational traffic related emissions was addressed in the DTS DEIR and found to be significant and unavoidable for the entire plan. Traffic-related emissions from the project were computed in this assessment. Operational air emissions from the project would be generated primarily from autos driven by future employees. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

CalEEMod Inputs

Land Uses

The project land uses were input to CalEEMod as described above for the construction period modeling.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest full year of operation would be 2028 if construction begins in 2024. Emissions associated with build-out later than 2028 would be lower.

Traffic Information

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model.[12] The traffic consultant provided a trip generation rate based on the office square footage only. For conservatism, the trip generation rate was modified to calculate daily trips based on the square footage of the office space plus the amenity and ground level retail space. Based on this updated calculation, the proposed project would produce 8,727 daily trips after an *Employment & Retail Reduction, Location-Based Reduction,* and *VMT-Based Reduction.* The daily trip generation was calculated using the size of the project and the adjusted total vehicle trips. The Saturday and Sunday trip rates were adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate. The default trip lengths and trip types specified by CalEEMod were used.

EMFAC2021 Adjustment

The vehicle emission factors and fleet mix used in CalEEMod are based on EMFAC2017, which is an older CARB emission inventory for on road and off road mobile sources. Since the release of CalEEMod Version 2020.4.0, new emission factors have been produced by CARB. EMFAC2021 became available for use in January 2021. It includes the latest data on California's car and truck fleets and travel activity. The CalEEMod vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2021, which were adjusted with the CARB EMFAC off-model adjustment factors. On road emission rates from 2028 Santa Clara County were used (See *Attachment 3*). More details about the updates in emissions calculation methodologies and data are available in the EMFAC2021 Technical Support Document.[13]

Energy

CalEEMod defaults for energy use were used, which include the 2019 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The 2020 emission factor for San Jose Clean Energy (SJCE) of 177.69 was used for this analysis.[14]

[12] Email from Fiona Phung, April 11, 2022. Attachment: *250 Stockton Mixed-Use Development LTA 04-05-22 w appendix.pdf*
[13] See CARB 2021: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac
[14] San Jose Clean Energy Website, url: https://sanjosecleanenergy.org/commercial-rates/

The City of San José passed an ordinance in December 2020 that prohibits the use of natural gas infrastructure in new buildings.[15] This ordinance applies to any new construction starting August 1, 2021. All project natural gas use was set to zero and assigned to electricity use in CalEEMod.

Project Generator

The project proposes to include a stand-by emergency diesel generator along the southeast side of the proposed building on the ground level. The generator would be 95-kilowatts (kW) powered by a 127 horsepower (HP) diesel engine. The generator would be tested periodically and power the building in the event of a power failure. For modeling purposes, it was assumed that the generator would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit the engine operation to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. Additionally, the generator would have to meet BAAQMD BACT requirements for IC Engine-Compression Ignition: Stationary Emergency, non-Agricultural, non-direct drive fire pump sources. The generator's emissions, including BACT engine requirements, were modeled using CalEEMod.

Project Cooling Tower

The project would include one cooling tower on Level 14 of the proposed building. Particulate matter emissions from evaporative cooling can occur and are a result of evaporation of liquid water entrained in the discharge air stream and carried out of the tower as "drift" droplets that contain dissolved solids in the water. Drift droplets that evaporate can produce small particulate matter (i.e., PM_{10} and $PM_{2.5}$) emissions. These emissions are generated when the drift droplets evaporate and leave the particulate matter formed by crystallization of dissolved solids.

PM_{10} and $PM_{2.5}$ emissions from evaporative cooling were calculated based on a worst-case assumptions including use of evaporative cooling for 100 percent of the time, a water flow rate of 5,400 gallons per minute (gpm), use of 0.005 percent drift eliminators, a total dissolved solids (TDS) concentration of 460 parts per million (ppm) in the recirculating water.[16] Based on a calculated total drift rate, recirculating water TDS concentration of 460 ppm, and PM fractions based on SCAQMD,[17] the PM_{10} emissions were calculated as 1.0 pounds per day and annual emissions of 0.2 tons per year. $PM_{2.5}$ emissions were calculated as 0.6 pounds per day and annual emissions of 0.1 tons per year. The cooling towers are not expected to produce emissions of volatile organic compounds (VOCs) or other criteria pollutants.[18] Cooling tower particulate matter emissions are included in *Attachment 4*.

[15] City of San José, 2020. "Expand Natural Gas Ban", December. Web: https://www.sanjoseca.gov/Home/Components/News/News/2210/4699

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

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

[18] South Coast AQMD, *Guidelines for Calculating Emissions from Cooling Towers*, November 2019. Web: https://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/guidelines-for-calculating-emissions-from-cooling-towers---november-2017-final.pdf?sfvrsn=12

Other Inputs

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

Existing Uses

The site currently consists of a commercial building with associated parking. However, operation of the existing building cannot be confirmed at the time of this analysis and, even in the event the building was in operation, emissions are expected to be minimal from the existing use. Therefore, a CalEEMod run was not developed for the existing use of the site. In addition, the traffic consultant did not provide a specific trip generation rate for the existing use of the site.

Summary of Computed Operational Emissions

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

Table 5. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2028 Annual Project Operational Emissions (*tons/year*)	6.49	2.76	5.37	1.37
Cooling Tower Emissions (*tons/year*)	--	--	0.20	0.10
Net Annual Operating Emissions (*tons/year*)	6.49	2.76	5.57	1.47
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2028 Daily Project Operational Emissions (*pounds/day*)[1]	35.57	15.13	30.52	8.05
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*
Notes: [1]Assumes 365-day operation.				

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

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

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project includes the installation of a diesel-powered emergency generator and would generate some traffic consisting of mostly light-duty vehicles, which would produce TAC and air pollutant emissions.

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

Community Risk Methodology for Construction and Operation

Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, project generators, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period was used, per BAAQMD guidance,[19] with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

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

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

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations closest to the project would be present for extended periods of time (i.e., chronic exposures). This includes the nearby existing residences to the south the site, as shown in Figure 1. Other modeled sensitive receptors include the future residential receptors of the Google Downtown West Mixed-Use project as well as other, non-Google residential receptors nearest to the project site. Some sensitive receptors further away from the project site, but still within 1,000 feet, were excluded from the modeling since the highest impacts from project construction and operation occur near the project site and decrease with distance. Residential receptors are assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions.

Community Risks from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary

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

community risk impact issue associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[20] This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that increased cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod and EMFAC2021 models provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages of 0.13 tons (257 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.15 tons (296 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[21,22] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

Construction Sources

Combustion equipment DPM exhaust emissions were modeled as a series of point sources with a nine-foot release height (construction equipment exhaust stack height) placed at 23 feet (7 meter) intervals throughout the construction site. This resulted in 195 individual point sources being used to represent mobile equipment DPM exhaust emissions in the construction area, with DPM emissions occurring throughout the project construction site. In addition, the following stack parameters were used: a vertical release, a stack diameter of 2.5 inches, an exhaust temperature of 918˚F, and an exit velocity of 309 feet per second. Since these are point sources, plume rise is calculated by the AERMOD dispersion model. Emissions from vehicle travel on- and off-site were also distributed among the point sources throughout the site. The locations of the point sources used for the modeling are identified in Figure 1.

For modeling fugitive $PM_{2.5}$ emissions, an area source with a near-ground level release height of 7 feet (2 meters) was used. Fugitive dust emissions at construction sites come from a variety of

[20] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.
[21] BAAQMD, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en
[22] BAAQMD, 2020, *BAAQMD Health Risk Assessment Modeling Protocol.* December. Web: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol-pdf.pdf?la=en

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

AERMOD Inputs and Meteorological Data

The modeling used a five-year meteorological data set (2013-2017) from the San José Airport prepared for use with the AERMOD model by the BAAQMD. Construction emissions were modeled as occurring daily between 7:00 a.m. to 5:00 p.m. per the project applicant's construction schedule. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2024-2027 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 5 feet (1.5 meters), 15 feet (4.5 meters), 25 feet (7.6 meters), and 35 feet (10.7 meters) were used to represent the breathing heights on the first through fourth floors of sensitive receptors in the residences near the site. For the multi-family building bordering the project site to the south, receptor heights of 30 feet (9.1 meters) and 40 feet (12.2 meters) were used to represent the breathing heights of sensitive receptors on the third and fourth floors (first and second residential floors) in those residences.

Summary of Construction Community Risk Impacts

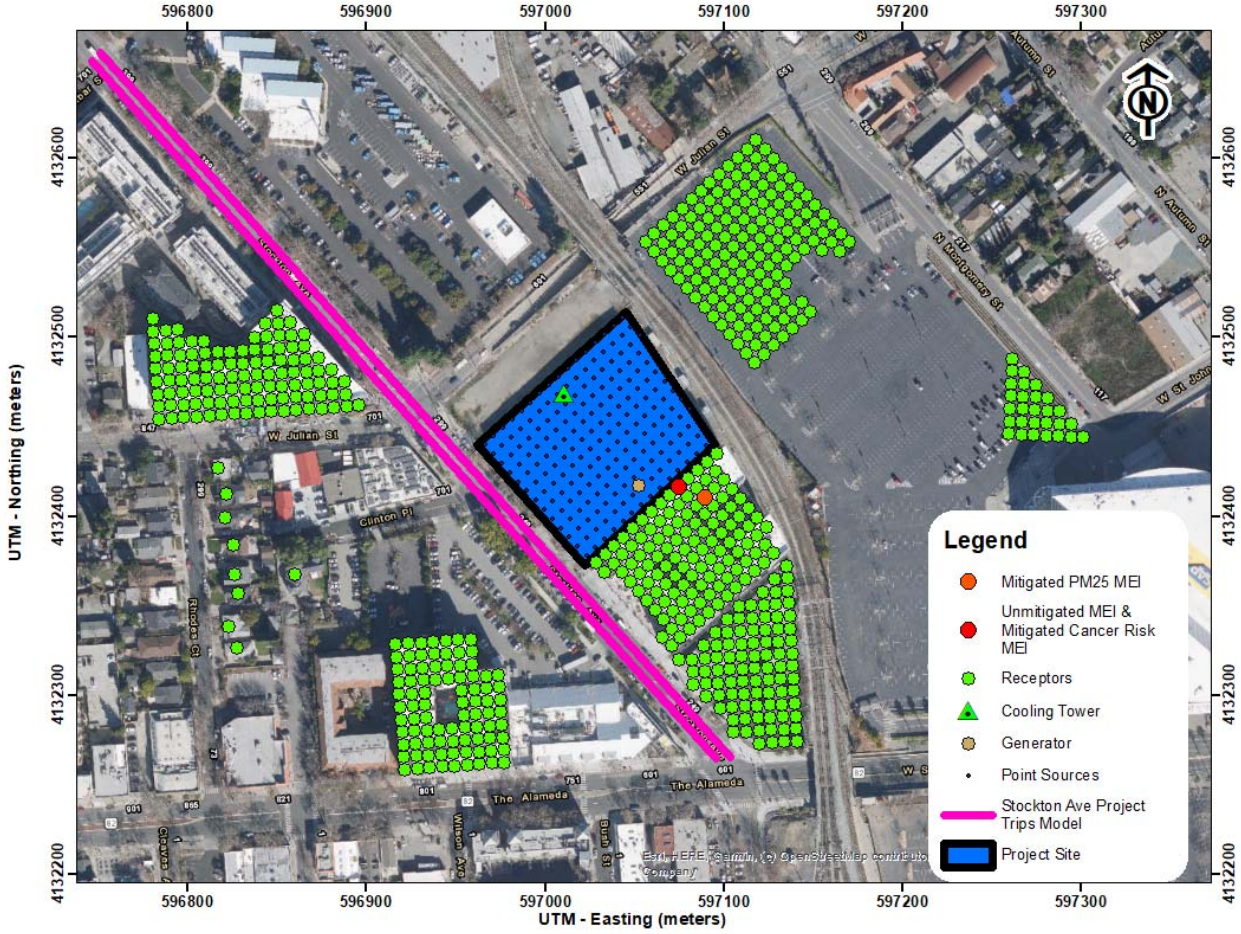
The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with the OEHHA guidance for age sensitivity factors and exposure parameters as recommended by BAAQMD, as described in *Attachment 1*. Non-cancer health hazards and maximum $PM_{2.5}$ concentrations were also calculated and identified. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Third trimester, infant, child, and adult exposures were assumed to occur at all residences during the entire construction period.

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

The maximum modeled annual DPM and $PM_{2.5}$ concentrations were identified at nearby sensitive receptors to find the MEI. Results of this assessment indicated that the unmitigated construction MEI was located on the third floor/first residential level (9.1 meters) of a multi-family home south of the project site. After applying mitigation, the location of the cancer risk MEI stayed at the same receptor, but the annual $PM_{2.5}$ concentration MEI shifted to a nearby receptor. The location of the MEIs and nearby sensitive receptors are shown in Figure 1. Table 6 lists the community risks from construction at the location of the residential MEI. *Attachment 4*

to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Figure 1. Locations of Project Construction Site, Modeled DPM Point Sources, Project Traffic Off-Site Sensitive Receptors, Project Generator, Project Cooling Tower, Project Trips Model, and Maximum TAC Locations (MEIs)



Community Risks from Project Operation

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

Project Traffic

Assuming a full build-out of the project site, this project would generate 8,727 daily trips.[23] These trips were modeled to occur on Stockton Avenue, the closest roadway to the project MEIs.

[23] Email from Fiona Phung, April 11, 2022. Attachment: *250 Stockton Mixed-Use Development LTA 04-05-22 w appendix.pdf*

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for project trips on Stockton Avenue using the Caltrans version of the CARB EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides aggregate emission factors in for dispersion modeling of mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (Santa Clara County), type of road (major/collector), truck percentage for non-state highways in Santa Clara County (3.51 percent),[24] traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (2028operational year), and season (annual).

Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[25] which were then applied to the project trip volumes to obtain estimated hourly traffic volumes and emissions for the roadway. For all hours of the day average speeds of 30 mph on Stockton Avenue was assumed for all vehicles based on posted speed limit signs on the roadway.

The emission factors generated by CT-EMFAC2017 were applied to the project trips. For all hours of the day, an average speed of 30 mph on Stockton Avenue was assumed for all vehicles based on posted speed limit signs on the roadway. Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the U.S. EPA AERMOD dispersion model, which is recommended by the BAAQMD for this type of analysis.[26] TAC and $PM_{2.5}$ emissions from project trips on Stockton Avenue within about 1,000 feet of the project site were evaluated with the model. Emissions from project trips were modeled in AERMOD using a series of volume sources along a line (line volume sources), with line segments used to represent opposing travel lanes on the Stockton Avenue. The same meteorological data and off-site sensitive receptors used in the previous construction dispersion modeling were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations and heights. Annual TAC and $PM_{2.5}$ concentrations for 2028 on Stockton Avenue were calculated using the model. Concentrations were calculated at the project MEI.

Project Stand-By Diesel Generator

The project proposes to include one stand-by emergency diesel generator located on the southeastern side of the project site to power the building in the event of a power failure. The generator is expected to be a 95-kilowatt (kW) generator powered by a 127-horsepower (hp) diesel-fired engine. This generator would be tested periodically and power the building in the event of a power failure. For modeling purposes, it was assumed that the generator would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During

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

[25] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2014 does not include Burden type output with hour by hour traffic volume information.

[26] BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012

testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

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

To assess potential cancer risks and $PM_{2.5}$ impacts from operation of the emergency generator, the U.S. EPA AERMOD dispersion model was used to calculate the maximum annual DPM concentrations at off-site sensitive receptor locations (nearby residences). The same receptors and breathing heights used in the construction dispersion modeling were used for the generator model. Additionally, the same BAAQMD San Jose Airport meteorological data was used. Stack parameters (stack height, exhaust flow rate, and exhaust gas temperature) for modeling the generators was based on BAAQMD default parameters for emergency generators.[27] Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator operation could occur at any time of the day (24 hours per day, 365 days per year).

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

Project Cooling Tower

The project would include one cooling tower on the 15th floor of the proposed building. Particulate matter emissions from evaporative cooling can occur and are a result of evaporation of liquid water entrained in the discharge air stream and carried out of the tower as "drift" droplets that contain dissolved solids in the water. Drift droplets that evaporate can produce small particulate matter (i.e., PM_{10} and $PM_{2.5}$) emissions. These emissions are generated when the drift droplets evaporate and leave the particulate matter formed by crystallization of dissolved solids. The cooling towers are not powered by a diesel engine, so no DPM emissions would be produced.

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

For the health risk assessment, the $PM_{2.5}$ emissions from evaporative cooling were calculated based on a worst-case assumptions including use of evaporative cooling for 100 percent of the time, a water flow rate of 5,400 gallons per minute (gpm), use of 0.005 percent drift eliminators, a total dissolved solids (TDS) concentration of 460 parts per million (ppm) in the recirculating water.[28] Based on a calculated total drift rate, recirculating water TDS concentration of 460 ppm, and PM fractions based on SCAQMD,[29] the $PM_{2.5}$ emissions were calculated as 0.11 tons per year.

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

The annual $PM_{2.5}$ concentration were based on an annual maximum exposure. Table 6 lists the community risks from cooling tower at the location of the project MEIs. The particulate matter emissions for the proposed cooling towers are included in *Attachment 5*.

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

For this project, the sensitive receptors identified in Figure 1 as the construction MEI is also the project MEI for construction and operational impacts. At this receptor, the MEI would be exposed to emissions from 4 years of construction cancer risk and 26 years of operational cancer risk (i.e., traffic, generator, and cooling tower operation). The annual $PM_{2.5}$ concentration and HI risks are not additive but based on an annual maximum risk for the entirety of the project.

Project risk impacts are shown in Table 6. The unmitigated maximum cancer risks and annual $PM_{2.5}$ concentration from construction activities at the residential project MEI locations would exceed the single-source significance thresholds. However, with the incorporation of *Mitigation Measure AQ-1 and AQ-2*, the mitigated cancer risks and annual $PM_{2.5}$ concentration would no longer exceed the BAAQMD single-source significance thresholds. The unmitigated non-cancer hazards at the MEIs from project construction and operation activities would be below the single-source significance thresholds.

[28] Recirculating water flow rate and maximum TDS concentration provided by the applicant.
[29] South Coast AQMD, *Final-Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds, Appendix A.* October 2006. Web: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-(pm)-2.5-significance-thresholds-and-calculation-methodology/final_pm2_5methodology.pdf

Table 6. Construction and Operation Risk Impacts

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Residential Sensitive Receptor				
Project Construction (Years 0-4)	Unmitigated	**41.15 (infant)**	**0.42**	0.03
	Mitigated[1]	7.88 (infant)	0.15	<0.01
Project Generator Operation (Years 4 – 30)[2]		1.75	0.01	<0.01
Project Cooling Tower (Years 4 – 30)		-	0.02	-
Project Trips (Years 4 – 30)		0.14	0.03	<0.01
Total/Maximum Project Impacts (Years 0 – 30)	Unmitigated	**43.04**	**0.42**	0.03
	Mitigated	9.77	0.15	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	***Yes***	*No*
	Mitigated*	*No*	*No*	*No*

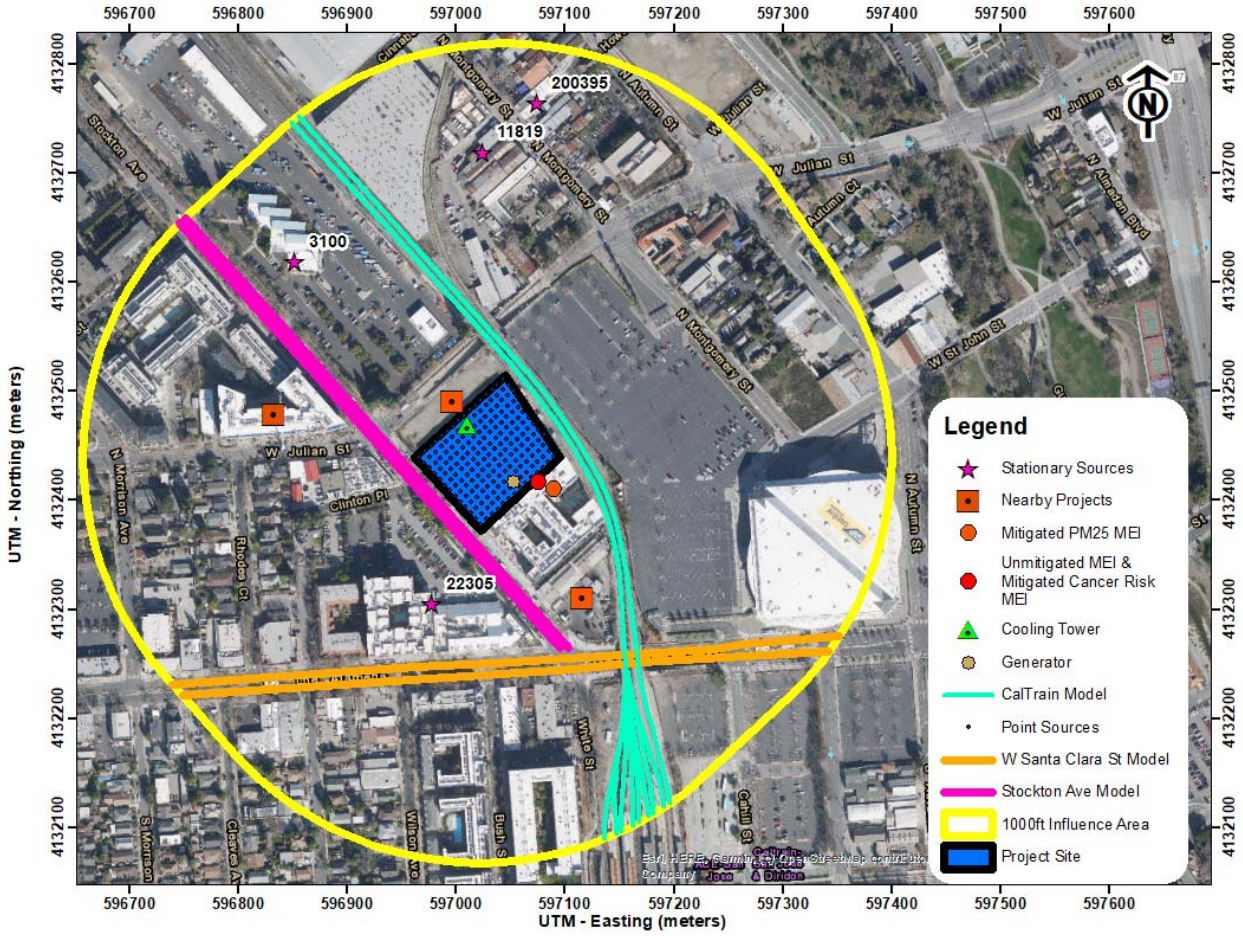
[1] Construction equipment with Tier 4 interim engines, electric cranes, electric aerial lifts, electric air compressors, propane forklifts, electric construction generator sets, electric welders, and BMPs as Mitigation Measures.
[2] Project generator cancer risk was based on 24/7 operation. Actual cancer risk from emergency generator usage would be significantly lower than what was conservatively modeled.

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

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

A review of the project area based on provided traffic information indicated that traffic on West Santa Clara Street and Stockton Avenue would exceed 10,000 vehicles per day. Other nearby streets would have less than 10,000 vehicles per day. A review of BAAQMD's stationary source map website identified five stationary sources with the potential to affect the project MEI, however, one stationary source will be demolished as part of a nearby project. A review of BAAQMD's highway and railway raster data identified one railway with the potential to affect the project MEI. In addition, there are several development projects whose construction would contribute to the cumulative risk. The risk impacts from these developments are included within the analysis. Figure 2 shows the location of the sources affecting the MEI. Community risk impacts from these sources upon the MEI are reported in Table 7. Details of the modeling and community risk calculations are included in *Attachment 5.*

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



Local Roadways – West Santa Clara Street & Stockton Avenue

A refined analysis of potential health impacts from vehicle traffic on West Santa Clara Street and Stockton Avenue was conducted since the roadway was estimated to have average daily traffic (ADT) exceeding 10,000 vehicles. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on the roadway near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks are then computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

Emission Rates

The analysis of traffic on nearby roadways was conducted in the same manner as the analysis for project trips. The ADT for West Santa Clara Street and Stockton Avenue were based on AM and PM peak-hour background volumes for the nearby roadway provided by the project's traffic data.[30] The calculated ADT on West Santa Clara Street the ADT would be 21,561 and on Stockton Avenue the ADT would be 10,727. Average hourly traffic distributions for Santa Clara

[30] Email from Fiona Phung, February 2, 2022. Attachment: *Apollo – Trip Generation and Volumes 02-02-22 v2.xlsx*

County roadways were developed using the EMFAC model,[31] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for the roadway. For all hours of the day average speeds of 30 mph on West Santa Clara Street and Stockton Avenue were assumed for all vehicles based on posted speed limit signs on the roadway.

Rail Line Community Risk Impacts

The project site is located west of and adjacent to Caltrain and Union Pacific Railroad (UPRR) rail lines near the San José Diridon Caltrain station. Rail activity on these lines currently generates DPM and $PM_{2.5}$ emissions from locomotive exhaust. The rail lines are used primarily for passenger service; however, there is some freight service by trains using diesel fueled locomotives. Passenger rail service along these rail lines includes diesel-fueled trains for Caltrain, the Altamont Commuter Express (ACE), Amtrak-Capital Corridor, and the Amtrak-Coast Starlight trains.

Based on the current Caltrain schedule effective August 30, 2021, there are 104 Caltrain trains passing the project site during weekdays and 32 on weekends. The ACE operates 8 trains daily between Stockton and San José with service terminating at the Diridon Station. The Amtrak-Capitol Corridor, which provides daily service between Sacramento/Auburn and San José at Diridon Station, has 12 weekday trains accessing the station and 14 trains on weekends. The Amtrak-Coast Starlight operates between Seattle and Los Angles, with 2 daily trains at the Diridon Station. In addition to the passenger trains utilizing Diridon Station, there are about 10 freight trains that use the UPPR track on a daily basis[32]. The freight trains do not stop at Diridon Station. On an annual average basis this would be a total of 103 daily passenger trains and 10 daily freight trains using diesel locomotives

Currently all of Caltrain's trains use diesel locomotives. The Peninsula Corridor Electrification Project is a key component of the Caltrain Modernization Program that would electrify the Caltrain Corridor from San Francisco to the Tamien Caltrain station in San José. As part of the program to modernize operation of the Caltrain rail corridor between San José and San Francisco, Caltrain is planning to phase in the change from using diesel locomotives to use of electric trains.[33] This plan was formally adopted on January 8, 2015[34] and electrified service is anticipated to begin in late 2024.[35]

Electrification of Caltrain would eliminate DPM emissions from these trains. Caltrain plans are that initial service between San José and San Francisco would use a mixed fleet of electric and diesel locomotives, with approximately 75 percent of the service being electric and 25 percent being diesel. Diesel locomotives would be replaced with electric trains over time as they reach the end of their service life. Caltrain's diesel-powered locomotives would continue to be used to

[31] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2014 does not include Burden type output with hour by hour traffic volume information.
[32] *Bay Area Regional Rail Plan, Technical Memorandum 4a, Conditions, Configuration & Traffic on Existing System*, Metropolitan Transportation Commission, November 15, 2006.
[33] Caltrain, 2014. *Peninsula Corridor Electrification Project. Final Environmental Impact Report.* December 2014.
[34] Caltrain, 2015. *Peninsula Corridor Electrification Fact Sheet.* May 2015.
[35] Caltrain, 2021. *Caltrain Electrification Delayed to 2024*. June 3, 2021. See: *www.caltrain.com/about/MediaRelations/news/Caltrain_Electrification_Delayed_to_2024.html*

provide service between the San José Diridon Station and Gilroy. It is expected that all of the San José to San Francisco fleet would be electric trains about five to eight years after initial electric service begins.[36] Construction for electrification is currently underway.

With Caltrain electrification, starting in late 2024 there would be 24 daily weekday trips using trains with diesel locomotives.[37] All other Caltrain trains would be electric. On an annual average basis this would be a total of 14 daily trains using diesel locomotives. Use of these diesel trains by Caltrain between San Francisco and San Jose would be phased out over time and replaced by electric trains. All trains used for freight service and the ACE and Amtrak passenger trains are assumed to use diesel powered locomotives.

Rail Line Emissions

For this evaluation the rail exposure period was assumed to begin in 2024, as this is when exposure would begin for the maximum construction cancer risk impact at the project MEI. In calculating cancer risks from DPM emissions from rail line diesel locomotives a 30-year exposure period is used per BAAQMD health risk guidance.[38] In this case, the exposure period would be from 2024 through 2053. For calculating emissions from Caltrain locomotives it was assumed that during 2024 all trains would use diesel locomotives. In 2025 and thereafter it was conservatively assumed that, on an annual average basis, there would be 19 daily Caltrain trips using diesel locomotives. All other Caltrain trains would be electric. All trains used for freight services and the ACE and Amtrak passenger trains were assumed to continue to use diesel powered locomotives over the entire 2024 through 2053 period. DPM emissions from diesel-fueled locomotives will be reduced over time due to regulatory requirements for reduced particulate matter emissions from diesel locomotives.

DPM and $PM_{2.5}$ emissions from trains on the rail line were calculated using EPA emission factors for locomotives[39] and CARB adjustment factors to account for fuels used in California[40]. Caltrain's current locomotive fleet consists of twenty-three 3,200 horsepower (hp) locomotives of model year or overhaul date of 1999 or later, three 3,200 hp locomotives of model year 1998, and six 3,600 hp locomotives of model year 2003.[41] The current fleet average locomotive engine size is about 3,285 hp. In estimating diesel emissions prior to electrification, a fleet average locomotive engine size of 3,285 hp was used. When electrification occurs, Caltrain will initially retain the six 3,600 hp locomotives and three 3,200 hp locomotives[42]. In estimating diesel locomotive emissions for the case of electrification, an average locomotive horsepower of 3,467 hp was used. For the ACE and Amtrak passenger trains, a locomotive diesel engine horsepower of 3,200 was assumed. Emissions from the freight trains were calculated assuming they would use two diesel locomotives with 2,300 hp engines (total of 4,600 hp). Passenger trains were assumed to be traveling at an average speed of 20 mph near the station while arriving and departing the Diridon Station and 30 mph farther away from the station when approaching or

[36] Caltrain 2019. *Caltrain Short- Range Transit Plan: FY2018-2027*. June 6, 2019.
[37] Caltrain 2019. *Caltrain Short- Range Transit Plan: FY2018-2027*. June 6, 2019.
[38] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines.* December 2016.
[39] *Emission Factors for Locomotives*, USEPA 2009 (EPA-420-F-09-025)
[40] *Offroad Modeling, Change Technical Memo*, Changes to the Locomotive Inventory, CARB July 2006.
[41] Caltrain *Commute Fleets*. Available at: http://www.caltrain.com/about/statsandreports.html. Accessed January 4, 2022.
[42] Caltrain 2019. *Caltrain Short- Range Transit Plan: FY2018-2027*. June 6, 2019.

leaving the station. The freight trains, which would bypass the station, were assumed to be traveling at 40 mph. Since the exposure duration used in calculating residential cancer risks is 30 years (in this case from 2024 through 2053), the passenger and freight train average DPM and $PM_{2.5}$ emissions were calculated based on average EPA emission factors for 2024 prior to electrification and the 2025-2053 period post Caltrain electrification.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the EPA AERMOD air quality dispersion model, which is recommended by the BAAQMD for this type of analysis.[43,44] TAC and $PM_{2.5}$ emissions from traffic on the roadways and railways within 1,000 feet of the project site were evaluated. Vehicle traffic on the roadways, and train travel on the railway, was modeled using a series of adjacent volume sources along a line (line volume sources); with line segments used for the travel directions on the roadways and railway. The same meteorological data and off-site sensitive receptors used in the previous dispersion modeling were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations. Annual TAC and $PM_{2.5}$ concentrations for 2024 from traffic on the roadways and trains on the railway were calculated using the model. Concentrations were calculated at the project MEI with receptor heights of 30 feet (9.1 meters) to represent the breathing heights of residents in the multi-family building.

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

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2018* GIS website,[45] which identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. Five sources were identified using this tool with three sources being auto body coating operations, one source being gas dispensing facilities, and one being a generator. One of the auto body coating operations will be demolished as part of the construction of a nearby project. Therefore, only four sources will be operational. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. BAAQMD provided updated emissions data and risk values.[46]

The screening level risks and hazards provided by BAAQMD for the stationary sources were adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal*

[43] BAAQMD, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en
[44] BAAQMD, 2020, *BAAQMD Health Risk Assessment Modeling Protocol.* December. Web: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol-pdf.pdf?la=en
[45] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65
[46] Correspondence with Matthew Hanson, Environmental Planner II, BAAQMD, February 10, 2022.

Combustion Engines, Gasoline Dispensing Facility, and Generic Equipment. Community risk impacts from the stationary sources upon the MEI are reported in Table 7.

Construction Risk Impacts from Nearby Developments

Based on the City's website,[47] the following planned or approved projects are located within 1,000 feet of the proposed project:

- **Stockton Hotel** – this project is located at 292 Stockton Avenue, which is adjacent to the project site on the northwest side. This project would include construction of a nine-story building that would include 311 hotel rooms and 19 condominium units. A three-level below grade parking structure is also included in this project. This project was analyzed by *Illingworth & Rodkin, Inc.* This project is currently under pre-construction review. Therefore, there is potential for this project to be constructed simultaneously or consecutively with the proposed project.

- **715 West Julian Street** – this project is located approximately 300 feet northwest of the project site. This project proposes the construction of a seven-story building with 249 residential units and 26,572 square feet of commercial. This project is currently under construction. Therefore, some construction could overlap with the proposed project and occur simultaneously.

- **Platform 16** – this project is located approximately 900 feet northeast of the project site. This project proposes the construction of one million square footage of office space. The project is currently under construction and is unlikely to overlap with, or be consecutive to, the construction of 250 Stockton Avenue. Therefore, the construction impacts from Platform 16 are not included in the cumulative analysis.

The mitigated construction risks and hazard impact values for certain developments were available from their air quality technical reports either conducted by *Illingworth & Rodin, Inc*. or on the City of San José Environmental Review website for Active EIRs,[48] Completed EIRs,[49] or Negative Declaration / Initial Studies.[50] For the purpose of this analysis, it was conservatively assumed the entire construction period from the proposed project would overlap with the nearby developments' construction schedule. This approach likely provides an overestimate of the community risk and hazard levels because it assumes that maximum impacts from the nearby development occurs concurrently with the proposed project at the proposed project's MEI. The mitigated construction risks reported in that air quality assessment were included in the cumulative risks Table 7.

[47] City of San Jose, Private / Key Economic Development Projects Map, Web: https://gis.sanjoseca.gov/maps/devprojects/
[48] City of San José, *Active EIRs*, https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/active-eirs
[49] City of San José, *Completed EIRs*, https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/completed-eirs
[50] City of San José, *Negative Declaration / Initial Studies*, https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/negative-declaration-initial-studies

Summary of Cumulative Risks at the Project MEI

Table 7 reports both the project and cumulative community risk impacts at the sensitive receptors most affected by project construction and operation (i.e., the project MEIs). The project would have an exceedance with respect to community risk caused by project construction and operation, since the unmitigated maximum cancer risk and annual $PM_{2.5}$ concentration exceeds the BAAQMD single-source thresholds. With the implementation of *Mitigation Measure AQ-1 and AQ-2*, the project's cancer risk and annual $PM_{2.5}$ concentration would be lowered to a level below the single-source thresholds. The combined unmitigated and mitigated cancer risk and annual $PM_{2.5}$ concentration would not exceed the cumulative-source threshold. The HI, unmitigated and mitigated, does not exceed its single or cumulative thresholds.

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

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Total/Maximum Project Impacts	Unmitigated	**43.04**	**0.42**	0.03
	Mitigated	9.77	0.15	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	***Yes***	*No*
	Mitigated	*No*	*No*	*No*
Cumulative Operational Sources				
West Santa Clara Street, ADT 21,561		0.40	0.03	<0.01
Stockton Avenue, ADT 10,727		0.38	0.03	<0.01
CalTrain[1]		21.96	0.05	0.01
Pacific Gas and Electric Company (Facility ID #3100, Gas Station), MEI at 1000+ feet		0.02	<0.01	<0.01
Fleet Body Worx, Inc (Facility ID #11819, Auto Body Coating Operation), MEI at 1000+ feet		-	-	<0.01
Unison Energy, LLC (Facility ID #22305, Generators), MEI at 380 feet		0.12	0.05	<0.01
S&S Toy Shop (Facility ID #200395, Auto Body Coating Operation), MEI at 1000+ feet		-	-	<0.01
Cumulative Temporary Construction Sources				
Stockton Hotel Mitigated Construction Emissions – adjacent northwest		<3.80	<0.06	<0.01
715 W Julian St Mitigated Construction Emissions – 300 feet northwest		<5.40	<0.04	<0.01
Combined Sources	Unmitigated	<75.12	<0.69	<0.12
	Mitigated	<41.85	<0.42	<0.10
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
	Mitigated	*No*	*No*	*No*

[1]The cancer risk value shown is from the annual $PM_{2.5}$ MEI since dispersion modeling resulted in a higher cancer risk there.

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

Implement a feasible plan to reduce DPM emissions by 80 percent such that increased cancer risk and annual $PM_{2.5}$ concentrations from construction would be reduced below TAC significance levels as follows:

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

    a. If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve an 80 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. Provide line power to the site during the early phases of construction to minimize the use of diesel-powered equipment, such as generators and welders.

3. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 80 percent or greater. Elements of the plan could include a combination of some of the following measures:
    - Implementation of No. 1 above to use Tier 4 or alternatively fueled equipment,
    - Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors,
    - Use of electrically-powered equipment,
    - Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
    - Change in construction build-out plans to lengthen phases, and
    - Implementation of different building techniques that result in less diesel equipment usage.

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

Effectiveness of Mitigation Measure AQ-1 and AQ-2

CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment met U.S. EPA Tier 4 Interim engine standards and most portable equipment would be electric. With these implemented, the project's construction cancer risk levels

(assuming infant exposure) would be reduced by 81 percent to 7.88 chances per million. Assuming a slightly lesser level of mitigation that achieves an 80-percent reduction in the project's cancer risk, increased cancer risks would be reduced to below 10 chances per million. As a result, the project's construction and operational risks would be reduced below the BAAQMD single-source thresholds.

Supporting Documentation

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

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant. 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 health risk assessment. This includes the summary of the dispersion modeling and the cancer risk calculations for construction and operation. The AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

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

Attachment 1: Health Risk Calculation Methodology

Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[51] 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.[52] 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.[53] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

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

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

[51] 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.
[52] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[53] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

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

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

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

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

Where:

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

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

Where:

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

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

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

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

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

Non-Cancer Hazards

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

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

Annual $PM_{2.5}$ Concentrations

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

Attachment 2: CalEEMod Input Assumptions and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: 250 Stockton Ave.

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size		Dwelling Units	2.39 total project acres disturbed
		s.f. residential	
	7825	s.f. retail	
	908,587	s.f. office/commercial	
		s.f. other, specify:	
	335,177	s.f. parking garage	1.572 spaces
		s.f. parking lot	spaces
Construction Hours	7:00 am	to	5:00 pm

Pile Driving? Y/N? N

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

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: ___95_____

Fuel Type: ____T4_____

Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	Demolition	**Start Date:**	**1/1/2024**	**Total phase:**	**22**			**Overall Import/Export Volumes**
		End Date:	**2/1/2024**					
2	Concrete/Industrial Saws	81	0.73	10	20	9.1	400	**Demolition Volume**
2	Excavators	158	0.38	10	20	9.1	400	Square footage of buildings to be demolished
1	Rubber-Tired Dozers	247	0.4	10	20	9.1	200	(*or* total tons to be hauled)
1	Tractors/Loaders/Backhoes	97	0.37	10	20	9.1	200	94,000 square feet *or*
								? Hauling volume (tons)
								Any pavement demolished and hauled? 320cy
	Site Preparation	**Start Date:**	**2/2/2024**	**Total phase:**	**20**			
		End Date:	**3/1/2024**					
1	Graders	187	0.41	10	20	10	200	
1	Rubber Tired Dozers	247	0.4	10	20	10	200	
1	Tractors/Loaders/Backhoes	97	0.37	10	20	10	200	
	Grading / Excavation	**Start Date:**	**3/2/2024**	**Total phase:**	**105**			
		End Date:	**8/1/2024**					**Soil Hauling Volume**
3	Excavators	158	0.38	10	100	9.5	3000	Export volume = 141,520 cubic yards?
1	Graders	187	0.41	10	80	7.6	800	Import volume = ? cubic yards?
1	Rubber Tired Dozers	247	0.4	10	40	3.8	400	
1	Concrete/Industrial Saws	81	0.73	10	20	1.9	200	
1	Tractors/Loaders/Backhoes	97	0.37	10	20	1.9	200	
	Other Equipment?							
	Trenching/Foundation/Structure	**Start Date:**	**8/2/2024**	**Total phase:**	**350**			
		End Date:	**1/6/2026**					
0	Tractor/Loader/Backhoe	97	0.37	0	0	0	0	
2	Excavators	158	0.38	10	100	2.9	2000	
1	*Concrete pump*	220	0.74	10	180	5.1	1800	
	Building - Exterior	**Start Date:**	**1/7/2026**	**Total phase:**	**250**			**Cement Trucks? 5,500 Total Round-Trips**
		End Date:	**1/12/2027**					
1	Cranes	231	0.29	10	250	10	2500	Electric? (Y/N) Y Otherwise assumed diesel
1	Forklifts	89	0.2	10	250	10	2500	Liquid Propane (LPG)? (Y/N) Y Otherwise Assumed diesel
1	Generator Sets	84	0.74	10	120	4.8	1200	Or temporary line power? (Y/N) Y
0	Tractors/Loaders/Backhoes	97	0.37	0	0	0	0	
1	Welders	46	0.45	10	200	8	2000	
	Other Equipment?					0		
	Building - Interior/Architectural Coating	**Start Date:**	**1/13/2027**	**Total phase:**	**150**			
		End Date:	**8/19/2027**					
1	Air Compressors	78	0.48	10	150	10	1500	
4	Aerial Lift	62	0.31	10	150	10	6000	
	Other Equipment?							
	Paving	**Start Date:**	**8/20/2027**	**Total phase:**	**40**			
		Start Date:	**10/20/2027**					
1	Cement and Mortar Mixers	9	0.56	8	30	6	240	
1	Pavers	130	0.42	8	10	2	80	**Asphalt? ___ cubic yards or ____ round trips?**
1	Paving Equipment	132	0.36	8	10	2	80	
1	Rollers	80	0.38	8	10	2	80	
1	Tractors/Loaders/Backhoes	97	0.37	8	10	2	80	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						

Equipment types listed in "Equipment Types" worksheet tab.

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

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horepower or load factor, as appropriate

Complete one sheet for each project component

Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**	
Year	Tons				MT	
Construction Equipment						
2024	0.14	1.23	0.05	0.05	270.76	
2025	0.05	0.34	0.01	0.01	154.40	
2026	0.11	0.97	0.04	0.04	167.02	
2027	4.89	0.37	0.01	0.01	94.84	
EMFAC						
2024	0.06	0.64	0.04	0.02	532.70	
2025	0.06	0.61	0.04	0.02	519.82	
2026	0.05	0.58	0.04	0.02	509.34	
2027	0.04	0.44	0.03	0.01	391.58	
Total Construction Emissions by Year						
2024	0.20	1.87	0.09	0.07	803.46	
2025	0.11	0.95	0.05	0.03	674.22	
2026	0.16	1.55	0.08	0.06	676.36	
2027	4.93	0.81	0.04	0.02	486.42	
	Total Construction Emissions					
Tons	5.39	5.19	0.28	0.18	2640.46	
Pounds/Workdays	*Average Daily Emissions*				Workdays	
2024	1.49	14.29	0.72	0.51		**262**
2025	0.81	7.26	0.42	0.22		**261**
2026	1.25	11.91	0.63	0.43		**261**
2027	48.06	7.92	0.43	0.24		**205**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		
	Total Construction Emissions					
Pounds	51.61	41.38	2.21	1.40	0.00	
Average	10.90	10.49	0.56	0.36	0.00	989.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		
Year	Tons					
Total	6.49	2.76	5.57	1.47		
	Existing Use Emissions					
Total	0.00	0.00	0.00	0.00		
	Net Annual Operational Emissions					
Tons/year	6.49	2.76	5.57	1.47		
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**		
	Average Daily Emissions					
Pounds Per Day	35.57	15.13	30.52	8.05		
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Traffic Consultant Trip Gen					CalEEMod Default		
Land Use	**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**
General Office Building	908.587	9849	8594	***9.46***	10.84	2.21	0.7
Employment & Retail Reduction		*-295*			*Rev*	***1.93***	***0.61***
Location-Based Reduction		*-860*					
VMT-Based Reduction		*-100*					
Land Use	**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**
Strip Retail Plaza	7.825	426	133	***17.00***	54.45	42.04	20.43
Employment & Retail Reduction		*-273*			*Rev*	***13.12***	***6.38***
Location-Based Reduction		*-20*					

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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	908.59	1000sqft	2.40	908,587.00	0
Enclosed Parking with Elevator	1,572.00	Space	0.00	335,177.00	0
Strip Mall	7.83	1000sqft	0.00	7,825.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2028
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	177.69	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SJCE 2020 Rate

Land Use - Construction sheet data.

Construction Phase - Construction schedule from provided construction sheet.

Off-road Equipment - Equipment info provided by construction sheet.

Off-road Equipment - Equipment info provided by construction sheet.

Off-road Equipment - Equipment info provided by construction sheet.

Off-road Equipment - Equipment info provided by construction sheet.

Off-road Equipment - Equipment info provided by construction sheet.

Off-road Equipment - Equipment info provided by construction sheet.

Off-road Equipment - Equipment info provided by construction sheet.

Date: 5/27/2022 10:23 AM

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Trips and VMT - All trips entered into EMFAC2021

Demolition -

Grading -

Vehicle Trips - Trip rates calculated from data provided by traffic consultant.

Vehicle Emission Factors - Emission factors from EMFAC 2021

Energy Use - San Jose reach code bans natural gas. Natural gas usage added to electricity usage.

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMP. Electric cranes, LPG forklifts, electric gen set, electric lifts, electric welders, electric air compressors. All non-electric equipment T4i

Fleet Mix - Fleet mix from EMFAC2021.

Stationary Sources - Emergency Generators and Fire Pumps - 95kw diesel fired emergency generator

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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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	150.00
tblConstructionPhase	NumDays	220.00	250.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	6.00	105.00
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDays	3.00	20.00
tblEnergyUse	NT24E	7.84	7.86
tblEnergyUse	NT24NG	0.06	0.00
tblEnergyUse	T24E	5.45	10.18
tblEnergyUse	T24E	2.46	3.15
tblEnergyUse	T24NG	16.14	0.00
tblEnergyUse	T24NG	2.34	0.00

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tblFleetMix	HHD	6.1360e-003	0.02
tblFleetMix	HHD	6.1360e-003	0.02
tblFleetMix	HHD	6.1360e-003	0.02
tblFleetMix	LDA	0.58	0.54
tblFleetMix	LDA	0.58	0.54
tblFleetMix	LDA	0.58	0.54
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	5.3040e-003	6.2907e-003
tblFleetMix	LHD2	5.3040e-003	6.2907e-003
tblFleetMix	LHD2	5.3040e-003	6.2907e-003
tblFleetMix	MCY	0.02	3.4963e-003
tblFleetMix	MCY	0.02	3.4963e-003
tblFleetMix	MCY	0.02	3.4963e-003
tblFleetMix	MDV	0.11	0.13
tblFleetMix	MDV	0.11	0.13
tblFleetMix	MDV	0.11	0.13
tblFleetMix	MH	2.5850e-003	6.3007e-004
tblFleetMix	MH	2.5850e-003	6.3007e-004
tblFleetMix	MH	2.5850e-003	6.3007e-004
tblFleetMix	MHD	8.1880e-003	0.01
tblFleetMix	MHD	8.1880e-003	0.01

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tblFleetMix	MHD	8.1880e-003	0.01
tblFleetMix	OBUS	8.6800e-004	1.6942e-003
tblFleetMix	OBUS	8.6800e-004	1.6942e-003
tblFleetMix	OBUS	8.6800e-004	1.6942e-003
tblFleetMix	SBUS	8.6200e-004	5.3304e-004
tblFleetMix	SBUS	8.6200e-004	5.3304e-004
tblFleetMix	SBUS	8.6200e-004	5.3304e-004
tblFleetMix	UBUS	3.4900e-004	1.2353e-003
tblFleetMix	UBUS	3.4900e-004	1.2353e-003
tblFleetMix	UBUS	3.4900e-004	1.2353e-003
tblGrading	MaterialExported	0.00	141,250.00
tblLandUse	LandUseSquareFeet	908,590.00	908,587.00
tblLandUse	LandUseSquareFeet	628,800.00	335,177.00
tblLandUse	LandUseSquareFeet	7,830.00	7,825.00
tblLandUse	LotAcreage	20.86	2.40
tblLandUse	LotAcreage	14.15	0.00
tblLandUse	LotAcreage	0.18	0.00
tblOffRoadEquipment	HorsePower	84.00	220.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	9.10
tblOffRoadEquipment	UsageHours	8.00	9.10
tblOffRoadEquipment	UsageHours	8.00	9.10
tblOffRoadEquipment	UsageHours	8.00	10.00

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tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	7.60
tblOffRoadEquipment	UsageHours	8.00	3.80
tblOffRoadEquipment	UsageHours	7.00	1.90
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	807.98	177.69
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	127.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	428.00	0.00
tblTripsAndVMT	HaulingTripNumber	17,656.00	0.00
tblTripsAndVMT	VendorTripNumber	205.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	434.00	0.00
tblTripsAndVMT	WorkerTripNumber	87.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleEF	HHD	0.02	0.21

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tblVehicleEF	HHD	0.05	0.10
tblVehicleEF	HHD	0.00	6.0238e-008
tblVehicleEF	HHD	6.31	5.09
tblVehicleEF	HHD	0.41	0.68
tblVehicleEF	HHD	6.3790e-003	8.1752e-004
tblVehicleEF	HHD	972.81	757.82
tblVehicleEF	HHD	1,295.90	1,479.56
tblVehicleEF	HHD	0.05	9.9267e-003
tblVehicleEF	HHD	0.15	0.12
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	3.0000e-006	5.6833e-006
tblVehicleEF	HHD	5.26	3.62
tblVehicleEF	HHD	2.59	1.57
tblVehicleEF	HHD	2.32	2.71
tblVehicleEF	HHD	2.2800e-003	1.8638e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	1.6382e-007
tblVehicleEF	HHD	2.1810e-003	1.7765e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8990e-003	8.7847e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	1.5062e-007
tblVehicleEF	HHD	1.0000e-006	5.5226e-005
tblVehicleEF	HHD	5.9000e-005	1.7500e-005
tblVehicleEF	HHD	0.42	0.32
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02

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tblVehicleEF	HHD	2.5000e-005	1.5738e-004
tblVehicleEF	HHD	2.0000e-006	3.2662e-007
tblVehicleEF	HHD	9.0490e-003	6.5679e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.00	9.8135e-008
tblVehicleEF	HHD	1.0000e-006	5.5226e-005
tblVehicleEF	HHD	5.9000e-005	1.7500e-005
tblVehicleEF	HHD	0.49	0.56
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	2.5000e-005	1.5738e-004
tblVehicleEF	HHD	3.0000e-006	3.5760e-007
tblVehicleEF	LDA	1.1280e-003	1.4251e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.43	0.52
tblVehicleEF	LDA	1.80	2.29
tblVehicleEF	LDA	208.82	221.35
tblVehicleEF	LDA	44.22	57.20
tblVehicleEF	LDA	3.3260e-003	3.3727e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.13	0.19
tblVehicleEF	LDA	0.04	7.0973e-003
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.0460e-003	9.5485e-004
tblVehicleEF	LDA	1.4250e-003	1.6437e-003
tblVehicleEF	LDA	0.02	2.4840e-003
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	9.6300e-004	8.7845e-004

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tblVehicleEF	LDA	1.3100e-003	1.5114e-003
tblVehicleEF	LDA	0.03	0.24
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	3.9220e-003	5.1049e-003
tblVehicleEF	LDA	0.02	0.18
tblVehicleEF	LDA	0.14	0.22
tblVehicleEF	LDA	2.0660e-003	2.1882e-003
tblVehicleEF	LDA	4.3800e-004	5.6550e-004
tblVehicleEF	LDA	0.03	0.24
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	5.6980e-003	7.4409e-003
tblVehicleEF	LDA	0.02	0.18
tblVehicleEF	LDA	0.15	0.24
tblVehicleEF	LDT1	2.1200e-003	4.0519e-003
tblVehicleEF	LDT1	0.04	0.08
tblVehicleEF	LDT1	0.61	1.04
tblVehicleEF	LDT1	1.93	3.92
tblVehicleEF	LDT1	251.94	301.13
tblVehicleEF	LDT1	53.96	78.42
tblVehicleEF	LDT1	4.2390e-003	6.8285e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.04	0.08
tblVehicleEF	LDT1	0.17	0.30
tblVehicleEF	LDT1	0.04	9.1816e-003
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	1.2270e-003	1.4650e-003
tblVehicleEF	LDT1	1.6610e-003	2.3392e-003

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tblVehicleEF	LDT1	0.02	3.2135e-003
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	1.1280e-003	1.3472e-003
tblVehicleEF	LDT1	1.5280e-003	2.1508e-003
tblVehicleEF	LDT1	0.05	0.50
tblVehicleEF	LDT1	0.11	0.13
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	8.5090e-003	0.02
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.18	0.39
tblVehicleEF	LDT1	2.4930e-003	2.9770e-003
tblVehicleEF	LDT1	5.3400e-004	7.7529e-004
tblVehicleEF	LDT1	0.05	0.50
tblVehicleEF	LDT1	0.11	0.13
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.20	0.43
tblVehicleEF	LDT2	2.0300e-003	2.0991e-003
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.60	0.68
tblVehicleEF	LDT2	2.37	2.95
tblVehicleEF	LDT2	263.74	305.02
tblVehicleEF	LDT2	57.01	77.91
tblVehicleEF	LDT2	4.4300e-003	4.8561e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.19	0.27
tblVehicleEF	LDT2	0.04	8.8479e-003

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tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.1330e-003	1.1158e-003
tblVehicleEF	LDT2	1.4830e-003	1.8364e-003
tblVehicleEF	LDT2	0.02	3.0968e-003
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.0430e-003	1.0266e-003
tblVehicleEF	LDT2	1.3630e-003	1.6885e-003
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	7.8330e-003	7.8650e-003
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.21	0.30
tblVehicleEF	LDT2	2.6090e-003	3.0150e-003
tblVehicleEF	LDT2	5.6400e-004	7.7018e-004
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.23	0.32
tblVehicleEF	LHD1	4.3880e-003	4.6811e-003
tblVehicleEF	LHD1	5.9280e-003	5.1820e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.54	0.66
tblVehicleEF	LHD1	0.94	2.14
tblVehicleEF	LHD1	8.45	8.17
tblVehicleEF	LHD1	721.39	709.22

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tblVehicleEF	LHD1	10.54	16.72
tblVehicleEF	LHD1	7.3500e-004	6.1243e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.39	0.40
tblVehicleEF	LHD1	0.25	0.36
tblVehicleEF	LHD1	8.9600e-004	6.8126e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8700e-003	9.3929e-003
tblVehicleEF	LHD1	7.7360e-003	0.01
tblVehicleEF	LHD1	2.2100e-004	1.6127e-004
tblVehicleEF	LHD1	8.5700e-004	6.5179e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4680e-003	2.3482e-003
tblVehicleEF	LHD1	7.3560e-003	0.01
tblVehicleEF	LHD1	2.0300e-004	1.4829e-004
tblVehicleEF	LHD1	1.5610e-003	0.10
tblVehicleEF	LHD1	0.06	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.3900e-004	0.00
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.18	0.15
tblVehicleEF	LHD1	0.05	0.09
tblVehicleEF	LHD1	8.2000e-005	7.9548e-005
tblVehicleEF	LHD1	7.0370e-003	6.9226e-003
tblVehicleEF	LHD1	1.0400e-004	1.6527e-004
tblVehicleEF	LHD1	1.5610e-003	0.10
tblVehicleEF	LHD1	0.06	0.02

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tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	8.3900e-004	0.00
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.18	0.15
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD2	2.6510e-003	2.6861e-003
tblVehicleEF	LHD2	5.6110e-003	5.0944e-003
tblVehicleEF	LHD2	5.5730e-003	9.7199e-003
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.51	0.43
tblVehicleEF	LHD2	0.51	1.14
tblVehicleEF	LHD2	13.28	13.47
tblVehicleEF	LHD2	700.57	756.59
tblVehicleEF	LHD2	6.75	8.92
tblVehicleEF	LHD2	1.6910e-003	1.6804e-003
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.48	0.60
tblVehicleEF	LHD2	0.14	0.20
tblVehicleEF	LHD2	1.4880e-003	1.4355e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1100e-004	6.7373e-005
tblVehicleEF	LHD2	1.4230e-003	1.3734e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7060e-003	2.6552e-003
tblVehicleEF	LHD2	0.01	0.02

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tblVehicleEF	LHD2	1.0200e-004	6.1947e-005
tblVehicleEF	LHD2	7.2700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0900e-004	0.00
tblVehicleEF	LHD2	0.10	0.09
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2700e-004	1.2901e-004
tblVehicleEF	LHD2	6.7590e-003	7.2818e-003
tblVehicleEF	LHD2	6.7000e-005	8.8178e-005
tblVehicleEF	LHD2	7.2700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.0900e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	MCY	0.32	0.15
tblVehicleEF	MCY	0.25	0.16
tblVehicleEF	MCY	17.85	11.46
tblVehicleEF	MCY	9.16	7.88
tblVehicleEF	MCY	209.84	186.14
tblVehicleEF	MCY	59.66	44.44
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	6.8246e-003
tblVehicleEF	MCY	1.14	0.53
tblVehicleEF	MCY	0.27	0.11
tblVehicleEF	MCY	0.01	0.01

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tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	2.1060e-003	1.9750e-003
tblVehicleEF	MCY	2.9000e-003	3.4508e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9650e-003	1.8444e-003
tblVehicleEF	MCY	2.7160e-003	3.2337e-003
tblVehicleEF	MCY	0.89	3.81
tblVehicleEF	MCY	0.64	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.14	0.93
tblVehicleEF	MCY	0.48	3.79
tblVehicleEF	MCY	1.89	1.20
tblVehicleEF	MCY	2.0770e-003	1.8401e-003
tblVehicleEF	MCY	5.9000e-004	4.3935e-004
tblVehicleEF	MCY	0.89	0.08
tblVehicleEF	MCY	0.64	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.68	1.14
tblVehicleEF	MCY	0.48	3.79
tblVehicleEF	MCY	2.06	1.30
tblVehicleEF	MDV	2.1400e-003	2.4427e-003
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.60	0.72
tblVehicleEF	MDV	2.45	3.04
tblVehicleEF	MDV	317.99	364.89
tblVehicleEF	MDV	67.38	92.49
tblVehicleEF	MDV	5.7730e-003	6.0266e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.06

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tblVehicleEF	MDV	0.20	0.30
tblVehicleEF	MDV	0.04	8.9171e-003
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.1580e-003	1.1030e-003
tblVehicleEF	MDV	1.5000e-003	1.7912e-003
tblVehicleEF	MDV	0.02	3.1210e-003
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.0670e-003	1.0161e-003
tblVehicleEF	MDV	1.3790e-003	1.6469e-003
tblVehicleEF	MDV	0.06	0.30
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	8.4840e-003	9.7224e-003
tblVehicleEF	MDV	0.06	0.23
tblVehicleEF	MDV	0.23	0.35
tblVehicleEF	MDV	3.1420e-003	3.6052e-003
tblVehicleEF	MDV	6.6700e-004	9.1431e-004
tblVehicleEF	MDV	0.06	0.30
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.06	0.23
tblVehicleEF	MDV	0.26	0.38
tblVehicleEF	MH	6.2680e-003	7.8577e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.49	0.64
tblVehicleEF	MH	1.74	2.08
tblVehicleEF	MH	1,392.93	1,664.51
tblVehicleEF	MH	16.29	20.83

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tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.13	1.36
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.2600e-004	2.5540e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2930e-003	3.3264e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.0700e-004	2.3483e-004
tblVehicleEF	MH	0.43	24.71
tblVehicleEF	MH	0.04	6.12
tblVehicleEF	MH	0.16	0.00
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	8.4430e-003	0.15
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6100e-004	2.0596e-004
tblVehicleEF	MH	0.43	24.71
tblVehicleEF	MH	0.04	6.12
tblVehicleEF	MH	0.16	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	8.4430e-003	0.15
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MHD	3.7420e-003	0.02
tblVehicleEF	MHD	1.1630e-003	9.5576e-003
tblVehicleEF	MHD	8.4440e-003	7.2175e-003

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tblVehicleEF	MHD	0.40	0.65
tblVehicleEF	MHD	0.17	0.20
tblVehicleEF	MHD	0.91	0.82
tblVehicleEF	MHD	67.24	151.31
tblVehicleEF	MHD	1,020.03	1,148.11
tblVehicleEF	MHD	8.65	7.36
tblVehicleEF	MHD	9.7020e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.5160e-003	5.2516e-003
tblVehicleEF	MHD	0.36	0.71
tblVehicleEF	MHD	1.44	0.73
tblVehicleEF	MHD	1.70	1.33
tblVehicleEF	MHD	2.1200e-004	9.7319e-004
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.0380e-003	7.1915e-003
tblVehicleEF	MHD	1.1100e-004	8.9136e-005
tblVehicleEF	MHD	2.0300e-004	9.3049e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	6.7260e-003	6.8725e-003
tblVehicleEF	MHD	1.0200e-004	8.1957e-005
tblVehicleEF	MHD	3.0500e-004	0.02
tblVehicleEF	MHD	0.01	4.2240e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.7100e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04

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tblVehicleEF	MHD	6.3800e-004	1.3972e-003
tblVehicleEF	MHD	9.7310e-003	0.01
tblVehicleEF	MHD	8.6000e-005	7.2771e-005
tblVehicleEF	MHD	3.0500e-004	0.02
tblVehicleEF	MHD	0.01	4.2240e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.7100e-004	0.00
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0850e-003	7.5623e-003
tblVehicleEF	OBUS	2.5530e-003	0.01
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.63	0.55
tblVehicleEF	OBUS	0.30	0.34
tblVehicleEF	OBUS	1.65	1.62
tblVehicleEF	OBUS	96.94	89.66
tblVehicleEF	OBUS	1,242.38	1,295.86
tblVehicleEF	OBUS	13.93	13.10
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.12	0.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.42	0.35
tblVehicleEF	OBUS	1.44	0.87
tblVehicleEF	OBUS	1.12	0.98
tblVehicleEF	OBUS	1.3800e-004	3.5519e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6840e-003	0.01

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tblVehicleEF	OBUS	1.5400e-004	1.2387e-004
tblVehicleEF	OBUS	1.3200e-004	3.3971e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	7.3370e-003	0.01
tblVehicleEF	OBUS	1.4100e-004	1.1389e-004
tblVehicleEF	OBUS	1.0770e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8800e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	9.2000e-004	8.4582e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3800e-004	1.2949e-004
tblVehicleEF	OBUS	1.0770e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8800e-004	0.00
tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	4.8620e-003	0.09
tblVehicleEF	SBUS	5.7680e-003	5.1387e-003
tblVehicleEF	SBUS	2.69	1.79
tblVehicleEF	SBUS	0.40	0.78
tblVehicleEF	SBUS	0.80	0.68

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tblVehicleEF	SBUS	341.71	186.34
tblVehicleEF	SBUS	998.71	980.42
tblVehicleEF	SBUS	4.70	3.91
tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.12	0.12
tblVehicleEF	SBUS	5.8520e-003	4.6872e-003
tblVehicleEF	SBUS	3.00	1.18
tblVehicleEF	SBUS	3.65	1.92
tblVehicleEF	SBUS	1.06	0.51
tblVehicleEF	SBUS	2.5420e-003	9.2934e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	6.0000e-005	4.4390e-005
tblVehicleEF	SBUS	2.4320e-003	8.8790e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6870e-003	2.6226e-003
tblVehicleEF	SBUS	0.02	9.6805e-003
tblVehicleEF	SBUS	5.6000e-005	4.0815e-005
tblVehicleEF	SBUS	7.2600e-004	0.04
tblVehicleEF	SBUS	6.9730e-003	8.5400e-003
tblVehicleEF	SBUS	0.30	0.19
tblVehicleEF	SBUS	3.4300e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.2570e-003	1.6862e-003
tblVehicleEF	SBUS	9.5500e-003	9.1034e-003
tblVehicleEF	SBUS	4.7000e-005	3.8616e-005

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tblVehicleEF	SBUS	7.2600e-004	0.04
tblVehicleEF	SBUS	6.9730e-003	8.5400e-003
tblVehicleEF	SBUS	0.43	0.32
tblVehicleEF	SBUS	3.4300e-004	0.00
tblVehicleEF	SBUS	0.08	0.14
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.9830e-003	2.4478e-003
tblVehicleEF	UBUS	13.17	6.31
tblVehicleEF	UBUS	0.14	0.55
tblVehicleEF	UBUS	1,653.79	1,056.23
tblVehicleEF	UBUS	1.40	3.05
tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1970e-003	4.6418e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1720e-003	5.5343e-003
tblVehicleEF	UBUS	1.5000e-005	1.2612e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9460e-003	5.2909e-003
tblVehicleEF	UBUS	1.4000e-005	1.1596e-005
tblVehicleEF	UBUS	3.9000e-005	6.9392e-003
tblVehicleEF	UBUS	4.5100e-004	1.9592e-003
tblVehicleEF	UBUS	2.1000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06

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tblVehicleEF	UBUS	8.7000e-005	7.8601e-003
tblVehicleEF	UBUS	8.3600e-003	8.2163e-003
tblVehicleEF	UBUS	0.01	8.5013e-003
tblVehicleEF	UBUS	1.4000e-005	3.0196e-005
tblVehicleEF	UBUS	3.9000e-005	6.9392e-003
tblVehicleEF	UBUS	4.5100e-004	1.9592e-003
tblVehicleEF	UBUS	2.1000e-005	0.00
tblVehicleEF	UBUS	1.77	0.60
tblVehicleEF	UBUS	8.7000e-005	7.8601e-003
tblVehicleEF	UBUS	9.1530e-003	8.9959e-003
tblVehicleTrips	ST_TR	2.21	1.93
tblVehicleTrips	ST_TR	42.04	13.12
tblVehicleTrips	SU_TR	0.70	0.61
tblVehicleTrips	SU_TR	20.43	6.38
tblVehicleTrips	WD_TR	9.74	9.46
tblVehicleTrips	WD_TR	44.32	17.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

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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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1359	1.2300	1.4012	3.0800e-003	0.3326	0.0518	0.3844	0.1379	0.0483	0.1861	0.0000	269.1021	269.1021	0.0663	0.0000	270.7605
2025	0.0499	0.3371	0.5110	1.7800e-003	0.0000	0.0117	0.0117	0.0000	0.0113	0.0113	0.0000	154.0053	154.0053	0.0157	0.0000	154.3976
2026	0.1099	0.9703	0.9294	1.9500e-003	0.0000	0.0402	0.0402	0.0000	0.0379	0.0379	0.0000	166.1134	166.1134	0.0362	0.0000	167.0186
2027	4.8864	0.3720	0.6875	1.0900e-003	0.0000	0.0113	0.0113	0.0000	0.0109	0.0109	0.0000	94.3003	94.3003	0.0218	0.0000	94.8445
Maximum	**4.8864**	**1.2300**	**1.4012**	**3.0800e-003**	**0.3326**	**0.0518**	**0.3844**	**0.1379**	**0.0483**	**0.1861**	**0.0000**	**269.1021**	**269.1021**	**0.0663**	**0.0000**	**270.7605**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0445	1.0550	1.9193	3.0800e-003	0.1497	4.7900e-003	0.1545	0.0620	4.7900e-003	0.0668	0.0000	269.1018	269.1018	0.0663	0.0000	270.7602
2025	0.0233	0.4854	0.9196	1.7800e-003	0.0000	2.5200e-003	2.5200e-003	0.0000	2.5200e-003	2.5200e-003	0.0000	154.0051	154.0051	0.0157	0.0000	154.3974
2026	1.2400e-003	0.1228	1.5303	2.4000e-004	0.0000	1.7000e-004	1.7000e-004	0.0000	1.8000e-004	1.8000e-004	0.0000	27.4000	27.4000	8.8600e-003	0.0000	27.6216
2027	4.8496	0.0319	0.0550	8.0000e-005	0.0000	1.2000e-004	1.2000e-004	0.0000	1.2000e-004	1.2000e-004	0.0000	7.0623	7.0623	2.1300e-003	0.0000	7.1157
Maximum	**4.8496**	**1.0550**	**1.9193**	**3.0800e-003**	**0.1497**	**4.7900e-003**	**0.1545**	**0.0620**	**4.7900e-003**	**0.0668**	**0.0000**	**269.1018**	**269.1018**	**0.0663**	**0.0000**	**270.7602**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	5.08	41.74	-25.36	34.43	55.00	93.39	64.86	55.01	92.98	71.71	0.00	33.06	33.06	33.56	0.00	33.06

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2024	3-31-2024	0.5510	0.3614
2	4-1-2024	6-30-2024	0.4767	0.3941
3	7-1-2024	9-30-2024	0.2140	0.2027
4	10-1-2024	12-31-2024	0.1193	0.1381
5	1-1-2025	3-31-2025	0.1028	0.1351
6	4-1-2025	6-30-2025	0.1039	0.1366
7	7-1-2025	9-30-2025	0.1051	0.1381
8	10-1-2025	12-31-2025	0.0742	0.0976
9	1-1-2026	3-31-2026	0.2593	0.0298
10	4-1-2026	6-30-2026	0.2809	0.0323
11	7-1-2026	9-30-2026	0.2839	0.0326
12	10-1-2026	12-31-2026	0.2562	0.0294
13	1-1-2027	3-31-2027	1.9392	1.8008
14	4-1-2027	6-30-2027	2.2624	2.1010
15	7-1-2027	9-30-2027	1.0474	0.9714
		Highest	2.2624	2.1010

2.2 Overall Operational

Unmitigated Operational

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

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Category	tons/yr										MT/yr					
Area	4.0877	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0445	0.0445	1.2000e-004	0.0000	0.0474
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1,759.1735	1,759.1735	0.3267	0.0396	1,779.1423
Mobile	2.3994	2.7461	18.1936	0.0560	5.3304	0.0396	5.3699	1.3316	0.0371	1.3686	0.0000	5,207.0995	5,207.0995	0.2320	0.2803	5,296.4191
Stationary	5.2100e-003	0.0146	0.0189	3.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	2.4181	2.4181	3.4000e-004	0.0000	2.4265
Waste						0.0000	0.0000		0.0000	0.0000	173.1939	0.0000	173.1939	10.2355	0.0000	429.0806
Water						0.0000	0.0000		0.0000	0.0000	57.3396	98.7017	156.0413	0.2157	0.1269	199.2547
Total	**6.4923**	**2.7609**	**18.2354**	**0.0560**	**5.3304**	**0.0404**	**5.3708**	**1.3316**	**0.0379**	**1.3695**	**230.5335**	**7,067.4372**	**7,297.9708**	**11.0103**	**0.4468**	**7,706.3706**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.0877	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0445	0.0445	1.2000e-004	0.0000	0.0474
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1,759.1735	1,759.1735	0.3267	0.0396	1,779.1423
Mobile	2.3994	2.7461	18.1936	0.0560	5.3304	0.0396	5.3699	1.3316	0.0371	1.3686	0.0000	5,207.0995	5,207.0995	0.2320	0.2803	5,296.4191
Stationary	5.2100e-003	0.0146	0.0189	3.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	2.4181	2.4181	3.4000e-004	0.0000	2.4265
Waste						0.0000	0.0000		0.0000	0.0000	173.1939	0.0000	173.1939	10.2355	0.0000	429.0806
Water						0.0000	0.0000		0.0000	0.0000	57.3396	98.7017	156.0413	0.2157	0.1269	199.2547

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Total	**6.4923**	**2.7609**	**18.2354**	**0.0560**	**5.3304**	**0.0404**	**5.3708**	**1.3316**	**0.0379**	**1.3695**	**230.5335**	**7,067.4372**	**7,297.9708**	**11.0103**	**0.4468**	**7,706.3706**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2024	1/30/2024	5	22	
2	Site Preparation	Site Preparation	2/2/2024	2/29/2024	5	20	
3	Grading	Grading	3/2/2024	7/26/2024	5	105	
4	Trenching	Trenching	8/2/2024	12/4/2025	5	350	
5	Building Construction	Building Construction	1/7/2026	12/22/2026	5	250	
6	Architectural Coating	Architectural Coating	1/13/2027	8/10/2027	5	150	
7	Paving	Paving	8/20/2027	10/14/2027	5	40	

Acres of Grading (Site Preparation Phase): 25

Acres of Grading (Grading Phase): 74.81

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,374,618; Non-Residential Outdoor: 458,206; Striped Parking Area: 20,111

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	9.10	81	0.73
Demolition	Excavators	2	9.10	158	0.38

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Demolition	Rubber Tired Dozers	1	9.10	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	9.10	97	0.37
Site Preparation	Graders	1	10.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	10.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Grading	Concrete/Industrial Saws	1	1.90	81	0.73
Grading	Excavators	3	9.50	158	0.38
Grading	Graders	1	7.60	187	0.41
Grading	Rubber Tired Dozers	1	3.80	247	0.40
Grading	Tractors/Loaders/Backhoes	1	1.90	97	0.37
Trenching	Excavators	2	2.90	158	0.38
Trenching	Pumps	1	5.10	220	0.74
Building Construction	Cranes	1	10.00	231	0.29
Building Construction	Forklifts	1	10.00	89	0.20
Building Construction	Generator Sets	1	4.80	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Aerial Lifts	4	10.00	63	0.31
Architectural Coating	Air Compressors	1	10.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	2.00	130	0.42
Paving	Paving Equipment	1	2.00	132	0.36
Paving	Rollers	1	2.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	2.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

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

Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0463	0.0000	0.0463	7.0000e-003	0.0000	7.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2028	0.2402	4.3000e-004		9.3500e-003	9.3500e-003		8.8200e-003	8.8200e-003	0.0000	37.6246	37.6246	8.4600e-003	0.0000	37.8360
Total	**0.0228**	**0.2028**	**0.2402**	**4.3000e-004**	**0.0463**	**9.3500e-003**	**0.0556**	**7.0000e-003**	**8.8200e-003**	**0.0158**	**0.0000**	**37.6246**	**37.6246**	**8.4600e-003**	**0.0000**	**37.8360**

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0208	0.0000	0.0208	3.1500e-003	0.0000	3.1500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0800e-003	0.1579	0.2806	4.3000e-004		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	37.6246	37.6246	8.4600e-003	0.0000	37.8360
Total	**7.0800e-003**	**0.1579**	**0.2806**	**4.3000e-004**	**0.0208**	**6.6000e-004**	**0.0215**	**3.1500e-003**	**6.6000e-004**	**3.8100e-003**	**0.0000**	**37.6246**	**37.6246**	**8.4600e-003**	**0.0000**	**37.8360**

Mitigated Construction Off-Site

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

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

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0885	0.0000	0.0885	0.0428	0.0000	0.0428	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1592	0.0878	2.3000e-004		6.5300e-003	6.5300e-003		6.0100e-003	6.0100e-003	0.0000	20.0630	20.0630	6.4900e-003	0.0000	20.2252
Total	**0.0149**	**0.1592**	**0.0878**	**2.3000e-004**	**0.0885**	**6.5300e-003**	**0.0951**	**0.0428**	**6.0100e-003**	**0.0488**	**0.0000**	**20.0630**	**20.0630**	**6.4900e-003**	**0.0000**	**20.2252**

Unmitigated Construction Off-Site

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0398	0.0000	0.0398	0.0193	0.0000	0.0193	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9700e-003	0.0668	0.1299	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0630	20.0630	6.4900e-003	0.0000	20.2252
Total	**3.9700e-003**	**0.0668**	**0.1299**	**2.3000e-004**	**0.0398**	**3.7000e-004**	**0.0402**	**0.0193**	**3.7000e-004**	**0.0196**	**0.0000**	**20.0630**	**20.0630**	**6.4900e-003**	**0.0000**	**20.2252**

Mitigated Construction Off-Site

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

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

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1978	0.0000	0.1978	0.0880	0.0000	0.0880	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0744	0.6956	0.8448	1.6300e-003		0.0299	0.0299		0.0276	0.0276	0.0000	142.6873	142.6873	0.0443	0.0000	143.7948
Total	**0.0744**	**0.6956**	**0.8448**	**1.6300e-003**	**0.1978**	**0.0299**	**0.2277**	**0.0880**	**0.0276**	**0.1156**	**0.0000**	**142.6873**	**142.6873**	**0.0443**	**0.0000**	**143.7948**

Unmitigated Construction Off-Site

Date: 5/27/2022 10:23 AM

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0890	0.0000	0.0890	0.0396	0.0000	0.0396	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0231	0.6136	1.0984	1.6300e-003		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	142.6872	142.6872	0.0443	0.0000	143.7946
Total	**0.0231**	**0.6136**	**1.0984**	**1.6300e-003**	**0.0890**	**2.6400e-003**	**0.0917**	**0.0396**	**2.6400e-003**	**0.0423**	**0.0000**	**142.6872**	**142.6872**	**0.0443**	**0.0000**	**143.7946**

Mitigated Construction Off-Site

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

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

3.5 Trenching - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0237	0.1725	0.2285	8.0000e-004		6.0700e-003	6.0700e-003		5.8500e-003	5.8500e-003	0.0000	68.7272	68.7272	7.0900e-003	0.0000	68.9045
Total	**0.0237**	**0.1725**	**0.2285**	**8.0000e-004**		**6.0700e-003**	**6.0700e-003**		**5.8500e-003**	**5.8500e-003**	**0.0000**	**68.7272**	**68.7272**	**7.0900e-003**	**0.0000**	**68.9045**

Unmitigated Construction Off-Site

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.2166	0.4104	8.0000e-004		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	68.7271	68.7271	7.0900e-003	0.0000	68.9044
Total	**0.0104**	**0.2166**	**0.4104**	**8.0000e-004**		**1.1200e-003**	**1.1200e-003**		**1.1200e-003**	**1.1200e-003**	**0.0000**	**68.7271**	**68.7271**	**7.0900e-003**	**0.0000**	**68.9044**

Mitigated Construction Off-Site

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

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

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

3.5 Trenching - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0499	0.3371	0.5110	1.7800e-003		0.0117	0.0117		0.0113	0.0113	0.0000	154.0053	154.0053	0.0157	0.0000	154.3976
Total	**0.0499**	**0.3371**	**0.5110**	**1.7800e-003**		**0.0117**	**0.0117**		**0.0113**	**0.0113**	**0.0000**	**154.0053**	**154.0053**	**0.0157**	**0.0000**	**154.3976**

Unmitigated Construction Off-Site

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

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0233	0.4854	0.9196	1.7800e-003		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003	0.0000	154.0051	154.0051	0.0157	0.0000	154.3974
Total	**0.0233**	**0.4854**	**0.9196**	**1.7800e-003**		**2.5200e-003**	**2.5200e-003**		**2.5200e-003**	**2.5200e-003**	**0.0000**	**154.0051**	**154.0051**	**0.0157**	**0.0000**	**154.3974**

Mitigated Construction Off-Site

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

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

3.6 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1099	0.9703	0.9294	1.9500e-003		0.0402	0.0402		0.0379	0.0379	0.0000	166.1134	166.1134	0.0362	0.0000	167.0186
Total	**0.1099**	**0.9703**	**0.9294**	**1.9500e-003**		**0.0402**	**0.0402**		**0.0379**	**0.0379**	**0.0000**	**166.1134**	**166.1134**	**0.0362**	**0.0000**	**167.0186**

Unmitigated Construction Off-Site

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2400e-003	0.1228	1.5303	2.4000e-004		1.7000e-004	1.7000e-004		1.8000e-004	1.8000e-004	0.0000	27.4000	27.4000	8.8600e-003	0.0000	27.6216
Total	**1.2400e-003**	**0.1228**	**1.5303**	**2.4000e-004**		**1.7000e-004**	**1.7000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**27.4000**	**27.4000**	**8.8600e-003**	**0.0000**	**27.6216**

Mitigated Construction Off-Site

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

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

3.7 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.8484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0341	0.3383	0.6353	1.0000e-003		9.7800e-003	9.7800e-003		9.5100e-003	9.5100e-003	0.0000	87.2380	87.2380	0.0196	0.0000	87.7289
Total	**4.8826**	**0.3383**	**0.6353**	**1.0000e-003**		**9.7800e-003**	**9.7800e-003**		**9.5100e-003**	**9.5100e-003**	**0.0000**	**87.2380**	**87.2380**	**0.0196**	**0.0000**	**87.7289**

Unmitigated Construction Off-Site

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

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.8484					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	**4.8484**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

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

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

3.8 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8300e-003	0.0337	0.0522	8.0000e-005		1.5300e-003	1.5300e-003		1.4300e-003	1.4300e-003	0.0000	7.0623	7.0623	2.1300e-003	0.0000	7.1157
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.8300e-003**	**0.0337**	**0.0522**	**8.0000e-005**		**1.5300e-003**	**1.5300e-003**		**1.4300e-003**	**1.4300e-003**	**0.0000**	**7.0623**	**7.0623**	**2.1300e-003**	**0.0000**	**7.1157**

Unmitigated Construction Off-Site

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1800e-003	0.0319	0.0550	8.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	7.0623	7.0623	2.1300e-003	0.0000	7.1157
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1800e-003**	**0.0319**	**0.0550**	**8.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**7.0623**	**7.0623**	**2.1300e-003**	**0.0000**	**7.1157**

Mitigated Construction Off-Site

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

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3994	2.7461	18.1936	0.0560	5.3304	0.0396	5.3699	1.3316	0.0371	1.3686	0.0000	5,207.0995	5,207.0995	0.2320	0.2803	5,296.4191
Unmitigated	2.3994	2.7461	18.1936	0.0560	5.3304	0.0396	5.3699	1.3316	0.0371	1.3686	0.0000	5,207.0995	5,207.0995	0.2320	0.2803	5,296.4191

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	8,595.26	1,753.58	554.24	15,459,695	15,459,695
Strip Mall	133.11	102.73	49.96	180,016	180,016
Total	8,728.37	1,856.31	604.20	15,639,711	15,639,711

4.3 Trip Type Information

	Miles	Trip %	Trip Purpose %

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Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.535774	0.032938	0.231052	0.126866	0.025406	0.006291	0.011040	0.023044	0.001694	0.001235	0.003496	0.000533	0.000630
General Office Building	0.535774	0.032938	0.231052	0.126866	0.025406	0.006291	0.011040	0.023044	0.001694	0.001235	0.003496	0.000533	0.000630
Strip Mall	0.535774	0.032938	0.231052	0.126866	0.025406	0.006291	0.011040	0.023044	0.001694	0.001235	0.003496	0.000533	0.000630

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,759.1735	1,759.1735	0.3267	0.0396	1,779.1423
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,759.1735	1,759.1735	0.3267	0.0396	1,779.1423
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.82336e+006	146.9609	0.0273	3.3100e-003	148.6291
General Office Building	1.99162e+007	1,605.2246	0.2981	0.0361	1,623.4458
Strip Mall	86701	6.9880	1.3000e-003	1.6000e-004	7.0673
Total		**1,759.1735**	**0.3267**	**0.0396**	**1,779.1423**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.82336e+006	146.9609	0.0273	3.3100e-003	148.6291
General Office Building	1.99162e+007	1,605.2246	0.2981	0.0361	1,623.4458
Strip Mall	86701	6.9880	1.3000e-003	1.6000e-004	7.0673

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Total		**1,759.1735**	**0.3267**	**0.0396**	**1,779.1423**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.0877	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0445	0.0445	1.2000e-004	0.0000	0.0474
Unmitigated	4.0877	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0445	0.0445	1.2000e-004	0.0000	0.0474

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4848					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6007					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Landscaping	2.1000e-003	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0445	0.0445	1.2000e-004	0.0000	0.0474
Total	**4.0877**	**2.1000e-004**	**0.0228**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0445**	**0.0445**	**1.2000e-004**	**0.0000**	**0.0474**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4848					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6007					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e-003	2.1000e-004	0.0228	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0445	0.0445	1.2000e-004	0.0000	0.0474
Total	**4.0877**	**2.1000e-004**	**0.0228**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0445**	**0.0445**	**1.2000e-004**	**0.0000**	**0.0474**

7.0 Water Detail

7.1 Mitigation Measures Water

	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	MT/yr			
Mitigated	156.0413	0.2157	0.1269	199.2547
Unmitigated	156.0413	0.2157	0.1269	199.2547

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	161.487 / 98.976	155.4829	0.2149	0.1265	198.5416
Strip Mall	0.579988 / 0.355476	0.5584	7.7000e-004	4.5000e-004	0.7131
Total		**156.0413**	**0.2157**	**0.1269**	**199.2547**

Mitigated

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

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

Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	161.487 / 98.976	155.4829	0.2149	0.1265	198.5416
Strip Mall	0.579988 / 0.355476	0.5584	7.7000e-004	4.5000e-004	0.7131
Total		**156.0413**	**0.2157**	**0.1269**	**199.2547**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	173.1939	10.2355	0.0000	429.0806
Unmitigated	173.1939	10.2355	0.0000	429.0806

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

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

Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	844.99	171.5253	10.1369	0.0000	424.9468
Strip Mall	8.22	1.6686	0.0986	0.0000	4.1339
Total		**173.1939**	**10.2355**	**0.0000**	**429.0806**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	844.99	171.5253	10.1369	0.0000	424.9468
Strip Mall	8.22	1.6686	0.0986	0.0000	4.1339
Total		**173.1939**	**10.2355**	**0.0000**	**429.0806**

9.0 Operational Offroad

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	127	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel	5.2100e-003	0.0146	0.0189	3.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	2.4181	2.4181	3.4000e-004	0.0000	2.4265
Total	**5.2100e-003**	**0.0146**	**0.0189**	**3.0000e-005**		**7.7000e-004**	**7.7000e-004**		**7.7000e-004**	**7.7000e-004**	**0.0000**	**2.4181**	**2.4181**	**3.4000e-004**	**0.0000**	**2.4265**

11.0 Vegetation

Attachment 3: EMFAC2021 Emissions Calculations

Summary of Construction Traffic Emissions (EMFAC2021)

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
					Tons							*Metric Tons*		
Criteria Pollutants														
2024	0.0597	0.6417	0.7831	0.0052	0.2034	0.0429	0.2463	0.0306	0.0181	0.0488	512.2209	0.0327	0.0660	532.6960
2025	0.0559	0.6110	0.7376	0.0051	0.2029	0.0425	0.2454	0.0305	0.0179	0.0484	499.8373	0.0313	0.0644	519.8214
2026	0.0528	0.5843	0.7010	0.0050	0.2029	0.0424	0.2453	0.0305	0.0177	0.0482	489.7948	0.0299	0.0631	509.3420
2027	0.0395	0.4396	0.5251	0.0038	0.1595	0.0332	0.1927	0.0240	0.0138	0.0378	376.5804	0.0224	0.0484	391.5751
Toxic Air Contaminants (1.0 Mile Trip Length)														
2024	0.0490	0.1781	0.2823	0.0006	0.0181	0.0036	0.0217	0.0027	0.0016	0.0043	57.3458	0.0082	0.0083	60.0319
2025	0.0462	0.1721	0.2666	0.0006	0.0181	0.0035	0.0216	0.0027	0.0015	0.0043	55.9353	0.0078	0.0081	58.5459
2026	0.0440	0.1674	0.2554	0.0006	0.0181	0.0035	0.0216	0.0027	0.0015	0.0042	54.7969	0.0075	0.0079	57.3463
2027	0.0332	0.1277	0.1929	0.0004	0.0142	0.0027	0.0170	0.0021	0.0012	0.0033	42.1361	0.0057	0.0061	44.0908

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	15	0	330	0	498	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3564	0	9960
Site Preparation	8	0	160	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1728	0	0
Grading	18	0	1890	0	17690	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	20412	0	353800
Trenching	8	0	2800	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	30240	0	0
Paving	13	0	520	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	5616	0	0
Building Construction	434	205	108500	51250	11000	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1171800	374125	220000
Architectural Coating	87	0	13050	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	140940	0	0

Number of Days Per Year					
2024	2024/01/01	12/31/24	366	262	
2025	1/1/25	12/31/25	365	261	
2026	1/1/26	12/31/26	365	261	
2027	1/1/27	2027/10/14	287	205	
			1383	**989**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	2024/01/01	2024/01/30	5	22
Site Preparation	2024/02/02	2024/02/29	5	20
Grading	2024/03/02	2024/07/26	5	105
Trenching/Foundation	2024/08/02	2025/12/04	5	350
Paving	2027/08/20	2027/10/14	5	40
Building Construction	2026/01/07	2026/12/22	5	250
Architectural Coating	2027/01/13	2027/08/10	5	150

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2028
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLE	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2028	HHDT	Aggregate	Aggregate	Gasoline	1.470835	154.303	154.303	0	29.42846	3.160849	0	0.799958	0.001802	0	0.000748	0.005	0.032409	0.00196	0	0.000813	0.02	0.092597	1951.66	0	49.27078	0.108026	0	0.000299	0.124786	0	0.028209	0.5443	0	0.001621	0.086862	0.781156	5.484444	0.794242	0	0.001775	0.086862	0.781156	5.484444	0.045	24.51976	0	4.057756	0.019294	0	0.000487
Santa Clara	2028	HHDT	Aggregate	Aggregate	Diesel	9119.079	1024317	1024317	0	134474.3	1.649728	56.82184	2.940109	0.02493	0.025825	0	0.008878	0.027829	0.026057	0.026993	0	0.035118	0.079512	1528	11109.9	0	0.000679	0.234703	0	0.240737	1.750369	0	0.01462	5.053085	0	0	0	0	0.016644	5.752553	0	0	0	0	0.216623	0.067122	73.97201	0	0.014469	0.105204	0
Santa Clara	2028	HHDT	Aggregate	Aggregate	Electricity	270.954	28275.15	0	28275.15	3483.7	0	0	0	0	0	0	0.008552	0.01525	0	0	0	0.034206	0.043571	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	HHDT	Aggregate	Aggregate	Natural Ga	909.887	57673.44	57673.44	0	8080.24	0.845299	12.05981	0	0.001592	0.026365	0	0.009	0.050678	0.001731	0.028674	0	0.036	0.144795	1343.406	10310.04	0	1.91551	31.69951	0	0.273862	2.101769	0	0.038157	0.471295	0	0	0	0	1.967209	32.37261	0	0	0	0	0.820835	11.87837	75.6236	0	0	0	0
Santa Clara	2028	LDA	Aggregate	Aggregate	Gasoline	600154.7	21978505	21978505	0	2786673	0.030254	0	0.217367	0.000997	0	0.00169	0.002	0.002654	0.001084	0	0.001838	0.008	0.007582	254.1998	0	64.05908	0.001655	0	0.057308	0.003885	0	0.029996	0.005911	0	0.251605	0.076497	0.209635	1.284962	0.08625	0	0.275476	0.076497	0.209635	1.284962	0.03804	0.603253	0	2.607541	0.002513	0	0.000633
Santa Clara	2028	LDA	Aggregate	Aggregate	Diesel	1207.848	34499.52	34499.52	0	5156.172	0.118376	0	0	0.009649	0	0	0.002	0.002722	0.010085	0	0	0.008	0.007778	220.6951	0	0	0.000886	0	0	0.034771	0	0	0.019079	0	0	0.02172	0	0	0	0	0	0.02172	0	0	0	0.0031	0.281436	0	0	0.002091	0	0
Santa Clara	2028	LDA	Aggregate	Aggregate	Electricity	69984.64	2868125	0	2868125	136272.3	0	0	0	0	0	0	0.002	0.001536	0	0	0	0.008	0.004389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	LDA	Aggregate	Aggregate	Plug-in Hyb	22751.93	936162.1	430803.2	505358.9	94079.21	0.00302	0	0.11551	0.000467	0	0.001715	0.002	0.001393	0.000508	0	0.001865	0.008	0.003979	128.4354	0	61.6907	0.000404	0	0.041698	0.000525	0	0.020069	0.001306	0	0.173285	0.041591	0.046177	0.492538	0.001905	0	0.188725	0.041591	0.046177	0.492538	0.018641	0.198644	0	1.339893	0.00127	0	0.00061
Santa Clara	2028	LDT1	Aggregate	Aggregate	Gasoline	49081.01	1563538	1563538	0	218519.1	0.084308	0	0.305828	0.00136	0	0.002171	0.002	0.00324	0.00148	0	0.002362	0.008	0.009256	304.9806	0	79.07292	0.004111	0	0.081169	0.006927	0	0.034482	0.017586	0	0.397179	0.135565	0.390418	2.261735	0.225662	0	0.443861	0.135565	0.390418	2.261735	0.037654	1.051411	0	3.964013	0.003015	0	0.000782
Santa Clara	2028	LDT1	Aggregate	Aggregate	Diesel	3.376419	51.57305	51.57305	0	9.61996	1.103246	0	0	0.165443	0	0	0.002	0.003602	0.172924	0	0	0.008	0.010292	376.155	0	0	0.012442	0	0	0.059263	0	0	0.267875	0	0	0	0	0	0.304958	0	0	0	0	0	0	0.0031	1.8775	0	0	0.003564	0	0
Santa Clara	2028	LDT1	Aggregate	Aggregate	Electricity	344.7167	14328.81	0	14328.81	1657.81	0	0	0	0	0	0	0.002	0.001534	0	0	0	0.008	0.004382	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	LDT1	Aggregate	Aggregate	Plug-in Hyb	210.9723	9240.009	3862.243	5377.766	872.3706	0.002743	0	0.11551	0.000276	0	0.001121	0.002	0.001402	0.0003	0	0.001219	0.008	0.004004	116.728	0	65.43695	0.000365	0	0.041529	0.000473	0	0.019911	0.001186	0	0.173285	0.023021	0.019863	0.274915	0.017151	0	0.188725	0.023021	0.019863	0.274915	0.017556	0.180774	0	1.339893	0.001154	0	0.000547
Santa Clara	2028	LDT2	Aggregate	Aggregate	Gasoline	306289.6	10804407	10804407	0	1428230	0.048684	0	0.272265	0.001037	0	0.001722	0.002	0.00314	0.001128	0	0.001873	0.008	0.008973	311.4521	0	79.35334	0.002155	0	0.067575	0.00483	0	0.033529	0.008041	0	0.302046	0.071308	0.20464	1.273765	0.011733	0	0.330702	0.071308	0.20464	1.273765	0.038949	0.699045	0	3.020134	0.003079	0	0.000784
Santa Clara	2028	LDT2	Aggregate	Aggregate	Diesel	1124.634	40163.41	40163.41	0	5296.19	0.032087	0	0	0.004136	0	0	0.002	0.003139	0.004324	0	0	0.008	0.008969	283.8903	0	0	0.00057	0	0	0.044727	0	0	0.012281	0	0	0	0	0	0.013981	0	0	0	0	0	0	0.0031	0.127096	0	0	0.00269	0	0
Santa Clara	2028	LDT2	Aggregate	Aggregate	Electricity	3966.166	125586.5	0	125586.5	19886.52	0	0	0	0	0	0	0.002	0.001529	0	0	0	0.008	0.00437	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	LDT2	Aggregate	Aggregate	Plug-in Hyb	3889.8	160537.5	69997.62	90539.85	16084.32	0.002861	0	0.11551	0.00035	0	0.001357	0.002	0.001398	0.00038	0	0.001476	0.008	0.003995	121.7264	0	71.36672	0.00038	0	0.041442	0.000491	0	0.01983	0.001237	0	0.173285	0.025845	0.023469	0.303951	0.001805	0	0.188725	0.025845	0.023469	0.303951	0.0183	0.188386	0	1.339893	0.001203	0	0.000706
Santa Clara	2028	LHDT1	Aggregate	Aggregate	Gasoline	19758.18	736964	736964	0	294367.4	0.105907	0.032213	0.550872	0.001382	0	0.000225	0.002	0.0273	0.001503	0	0.000245	0.008	0.078	819.0942	115.0602	25.40508	0.005002	0.103139	0.028129	0.006125	0.002833	0.046743	0.023788	0.369318	0.136586	0.037892	0.223771	2.358305	0.034712	0.538908	0.149544	0.037892	0.223771	2.358305	0.045	0.894116	3.764573	3.249257	0.008098	0.001137	0.000251
Santa Clara	2028	LHDT1	Aggregate	Aggregate	Diesel	11024.69	426298.1	426298.1	0	138676.7	0.969403	1.57457	0	0.026418	0.026447	0	0.003	0.0273	0.027612	0.027643	0	0.012	0.078	620.6931	125.5014	0	0.006234	0.005098	0	0.09779	0.019773	0	0.13422	0.10976	0	0	0	0	0.152801	0.124954	0	0	0	0	0.19297	0.350151	0.909745	0	0.005881	0.001189	0
Santa Clara	2028	LHDT1	Aggregate	Aggregate	Electricity	1021.234	60968.04	0	60968.04	14299.84	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	LHDT2	Aggregate	Aggregate	Gasoline	2498.391	89760.82	89760.82	0	37222.3	0.097832	0.031367	0.543719	0.001242	0	0.000172	0.002	0.03185	0.001351	0	0.000187	0.008	0.091	927.6745	133.3883	24.76704	0.003463	0.100393	0.02699	0.006277	0.002707	0.045144	0.014905	0.359925	0.12934	0.035925	0.207704	2.286049	0.021749	0.525202	0.141611	0.035925	0.207704	2.286049	0.045	0.707005	3.772284	3.162872	0.009171	0.001319	0.000245
Santa Clara	2028	LHDT2	Aggregate	Aggregate	Diesel	5257.65	198606.8	198606.8	0	66134.62	0.865041	1.574905	0	0.026454	0.027	0	0.003	0.03185	0.02765	0.02822	0	0.012	0.091	735.4981	201.5097	0	0.00621	0.005098	0	0.115878	0.031748	0	0.133707	0.10976	0	0	0	0	0.152217	0.124954	0	0	0	0	0.198314	0.337166	0.909745	0	0.006969	0.001909	0
Santa Clara	2028	LHDT2	Aggregate	Aggregate	Electricity	258.9077	14761.07	0	14761.07	3434.171	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	MCY	Aggregate	Aggregate	Gasoline	29377.66	168474	168474	0	58755.32	0.525696	0	0.112461	0.001844	0	0.003234	0.001	0.0042	0.001975	0	0.003451	0.004	0.012	186.1355	0	44.44114	0.148032	0	0.164333	0.037627	0	0.006825	0.934888	0	1.195378	3.558397	3.787612	3.814128	1.139755	0	1.300164	3.558397	3.787612	3.814128	0.008853	11.46379	0	7.875637	0.00184	0	0.000439
Santa Clara	2028	MDV	Aggregate	Aggregate	Gasoline	168553.5	5803822	5803822	0	781481.4	0.061284	0	0.315881	0.001013	0	0.001716	0.002	0.003184	0.001101	0	0.001866	0.008	0.009096	376.9736	0	96.30475	0.002561	0	0.076579	0.005494	0	0.035243	0.010093	0	0.362532	0.080433	0.240438	1.475862	0.014727	0	0.396926	0.080433	0.240438	1.475862	0.038637	0.751575	0	3.184891	0.003727	0	0.000952
Santa Clara	2028	MDV	Aggregate	Aggregate	Diesel	2426.785	81862.87	81862.87	0	11233.79	0.032614	0	0	0.003648	0	0	0.002	0.003262	0.003813	0	0	0.008	0.009319	380.6728	0	0	0.000421	0	0	0.059975	0	0	0.009068	0	0	0.010323	0	0	0	0.010323	0	0	0	0	0	0	0.0031	0.190366	0	0	0.003607	0	0
Santa Clara	2028	MDV	Aggregate	Aggregate	Electricity	4086.684	132418.2	0	132418.2	20489.55	0	0	0	0	0	0	0.002	0.00153	0	0	0	0.008	0.004371	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	MDV	Aggregate	Aggregate	Plug-in Hyb	2378.288	95173.34	41647.22	53526.11	9834.221	0.002871	0	0.11551	0.000381	0	0.001468	0.002	0.001398	0.000414	0	0.001596	0.008	0.003995	122.166	0	87.32909	0.00038	0	0.041303	0.00049	0	0.0197	0.001242	0	0.173285	0.029777	0.030116	0.357344	0.001812	0	0.189725	0.029777	0.030116	0.357344	0.018379	0.189069	0	1.339893	0.001208	0	0.000863
Santa Clara	2028	MH	Aggregate	Aggregate	Gasoline	2135.932	20452.38	20452.38	0	213.6786	0.26549	0	0.443358	0.001449	0	0.000349	0.003	0.015756	0.001576	0	0.000379	0.012	0.045017	1945.922	0	30.95502	0.009219	0	0.035524	0.019212	0	0.048669	0.036579	0	0.142607	9.09894	0.220886	3.673671	0.053375	0	0.156136	9.09894	0.220886	3.673671	0.045	0.773269	0	3.09385	0.019237	0	0.000306
Santa Clara	2028	MH	Aggregate	Aggregate	Diesel	1038.172	9908.83	9908.83	0	103.8172	3.609205	0	0	0.070805	0	0	0.004	0.015675	0.074006	0	0	0.016	0.044785	1083.65	0	0	0.005048	0	0	0.170729	0	0	0.108673	0	0	0	0	0	0.123716	0	0	0	0	0	0	0.173727	0.351812	0	0	0.010268	0	0
Santa Clara	2028	MHDT	Aggregate	Aggregate	Gasoline	1401.234	72189.25	72189.25	0	28035.89	0.242516	0.078583	0.374586	0.001336	0	0.00048	0.003	0.015756	0.001453	0	0.000522	0.012	0.045017	1692.94	512.6804	43.11567	0.007916	0.26741	0.042275	0.014019	0.006888	0.03076	0.037328	1.020423	0.224339	0.024741	0.206107	2.119603	0.054468	1.488999	0.245622	0.024741	0.206107	2.119603	0.045	0.73501	15.20594	4.808335	0.016736	0.005068	0.000426
Santa Clara	2028	MHDT	Aggregate	Aggregate	Diesel	10803.08	430729.5	430729.5	0	129114.2	0.860613	10.763	1.608029	0.008248	0.013921	0	0.003	0.015941	0.008621	0.01455	0	0.012	0.045546	1122.135	2173.473	0	0.000865	0.009639	0	0.176793	0.342432	0	0.018619	0.207523	0	0	0	0	0.021196	0.23625	0	0	0	0	0.215005	0.083705	7.507183	0	0.010626	0.020581	0
Santa Clara	2028	MHDT	Aggregate	Aggregate	Electricity	455.7542	23641.62	0	23641.62	5888.879	0	0	0	0	0	0	0.003	0.00795	0	0	0	0.012	0.022714	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	MHDT	Aggregate	Aggregate	Natural Ga	123.908	5444.71	5444.71	0	1175.944	0.104653	6.319766	0	0.001324	0.019478	0	0.003	0.016008	0.00144	0.021184	0	0.012	0.045737	964.7434	1240.847	0	0.760505	16.16251	0	0.196669	1.068381	0	0.010866	0.23093	0	0	0	0	0.776151	16.49502	0	0	0	0	1.06	2.992399	37.88217	0	0	0	0
Santa Clara	2028	OBUS	Aggregate	Aggregate	Gasoline	397.1145	16622.09	16622.09	0	7945.466	0.357116	0.059942	0.391986	0.001028	0	0.000266	0.003	0.01568	0.001118	0	0.000289	0.012	0.044799	1689.377	370.1334	30.60894	0.009705	0.195421	0.034455	0.017965	0.004869	0.029709	0.046721	0.746963	0.182947	0.035541	0.189879	3.415245	0.068175	1.089967	0.200304	0.035541	0.189879	3.415245	0.045	1.017018	5.778725	3.777572	0.016701	0.003659	0.000303
Santa Clara	2028	OBUS	Aggregate	Aggregate	Diesel	1000.421	63426.65	63426.65	0	10301.55	1.028839	6.455092	1.462805	0.016693	0.006255	0	0.003	0.018135	0.017448	0.006538	0	0.012	0.051815	1214.71	1504.36	0	0.001614	0.021006	0	0.193178	0.237013	0	0.034758	0.452257	0	0	0	0	0.039569	0.51486	0	0	0	0	0.216724	0.130637	7.741349	0	0.011503	0.014245	0
Santa Clara	2028	OBUS	Aggregate	Aggregate	Electricity	11.18613	887.4727	0	887.4727	223.8121	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	OBUS	Aggregate	Aggregate	Natural Ga	10.8368	704.2664	704.2664	0	96.44751	0.118641	1.506606	0	0.001403	0.004634	0	0.003	0.016148	0.001526	0.00504	0	0.012	0.046137	949.9442	1177.671	0	0.829179	3.856516	0	0.193652	0.240076	0	0.011847	0.055102	0	0	0	0	0.846238	3.935858	0	0	0	0	1.06	3.360428	9.009932	0	0	0	0
Santa Clara	2028	SBUS	Aggregate	Aggregate	Gasoline	192.6095	9426.49	9426.49	0	770.4379	0.441988	0.854627	0.742088	0.000877	0	0.00059	0.002	0.015721	0.000954	0	0.000642	0.008	0.044917	795.4934	2545.579	56.45763	0.008926	2.46924	0.074272	0.024568	0.079725	0.067747	0.043131	10.64152	0.421106	0.123435	0.341525	2.080031	0.062937	15.52808	0.461058	0.123435	0.341525	2.080031	0.045	1.111121	82.24088	9.778336	0.007864	0.025166	0.000558
Santa Clara	2028	SBUS	Aggregate	Aggregate	Diesel	672.4071	14961.93	14961.93	0	9736.455	2.992481	19.08388	0.530181	0.015915	0.014197	0	0.003	0.015721	0.016635	0.014839	0	0.012	0.044917	1127.12	2187.632	0	0.002319	0.007838	0	0.177578	0.344662	0	0.049921	0.168747	0	0	0	0	0.056831	0.192106	0	0	0	0	0.16354	0.160085	5.10628	0	0.010673	0.020716	0
Santa Clara	2028	SBUS	Aggregate	Aggregate	Electricity	19.56942	629.4361	0	629.4361	226.2446	0	0	0	0	0	0	0.002	0.002576	0.00786	0	0	0	0.010305	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	SBUS	Aggregate	Aggregate	Natural Ga	27.79861	667.4476	667.4476	0	402.5239	0.501921	5.232817	0	0.003378	0.012266	0	0.003	0.015721	0.003674	0.01334	0	0.012	0.044917	1228.307	4092.288	0	3.255494	14.78651	0	0.250398	0.83424	0	0.046515	0.21127	0	0	0	0	3.322471	15.09072	0	0	0	0	1.06	10.7964	22.79477	0	0	0	0
Santa Clara	2028	UBUS	Aggregate	Aggregate	Gasoline	46.62731	4869.279	4869.279	0	186.5092	0.018118	0	0.301177	0.001197	0	0.000134	0.002	0.03185	0.001302	0	0.000145	0.008	0.091	850.5342	0	35.22796	0.001481	0	0.028231	0.003213	0	0.053536	0.003868	0	0.094762	0.022596	0.090653	0.320129	0.005644	0	0.103752	0.022596	0.090653	0.320129	0.045	0.581279	0	6.342648	0.008408	0	0.000348
Santa Clara	2028	UBUS	Aggregate	Aggregate	Diesel	397.7907	44197.62	44197.62	0	1591.163	0.382083	0	0	0.006946	0	0	0.008	0.08221	0.0385	0.00726	0	0	0.032883	0.11	1110.56	0	0	0.003188	0	0	0.174969	0	0	0.068627	0	0	0	0	0.078126	0	0	0	0	0	0.22	0.07852	0	0	0.010523	0	0
Santa Clara	2028	UBUS	Aggregate	Aggregate	Electricity	30.09259	3155.026	0	3155.026	120.3703	0	0	0	0	0	0	0.008	0.008937	0.01925	0	0	0	0.03575	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2028	UBUS	Aggregate	Aggregate	Natural Ga	63.25774	7303.084	7303.084	0	253.0309	0.06078	0	0	0.000288	0	0	0.008444	0.0385	0.000301	0	0	0	0.033778	0.11	1320.856	0	0	4.332259	0	0	0.269265	0	0	0.061899	0	0	0	0	4.421388	0	0	0	0	0	0.97	50.55326	0	0	0	0	0

CalEEMod EMFAC2021 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.535774	0.032938	0.231052	0.126866	0.025406	0.006291	0.01104	0.023044	0.001694	0.001235	0.003496	0.000533	0.00063

CalEEMod EMFAC2021 Emission Factors Input

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004681	0.002686	0.015111	0.212115634	0.007562	0	0	0.080095	0
A	CH4_RUNEX	0.001425	0.004052	0.002099	0.002443	0.005182	0.005094	0.009558	0.100129934	0.010383	0.534009843	0.148032	0.089223	0.007858
A	CH4_STREX	0.05078	0.0804	0.066131	0.073205	0.01851	0.00972	0.007218	6.02384E-08	0.014744	0.002447775	0.164333	0.005139	0.023908
A	CO_IDLEX	0	0	0	0	0.188693	0.137463	0.652204	5.089184403	0.545964	0	0	1.787728	0
A	CO_RUNEX	0.521134	1.036877	0.681545	0.719023	0.66017	0.430262	0.198131	0.682268113	0.337547	6.308197017	11.46379	0.781582	0.63572
A	CO_STREX	2.294229	3.923757	2.949988	3.040087	2.13812	1.139056	0.820911	0.000817522	1.616531	0.549940604	7.875637	0.676529	2.082199
A	CO2_NBIO_IDLEX	0	0	0	0	8.174906	13.47489	151.3137	757.8199397	89.65996	0	0	186.3421	0
A	CO2_NBIO_RUNEX	221.3548	301.1336	305.0199	364.8907	709.2157	756.5887	1148.112	1479.563001	1295.864	1056.22719	186.1355	980.422	1664.507
A	CO2_NBIO_STREX	57.20211	78.42266	77.90605	92.48552	16.7174	8.919443	7.360999	0.009926653	13.09844	3.05444779	44.44114	3.906108	20.83311
A	NOX_IDLEX	0	0	0	0	0.040228	0.080872	0.713496	3.622538357	0.349967	0	0	1.180191	0
A	NOX_RUNEX	0.026023	0.083105	0.047401	0.058663	0.401317	0.595736	0.73076	1.566149473	0.873039	0.292637904	0.525696	1.9184	1.356761
A	NOX_STREX	0.191361	0.30277	0.265884	0.301311	0.362492	0.195812	1.328267	2.706913868	0.97934	0.026113624	0.112461	0.514906	0.298385
A	PM10_IDLEX	0	0	0	0	0.000681	0.001436	0.000973	0.00186378	0.000355	0	0	0.000929	0
A	PM10_PMBW	0.007097	0.009182	0.008848	0.008917	0.076058	0.088784	0.044461	0.081989135	0.050018	0.126376132	0.012	0.044367	0.044942
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009393	0.010621	0.012	0.03513875	0.012	0.044658837	0.004	0.01049	0.013305
A	PM10_RUNEX	0.000955	0.001465	0.001116	0.001103	0.01052	0.018516	0.007191	0.024126657	0.013796	0.005534317	0.001975	0.010136	0.025215
A	PM10_STREX	0.001644	0.002339	0.001836	0.001791	0.000161	6.74E-05	8.91E-05	1.63816E-07	0.000124	1.26121E-05	0.003451	4.44E-05	0.000255
A	PM25_IDLEX	0	0	0	0	0.000652	0.001373	0.00093	0.001776496	0.00034	0	0	0.000888	0
A	PM25_PMBW	0.002484	0.003214	0.003097	0.003121	0.02662	0.031075	0.015561	0.028696197	0.017506	0.044231646	0.0042	0.015528	0.01573
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002348	0.002655	0.003	0.008784687	0.003	0.011164709	0.001	0.002623	0.003326
A	PM25_RUNEX	0.000878	0.001347	0.001027	0.001016	0.010031	0.0177	0.006872	0.023079587	0.01319	0.005290933	0.001844	0.009681	0.024084
A	PM25_STREX	0.001511	0.002151	0.001688	0.001647	0.000148	6.19E-05	8.2E-05	1.50623E-07	0.000114	1.15963E-05	0.003234	4.08E-05	0.000235
A	ROG_DIURN	0.242811	0.502428	0.266297	0.30328	0.104161	0.055259	0.018086	5.52258E-05	0.073045	0.00693921	3.814128	0.035978	24.71437
A	ROG_HTSK	0.067372	0.134098	0.069588	0.076727	0.024934	0.012938	0.004224	1.75002E-05	0.015209	0.001959156	3.558397	0.00854	6.123699
A	ROG_IDLEX	0	0	0	0	0.019017	0.014284	0.022534	0.318402382	0.040376	0	0	0.194779	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.005105	0.01734	0.007865	0.009722	0.061058	0.092017	0.020251	0.01554384	0.036618	0.058866401	0.934888	0.046117	0.060107
A	ROG_RUNLS	0.182649	0.386011	0.19915	0.228657	0.147249	0.074801	0.035188	0.00015738	0.081255	0.007860127	3.787612	0.023629	0.148659
A	ROG_STREX	0.222658	0.3933	0.29546	0.346297	0.089878	0.04658	0.038301	3.26616E-07	0.078288	0.008216344	1.195378	0.029135	0.095976
A	SO2_IDLEX	0	0	0	0	7.95E-05	0.000129	0.001397	0.006567944	0.000846	0	0	0.001686	0
A	SO2_RUNEX	0.002188	0.002977	0.003015	0.003605	0.006923	0.007282	0.010874	0.013349969	0.012337	0.008501298	0.00184	0.009103	0.01631
A	SO2_STREX	0.000566	0.000775	0.00077	0.000914	0.000165	8.82E-05	7.28E-05	9.81351E-08	0.000129	3.01963E-05	0.000439	3.86E-05	0.000206
A	TOG_DIURN	0.242811	0.502428	0.266297	0.30328	0.104161	0.055259	0.018086	5.52258E-05	0.073045	0.00693921	0.083947	0.035978	24.71437
A	TOG_HTSK	0.067372	0.134098	0.069588	0.076727	0.024934	0.012938	0.004224	1.75002E-05	0.015209	0.001959156	3.558397	0.00854	6.123699
A	TOG_IDLEX	0	0	0	0	0.026882	0.019052	0.040694	0.560790581	0.05335	0	0	0.317855	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.007441	0.0253	0.011462	0.014148	0.074104	0.106171	0.032495	0.117637308	0.051922	0.600927917	1.139755	0.142539	0.076332
A	TOG_RUNLS	0.182649	0.386011	0.19915	0.228657	0.147249	0.074801	0.035188	0.00015738	0.081255	0.007860127	3.787612	0.023629	0.148659
A	TOG_STREX	0.243783	0.430614	0.323492	0.379151	0.098405	0.050999	0.041934	3.57604E-07	0.085716	0.008995862	1.300164	0.031899	0.105082
A	N2O_IDLEX	0	0	0	0	0.000612	0.00168	0.023392	0.122368779	0.013015	0	0	0.024273	0
A	N2O_RUNEX	0.003373	0.006829	0.004856	0.006027	0.037739	0.077781	0.147053	0.236311345	0.15401	0.163214312	0.037627	0.118964	0.068662
A	N2O_STREX	0.026528	0.034164	0.032804	0.033699	0.030759	0.016258	0.005252	5.68332E-06	0.012713	0.004641839	0.006825	0.004687	0.032748

Attachment 4: Project Construction Dispersion Modeling Inputs and Risk Calculations

250 Stockton Ave, San Jose, CA

DPM Construction Emissions and Modeling Emission Rates

Construction Year	Activity	DPM (ton/year)	Source Type	No. Sources	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Emissions per Point Source (g/s)
2024	Construction	0.0554	Point	195	110.8	0.03034	3.82E-03	1.96E-05
2025	Construction	0.0152	Point	195	30.5	0.00835	1.05E-03	5.39E-06
2026	Construction	0.0437	Point	195	87.4	0.02395	3.02E-03	1.55E-05
2027	Construction	0.0140	Point	195	28.1	0.00770	9.70E-04	4.97E-06
Total		***0.1284***			***256.7***	***0.0703***	***0.0089***	

Emissions assumed to be evenly distributed over each construction areas

hr/day =	10	(7am -5pm)
days/yr =	365	
hours/year =	3650	

PM2.5 Fugitive Dust Construction Emissions for Modeling

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate $g/s/m^2$
2024	Construction	CON_FUG	0.1406	281.3	0.07706	9.71E-03	9411.3	1.03E-06
2025	Construction	CON_FUG	0.0027	5.4	0.00149	1.88E-04	9411.3	1.99E-08
2026	Construction	CON_FUG	0.0027	5.4	0.00149	1.88E-04	9411.3	1.99E-08
2027	Construction	CON_FUG	0.0021	4.3	0.00117	1.48E-04	9411.3	1.57E-08
Total			***0.1482***	***296.4***	***0.0812***	***0.0102***		

Emissions assumed to be evenly distributed over each construction areas

hr/day =	10	(7am -5pm)
days/yr =	365	
hours/year =	3650	

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	Activity	DPM (ton/year)	Source Type	No. Sources	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Emissions per Point Source (g/s)
2024	Construction	0.0084	Point	195	16.7	0.00459	5.78E-04	2.96E-06
2025	Construction	0.0061	Point	195	12.1	0.00332	4.18E-04	2.14E-06
2026	Construction	0.0037	Point	195	7.4	0.00202	2.54E-04	1.30E-06
2027	Construction	0.0029	Point	195	5.7	0.00157	1.98E-04	1.01E-06
Total		***0.0210***			***41.9***	***0.0115***	***0.0014***	

Emissions assumed to be evenly distributed over each construction areas

hr/day = 10 (7am -5pm)
days/yr = 365
hours/year = 3650

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate $g/s/m^2$
2024	Construction	CON_FUG	0.0647	129.5	0.03547	4.47E-03	9411.3	4.75E-07
2025	Construction	CON_FUG	0.0027	5.4	0.00149	1.88E-04	9411.3	1.99E-08
2026	Construction	CON_FUG	0.0027	5.4	0.00149	1.88E-04	9411.3	1.99E-08
2027	Construction	CON_FUG	0.0021	4.3	0.00117	1.48E-04	9411.3	1.57E-08
Total			***0.0723***	***144.6***	***0.0396***	***0.0050***		

Emissions assumed to be evenly distributed over each construction areas

hr/day = 10 (7am -5pm)
days/yr = 365
hours/year = 3650

250 Stockton Ave, San Jose, CA
Construction Health Impact Summary

Maximum Impacts at MEI Location - Without Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2024	0.1646	0.2837	29.27	0.47	0.03	0.42
2025	0.0453	0.0055	7.44	0.13	0.01	0.05
2026	0.1299	0.0055	3.36	0.37	0.03	0.13
2027	0.0418	0.0043	1.08	0.12	0.01	0.05
Total	-	-	**41.15**	**1.10**		-
Maximum	0.1646	0.2837	**-**	**-**	**0.03**	**0.42**

Maximum Impacts at MEI Location - With Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2024	0.0249	0.1308	4.42	0.07	0.00	0.15
2025	0.0180	0.0055	2.96	0.05	0.00	0.02
2026	0.0110	0.0055	0.28	0.03	0.00	0.03
2027	0.0085	0.0043	0.22	0.02	0.00	0.01
Total	-	-	**7.88**	**0.18**	-	-
Maximum	0.0249	0.1308	**-**	**-**	**0.00**	**0.15**

- Tier 4 interim engines, electric cranes, electric aerial lifts, electric air compressors, propane forklifts, electric construction generator sets, electric welders, and BMPs as Mitigation Measures.

250 Stockton Ave, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 12.2 meter receptor height

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
						Infant/Child		Modeled		Adult	Adult	Maximum		
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2024	0.1132	10	1.54	2024	0.1132	-	-			
1	1	0 - 1	2024	0.1132	10	18.60	2024	0.1132	1	0.33	0.023	0.19	0.28
2	1	1 - 2	2025	0.0312	10	5.12	2025	0.0312	1	0.09	0.006	0.00	0.03
3	1	2 - 3	2026	0.0894	3	2.31	2026	0.0894	1	0.26	0.018	0.00	0.09
4	1	3 - 4	2027	0.0287	3	0.74	2027	0.0287	1	0.08	0.006	0.00	0.03
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**28.31**				**0.75**			

* Third trimester of pregnancy

250 Stockton Ave, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 9.1 meter receptor height

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
							Modeled				Maximum		
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2024	0.1646	10	2.24	2024	0.1646	-	-			
1	1	0 - 1	2024	0.1646	10	27.03	2024	0.1646	1	0.47	0.033	0.28	0.42
2	1	1 - 2	2025	0.0453	10	7.44	2025	0.0453	1	0.13	0.009	0.01	0.05
3	1	2 - 3	2026	0.1299	3	3.36	2026	0.1299	1	0.37	0.026	0.01	0.13
4	1	3 - 4	2027	0.0418	3	1.08	2027	0.0418	1	0.12	0.008	0.00	0.05
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**41.15**				**1.10**			

* Third trimester of pregnancy

250 Stockton Ave, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
						Infant/Child		Modeled		Adult	Adult	Maximum		
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2024	0.0632	10	0.86	2024	0.0632	-	-			
1	1	0 - 1	2024	0.0632	10	10.37	2024	0.0632	1	0.18	0.013	0.233	0.30
2	1	1 - 2	2025	0.0174	10	2.85	2025	0.0174	1	0.05	0.003	0.005	0.02
3	1	2 - 3	2026	0.0499	3	1.29	2026	0.0499	1	0.14	0.010	0.005	0.05
4	1	3 - 4	2027	0.0160	3	0.41	2027	0.0160	1	0.05	0.003	0.004	0.02
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**15.79**				**0.42**			

* Third trimester of pregnancy

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
						Infant/Child		Modeled		Adult	Adult	Maximum		
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2024	0.0217	10	0.30	2024	0.0217	-	-			
1	1	0 - 1	2024	0.0217	10	3.57	2024	0.0217	1	0.06	0.00	0.118	0.14
2	1	1 - 2	2025	0.0060	10	0.98	2025	0.0060	1	0.02	0.00	0.002	0.01
3	1	2 - 3	2026	0.0172	3	0.44	2026	0.0172	1	0.05	0.00	0.002	0.02
4	1	3 - 4	2027	0.0055	3	0.14	2027	0.0055	1	0.02	0.00	0.002	0.01
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**5.43**				**0.14**			

* Third trimester of pregnancy

250 Stockton Ave, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 12.2 meter receptor height

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
						Infant/Child		Modeled		Adult		Maximum	
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2024	0.0171	10	0.23	2024	0.0171	-	-			
1	1	0 - 1	2024	0.0171	10	2.81	2024	0.0171	1	0.05	0.0034	0.087	0.10
2	1	1 - 2	2025	0.0124	10	2.03	2025	0.0124	1	0.04	0.002	0.0037	0.02
3	1	2 - 3	2026	0.0075	3	0.19	2026	0.0075	1	0.02	0.002	0.0037	0.02
4	1	3 - 4	2027	0.0059	3	0.15	2027	0.0059	1	0.02	0.001	0.0029	0.01
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**5.42**				**0.12**			

* Third trimester of pregnancy

250 Stockton Ave, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 9.1 meter receptor height

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
						Infant/Child		Modeled		Adult	Adult	Maximum		
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2024	0.0249	10	0.34	2024	0.0249	-	-			
1	1	0 - 1	2024	0.0249	10	4.08	2024	0.0249	1	0.07	0.0050	0.131	0.15
2	1	1 - 2	2025	0.0180	10	2.96	2025	0.0180	1	0.05	0.004	0.0055	0.02
3	1	2 - 3	2026	0.0110	3	0.28	2026	0.0110	1	0.03	0.002	0.0055	0.03
4	1	3 - 4	2027	0.0085	3	0.22	2027	0.0085	1	0.02	0.002	0.0043	0.01
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**7.88**				**0.18**			

* Third trimester of pregnancy

250 Stockton Ave, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
				DPM Conc (ug/m3)	Age		Modeled		Age				
Exposure Year	Exposure Duration (years)	Age	Year	Annual	Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	Annual	Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2024	0.0095	10	0.13	2024	0.0095	-	-			
1	1	0 - 1	2024	0.0095	10	1.57	2024	0.0095	1	0.03	0.002	0.11	0.12
2	1	1 - 2	2025	0.0069	10	1.13	2025	0.0069	1	0.02	0.001	0.00	0.01
3	1	2 - 3	2026	0.0042	3	0.11	2026	0.0042	1	0.01	0.001	0.00	0.01
4	1	3 - 4	2027	0.0033	3	0.08	2027	0.0033	1	0.01	0.001	0.00	0.01
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**3.02**				**0.07**			

* Third trimester of pregnancy

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled DPM Conc (ug/m3)		Age	Adult			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Hazard Index**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2024	0.0033	10	0.04	2024	0.0033	-	-			
1	1	0 - 1	2024	0.0033	10	0.54	2024	0.0033	1	0.01	0.001	0.05	0.06
2	1	1 - 2	2025	0.0024	10	0.39	2025	0.0024	1	0.01	0.000	0.002	0.00
3	1	2 - 3	2026	0.0015	3	0.04	2026	0.0015	1	0.00	0.000	0.002	0.00
4	1	3 - 4	2027	0.0011	3	0.03	2027	0.0011	1	0.00	0.000	0.002	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**1.04**				**0.02**			

* Third trimester of pregnancy

Attachment 5: Cumulative Community Risk from Existing TAC Sources

```
           File Name:   Local Roadways 2024.EF
CT-EMFAC2017 Version:   1.0.2.27401
            Run Date:   3/24/2022 10:29:59 AM
                Area:   Santa Clara (SF)
       Analysis Year:   2024
              Season:   Annual

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

Vehicle Category        VMT Fraction            Diesel VMT Fraction     Gas VMT Fraction
                        Across Category         Within Category         Within Category
         Truck 1             0.015                   0.495                   0.505
         Truck 2             0.020                   0.937                   0.048
       Non-Truck             0.965                   0.014                   0.955

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

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

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

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

       Pollutant Name        30 mph          35 mph
                PM2.5      0.001693        0.001451
                  TOG      0.034349        0.028781
            Diesel PM      0.000339        0.000339

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

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

       Pollutant Name   Emission Factor
                  TOG         1.303551

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

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

       Pollutant Name   Emission Factor
                PM2.5         0.002108

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

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

       Pollutant Name   Emission Factor
                PM2.5         0.016805

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

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

       Pollutant Name   Emission Factor
                PM2.5         0.014840

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

```
          File Name:   Local Roadways 2028.EF
CT-EMFAC2017 Version:   1.0.2.27401
            Run Date:   5/9/2022 2:13:34 PM
                Area:   Santa Clara (SF)
       Analysis Year:   2028
              Season:   Annual

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

Vehicle Category        VMT Fraction            Diesel VMT Fraction     Gas VMT Fraction
                        Across Category         Within Category         Within Category
         Truck 1             0.014                  0.517                   0.483
         Truck 2             0.021                  0.933                   0.050
       Non-Truck             0.965                  0.015                   0.945

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

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

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

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

       Pollutant Name        30 mph
                PM2.5      0.001402
                 TOG       0.028455
           Diesel PM       0.000288

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

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

       Pollutant Name   Emission Factor
                 TOG          1.122713

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.002113

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.016796

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.014896

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

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - Stockton Avenue
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2024**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	31.7	3.4	30	5,364
DPM_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	31.7	3.4	30	5,364
									Total	10,727

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00034			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and DPM Emissions - DPM_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.90%	209	6.46E-06	9	6.42%	344	1.06E-05	17	5.62%	301	9.31E-06
2	2.58%	138	4.27E-06	10	7.34%	393	1.22E-05	18	3.27%	175	5.41E-06
3	2.87%	154	4.75E-06	11	6.42%	344	1.06E-05	19	2.35%	126	3.89E-06
4	3.32%	178	5.51E-06	12	6.88%	369	1.14E-05	20	0.86%	46	1.42E-06
5	2.18%	117	3.61E-06	13	6.25%	335	1.04E-05	21	3.09%	166	5.13E-06
6	3.38%	181	5.60E-06	14	6.19%	332	1.03E-05	22	4.13%	221	6.84E-06
7	6.02%	323	9.97E-06	15	5.10%	274	8.45E-06	23	2.52%	135	4.18E-06
8	4.64%	249	7.69E-06	16	3.78%	203	6.27E-06	24	0.92%	49	1.52E-06
								Total		5,364	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.90%	209	6.39E-06	9	6.42%	344	1.05E-05	17	5.62%	301	9.20E-06
2	2.58%	138	4.23E-06	10	7.34%	393	1.20E-05	18	3.27%	175	5.35E-06
3	2.87%	154	4.70E-06	11	6.42%	344	1.05E-05	19	2.35%	126	3.85E-06
4	3.32%	178	5.45E-06	12	6.88%	369	1.13E-05	20	0.86%	46	1.41E-06
5	2.18%	117	3.57E-06	13	6.25%	335	1.02E-05	21	3.09%	166	5.07E-06
6	3.38%	181	5.54E-06	14	6.19%	332	1.01E-05	22	4.13%	221	6.76E-06
7	6.02%	323	9.86E-06	15	5.10%	274	8.36E-06	23	2.52%	135	4.13E-06
8	4.64%	249	7.61E-06	16	3.78%	203	6.20E-06	24	0.92%	49	1.50E-06
								Total		5,364	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - Stockton Avenue
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = **2024**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	32	1.3	30	5,364
PM2.5_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	32	1.3	30	5,364
									Total	10,727

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.001693			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	62	9.53E-06	9	7.11%	381	5.89E-05	17	7.39%	396	6.11E-05
2	0.42%	22	3.46E-06	10	4.39%	235	3.63E-05	18	8.18%	439	6.77E-05
3	0.41%	22	3.36E-06	11	4.66%	250	3.86E-05	19	5.70%	305	4.71E-05
4	0.26%	14	2.16E-06	12	5.89%	316	4.87E-05	20	4.27%	229	3.54E-05
5	0.50%	27	4.14E-06	13	6.15%	330	5.09E-05	21	3.26%	175	2.70E-05
6	0.90%	48	7.48E-06	14	6.04%	324	5.00E-05	22	3.30%	177	2.73E-05
7	3.79%	203	3.14E-05	15	7.01%	376	5.81E-05	23	2.46%	132	2.04E-05
8	7.76%	416	6.43E-05	16	7.14%	383	5.91E-05	24	1.87%	100	1.54E-05
								Total		5,364	

2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	62	9.43E-06	9	7.11%	381	5.82E-05	17	7.39%	396	6.04E-05
2	0.42%	22	3.42E-06	10	4.39%	235	3.59E-05	18	8.18%	439	6.69E-05
3	0.41%	22	3.32E-06	11	4.66%	250	3.82E-05	19	5.70%	305	4.66E-05
4	0.26%	14	2.14E-06	12	5.89%	316	4.82E-05	20	4.27%	229	3.50E-05
5	0.50%	27	4.09E-06	13	6.15%	330	5.04E-05	21	3.26%	175	2.67E-05
6	0.90%	48	7.40E-06	14	6.04%	324	4.94E-05	22	3.30%	177	2.70E-05
7	3.79%	203	3.10E-05	15	7.01%	376	5.74E-05	23	2.46%	132	2.01E-05
8	7.76%	416	6.35E-05	16	7.14%	383	5.84E-05	24	1.87%	100	1.53E-05
								Total		5,364	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - Stockton Avenue
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	32	1.3	30	5,364
TEXH_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	32	1.3	30	5,364
									Total	10,727

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.03435			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	62	1.93E-04	9	7.11%	381	1.19E-03	17	7.39%	396	1.24E-03
2	0.42%	22	7.01E-05	10	4.39%	235	7.37E-04	18	8.18%	439	1.37E-03
3	0.41%	22	6.82E-05	11	4.66%	250	7.83E-04	19	5.70%	305	9.56E-04
4	0.26%	14	4.39E-05	12	5.89%	316	9.89E-04	20	4.27%	229	7.18E-04
5	0.50%	27	8.39E-05	13	6.15%	330	1.03E-03	21	3.26%	175	5.47E-04
6	0.90%	48	1.52E-04	14	6.04%	324	1.01E-03	22	3.30%	177	5.54E-04
7	3.79%	203	6.37E-04	15	7.01%	376	1.18E-03	23	2.46%	132	4.13E-04
8	7.76%	416	1.30E-03	16	7.14%	383	1.20E-03	24	1.87%	100	3.13E-04
								Total		5,364	

2024 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	62	1.91E-04	9	7.11%	381	1.18E-03	17	7.39%	396	1.23E-03
2	0.42%	22	6.94E-05	10	4.39%	235	7.28E-04	18	8.18%	439	1.36E-03
3	0.41%	22	6.74E-05	11	4.66%	250	7.75E-04	19	5.70%	305	9.46E-04
4	0.26%	14	4.34E-05	12	5.89%	316	9.78E-04	20	4.27%	229	7.10E-04
5	0.50%	27	8.30E-05	13	6.15%	330	1.02E-03	21	3.26%	175	5.41E-04
6	0.90%	48	1.50E-04	14	6.04%	324	1.00E-03	22	3.30%	177	5.47E-04
7	3.79%	203	6.29E-04	15	7.01%	376	1.16E-03	23	2.46%	132	4.09E-04
8	7.76%	416	1.29E-03	16	7.14%	383	1.19E-03	24	1.87%	100	3.10E-04
								Total		5,364	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - Stockton Avenue
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	32	1.3	30	5,364
TEVAP_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	32	1.3	30	5,364
									Total	10,727

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle per Hour (g/hour)	1.30355			
Emissions per Vehicle per Mile (g/VMT)	0.04345			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	62	2.45E-04	9	7.11%	381	1.51E-03	17	7.39%	396	1.57E-03
2	0.42%	22	8.87E-05	10	4.39%	235	9.32E-04	18	8.18%	439	1.74E-03
3	0.41%	22	8.62E-05	11	4.66%	250	9.91E-04	19	5.70%	305	1.21E-03
4	0.26%	14	5.56E-05	12	5.89%	316	1.25E-03	20	4.27%	229	9.08E-04
5	0.50%	27	1.06E-04	13	6.15%	330	1.31E-03	21	3.26%	175	6.92E-04
6	0.90%	48	1.92E-04	14	6.04%	324	1.28E-03	22	3.30%	177	7.00E-04
7	3.79%	203	8.05E-04	15	7.01%	376	1.49E-03	23	2.46%	132	5.23E-04
8	7.76%	416	1.65E-03	16	7.14%	383	1.52E-03	24	1.87%	100	3.96E-04
								Total		5,364	

2024 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	62	2.42E-04	9	7.11%	381	1.49E-03	17	7.39%	396	1.55E-03
2	0.42%	22	8.77E-05	10	4.39%	235	9.21E-04	18	8.18%	439	1.72E-03
3	0.41%	22	8.53E-05	11	4.66%	250	9.80E-04	19	5.70%	305	1.20E-03
4	0.26%	14	5.49E-05	12	5.89%	316	1.24E-03	20	4.27%	229	8.98E-04
5	0.50%	27	1.05E-04	13	6.15%	330	1.29E-03	21	3.26%	175	6.84E-04
6	0.90%	48	1.90E-04	14	6.04%	324	1.27E-03	22	3.30%	177	6.92E-04
7	3.79%	203	7.96E-04	15	7.01%	376	1.47E-03	23	2.46%	132	5.17E-04
8	7.76%	416	1.63E-03	16	7.14%	383	1.50E-03	24	1.87%	100	3.92E-04
								Total		5,364	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - Stockton Avenue
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = **2024**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	32	1.3	30	5,364
FUG_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	32	1.3	30	5,364
									Total	10,727

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01681			
Road Dust - Emissions per Vehicle (g/VMT)	0.01484			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03375			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	62	1.90E-04	9	7.11%	381	1.17E-03	17	7.39%	396	1.22E-03
2	0.42%	22	6.89E-05	10	4.39%	235	7.24E-04	18	8.18%	439	1.35E-03
3	0.41%	22	6.70E-05	11	4.66%	250	7.70E-04	19	5.70%	305	9.40E-04
4	0.26%	14	4.32E-05	12	5.89%	316	9.72E-04	20	4.27%	229	7.05E-04
5	0.50%	27	8.25E-05	13	6.15%	330	1.02E-03	21	3.26%	175	5.38E-04
6	0.90%	48	1.49E-04	14	6.04%	324	9.96E-04	22	3.30%	177	5.44E-04
7	3.79%	203	6.25E-04	15	7.01%	376	1.16E-03	23	2.46%	132	4.06E-04
8	7.76%	416	1.28E-03	16	7.14%	383	1.18E-03	24	1.87%	100	3.08E-04
								Total		5,364	

2024 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	62	1.88E-04	9	7.11%	381	1.16E-03	17	7.39%	396	1.21E-03
2	0.42%	22	6.82E-05	10	4.39%	235	7.16E-04	18	8.18%	439	1.33E-03
3	0.41%	22	6.62E-05	11	4.66%	250	7.61E-04	19	5.70%	305	9.29E-04
4	0.26%	14	4.27E-05	12	5.89%	316	9.61E-04	20	4.27%	229	6.97E-04
5	0.50%	27	8.15E-05	13	6.15%	330	1.00E-03	21	3.26%	175	5.32E-04
6	0.90%	48	1.47E-04	14	6.04%	324	9.85E-04	22	3.30%	177	5.38E-04
7	3.79%	203	6.19E-04	15	7.01%	376	1.14E-03	23	2.46%	132	4.02E-04
8	7.76%	416	1.27E-03	16	7.14%	383	1.16E-03	24	1.87%	100	3.04E-04
								Total		5,364	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - West Santa Clara Street
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2024**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_EB_WSC	W Santa Clara St Northbound	EB	2	594.5	0.37	13.3	43.7	3.4	30	10,780
DPM_WB_WSC	W Santa Clara St Southbound	WB	2	612.3	0.38	13.3	43.7	3.4	30	10,780
									Total	21,561

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00034			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and DPM Emissions - DPM_EB_WSC

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.90%	420	1.46E-05	9	6.42%	692	2.41E-05	17	5.62%	605	2.11E-05
2	2.58%	278	9.67E-06	10	7.34%	791	2.75E-05	18	3.27%	352	1.22E-05
3	2.87%	309	1.07E-05	11	6.42%	692	2.41E-05	19	2.35%	253	8.81E-06
4	3.32%	358	1.25E-05	12	6.88%	741	2.58E-05	20	0.86%	93	3.22E-06
5	2.18%	235	8.17E-06	13	6.25%	673	2.34E-05	21	3.09%	334	1.16E-05
6	3.38%	364	1.27E-05	14	6.19%	667	2.32E-05	22	4.13%	445	1.55E-05
7	6.02%	649	2.26E-05	15	5.10%	550	1.91E-05	23	2.52%	272	9.46E-06
8	4.64%	500	1.74E-05	16	3.78%	408	1.42E-05	24	0.92%	99	3.44E-06
								Total		10,780	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.90%	420	1.51E-05	9	6.42%	692	2.48E-05	17	5.62%	605	2.17E-05
2	2.58%	278	9.96E-06	10	7.34%	791	2.83E-05	18	3.27%	352	1.26E-05
3	2.87%	309	1.11E-05	11	6.42%	692	2.48E-05	19	2.35%	253	9.07E-06
4	3.32%	358	1.28E-05	12	6.88%	741	2.66E-05	20	0.86%	93	3.32E-06
5	2.18%	235	8.41E-06	13	6.25%	673	2.41E-05	21	3.09%	334	1.20E-05
6	3.38%	364	1.31E-05	14	6.19%	667	2.39E-05	22	4.13%	445	1.59E-05
7	6.02%	649	2.32E-05	15	5.10%	550	1.97E-05	23	2.52%	272	9.74E-06
8	4.64%	500	1.79E-05	16	3.78%	408	1.46E-05	24	0.92%	99	3.54E-06
								Total		10,780	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - West Santa Clara Street
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_EB_WSC	W Santa Clara St Northbound	EB	2	594.5	0.37	13.3	44	1.3	30	10,780
PM2.5_WB_WSC	W Santa Clara St Southbound	WB	2	612.3	0.38	13.3	44	1.3	30	10,780
									Total	21,561

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.001693			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_EB_WSC

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	124	2.16E-05	9	7.11%	767	1.33E-04	17	7.39%	796	1.38E-04
2	0.42%	45	7.82E-06	10	4.39%	473	8.21E-05	18	8.18%	881	1.53E-04
3	0.41%	44	7.60E-06	11	4.66%	503	8.74E-05	19	5.70%	614	1.07E-04
4	0.26%	28	4.90E-06	12	5.89%	635	1.10E-04	20	4.27%	461	8.01E-05
5	0.50%	54	9.36E-06	13	6.15%	663	1.15E-04	21	3.26%	351	6.10E-05
6	0.90%	97	1.69E-05	14	6.04%	651	1.13E-04	22	3.30%	355	6.17E-05
7	3.79%	409	7.10E-05	15	7.01%	756	1.31E-04	23	2.46%	265	4.61E-05
8	7.76%	837	1.45E-04	16	7.14%	769	1.34E-04	24	1.87%	201	3.49E-05
								Total		10,780	

2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	124	2.22E-05	9	7.11%	767	1.37E-04	17	7.39%	796	1.42E-04
2	0.42%	45	8.06E-06	10	4.39%	473	8.46E-05	18	8.18%	881	1.58E-04
3	0.41%	44	7.83E-06	11	4.66%	503	9.00E-05	19	5.70%	614	1.10E-04
4	0.26%	28	5.04E-06	12	5.89%	635	1.14E-04	20	4.27%	461	8.24E-05
5	0.50%	54	9.64E-06	13	6.15%	663	1.19E-04	21	3.26%	351	6.28E-05
6	0.90%	97	1.74E-05	14	6.04%	651	1.16E-04	22	3.30%	355	6.36E-05
7	3.79%	409	7.31E-05	15	7.01%	756	1.35E-04	23	2.46%	265	4.75E-05
8	7.76%	837	1.50E-04	16	7.14%	769	1.38E-04	24	1.87%	201	3.60E-05
								Total		10,780	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - West Santa Clara Street
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_EB_WSC	W Santa Clara St Northbound	EB	2	594.5	0.37	13.3	44	1.3	30	10,780
TEXH_WB_WSC	W Santa Clara St Southbound	WB	2	612.3	0.38	13.3	44	1.3	30	10,780
									Total	21,561

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.03435			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_EB_WSC

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	124	4.38E-04	9	7.11%	767	2.70E-03	17	7.39%	796	2.81E-03
2	0.42%	45	1.59E-04	10	4.39%	473	1.67E-03	18	8.18%	881	3.11E-03
3	0.41%	44	1.54E-04	11	4.66%	503	1.77E-03	19	5.70%	614	2.16E-03
4	0.26%	28	9.94E-05	12	5.89%	635	2.24E-03	20	4.27%	461	1.62E-03
5	0.50%	54	1.90E-04	13	6.15%	663	2.34E-03	21	3.26%	351	1.24E-03
6	0.90%	97	3.43E-04	14	6.04%	651	2.29E-03	22	3.30%	355	1.25E-03
7	3.79%	409	1.44E-03	15	7.01%	756	2.67E-03	23	2.46%	265	9.35E-04
8	7.76%	837	2.95E-03	16	7.14%	769	2.71E-03	24	1.87%	201	7.09E-04
								Total		10,780	

2024 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	124	4.51E-04	9	7.11%	767	2.78E-03	17	7.39%	796	2.89E-03
2	0.42%	45	1.63E-04	10	4.39%	473	1.72E-03	18	8.18%	881	3.20E-03
3	0.41%	44	1.59E-04	11	4.66%	503	1.83E-03	19	5.70%	614	2.23E-03
4	0.26%	28	1.02E-04	12	5.89%	635	2.30E-03	20	4.27%	461	1.67E-03
5	0.50%	54	1.96E-04	13	6.15%	663	2.41E-03	21	3.26%	351	1.27E-03
6	0.90%	97	3.54E-04	14	6.04%	651	2.36E-03	22	3.30%	355	1.29E-03
7	3.79%	409	1.48E-03	15	7.01%	756	2.75E-03	23	2.46%	265	9.63E-04
8	7.76%	837	3.04E-03	16	7.14%	769	2.79E-03	24	1.87%	201	7.30E-04
								Total		10,780	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - West Santa Clara Street
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_EB_WSC	W Santa Clara St Northbound	EB	2	594.5	0.37	13.3	44	1.3	30	10,780
TEVAP_WB_WSC	W Santa Clara St Southbound	WB	2	612.3	0.38	13.3	44	1.3	30	10,780
									Total	21,561

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle per Hour (g/hour)	1.30355			
Emissions per Vehicle per Mile (g/VMT)	0.04345			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_EB_WSC

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	124	5.54E-04	9	7.11%	767	3.42E-03	17	7.39%	796	3.55E-03
2	0.42%	45	2.01E-04	10	4.39%	473	2.11E-03	18	8.18%	881	3.93E-03
3	0.41%	44	1.95E-04	11	4.66%	503	2.24E-03	19	5.70%	614	2.74E-03
4	0.26%	28	1.26E-04	12	5.89%	635	2.83E-03	20	4.27%	461	2.05E-03
5	0.50%	54	2.40E-04	13	6.15%	663	2.96E-03	21	3.26%	351	1.57E-03
6	0.90%	97	4.34E-04	14	6.04%	651	2.90E-03	22	3.30%	355	1.58E-03
7	3.79%	409	1.82E-03	15	7.01%	756	3.37E-03	23	2.46%	265	1.18E-03
8	7.76%	837	3.73E-03	16	7.14%	769	3.43E-03	24	1.87%	201	8.97E-04
								Total		10,780	

2024 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	124	5.70E-04	9	7.11%	767	3.52E-03	17	7.39%	796	3.66E-03
2	0.42%	45	2.07E-04	10	4.39%	473	2.17E-03	18	8.18%	881	4.05E-03
3	0.41%	44	2.01E-04	11	4.66%	503	2.31E-03	19	5.70%	614	2.82E-03
4	0.26%	28	1.29E-04	12	5.89%	635	2.92E-03	20	4.27%	461	2.12E-03
5	0.50%	54	2.47E-04	13	6.15%	663	3.05E-03	21	3.26%	351	1.61E-03
6	0.90%	97	4.47E-04	14	6.04%	651	2.99E-03	22	3.30%	355	1.63E-03
7	3.79%	409	1.88E-03	15	7.01%	756	3.47E-03	23	2.46%	265	1.22E-03
8	7.76%	837	3.84E-03	16	7.14%	769	3.53E-03	24	1.87%	201	9.24E-04
								Total		10,780	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Cumulative Operation - West Santa Clara Street
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_EB_WSC	W Santa Clara St Northbound	EB	2	594.5	0.37	13.3	44	1.3	30	10,780
FUG_WB_WSC	W Santa Clara St Southbound	WB	2	612.3	0.38	13.3	44	1.3	30	10,780
									Total	21,561

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01681			
Road Dust - Emissions per Vehicle (g/VMT)	0.01484			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03375			

Emisson Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_EB_WSC

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	124	4.30E-04	9	7.11%	767	2.66E-03	17	7.39%	796	2.76E-03
2	0.42%	45	1.56E-04	10	4.39%	473	1.64E-03	18	8.18%	881	3.05E-03
3	0.41%	44	1.52E-04	11	4.66%	503	1.74E-03	19	5.70%	614	2.13E-03
4	0.26%	28	9.77E-05	12	5.89%	635	2.20E-03	20	4.27%	461	1.60E-03
5	0.50%	54	1.87E-04	13	6.15%	663	2.30E-03	21	3.26%	351	1.22E-03
6	0.90%	97	3.37E-04	14	6.04%	651	2.25E-03	22	3.30%	355	1.23E-03
7	3.79%	409	1.42E-03	15	7.01%	756	2.62E-03	23	2.46%	265	9.19E-04
8	7.76%	837	2.90E-03	16	7.14%	769	2.67E-03	24	1.87%	201	6.97E-04
								Total		10,780	

2024 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	124	4.43E-04	9	7.11%	767	2.74E-03	17	7.39%	796	2.84E-03
2	0.42%	45	1.61E-04	10	4.39%	473	1.69E-03	18	8.18%	881	3.14E-03
3	0.41%	44	1.56E-04	11	4.66%	503	1.79E-03	19	5.70%	614	2.19E-03
4	0.26%	28	1.01E-04	12	5.89%	635	2.26E-03	20	4.27%	461	1.64E-03
5	0.50%	54	1.92E-04	13	6.15%	663	2.37E-03	21	3.26%	351	1.25E-03
6	0.90%	97	3.48E-04	14	6.04%	651	2.32E-03	22	3.30%	355	1.27E-03
7	3.79%	409	1.46E-03	15	7.01%	756	2.70E-03	23	2.46%	265	9.46E-04
8	7.76%	837	2.99E-03	16	7.14%	769	2.74E-03	24	1.87%	201	7.18E-04
								Total		10,780	

250 Stockton Ave, San Jose, CA - West San Carlos Street Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Residential MEI Receptor (9.1 meter receptor height)

Emission Year	2024
Receptor Information	Construction Residential MEI receptor
Number of Receptors	2
Receptor Height	9.1 meters
Receptor Distances	At Construction Residential MEI location

Meteorological Conditions

BAAQMD San Jose International Met D	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction Residential MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0004	0.0272	0.0343

Construction Residential MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0288	0.0274	0.0014

250 Stockton Ave, San Jose, CA - Stockton Avenue Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Residential MEI Receptor (9.1 meter receptor height)

Emission Year	2024
Receptor Information	Construction Residential MEI receptor
Number of Receptors	2
Receptor Height	9.1 meters
Receptor Distances	At Construction Residential MEI location

Meteorological Conditions

BAAQMD San Jose International Met D	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction Residential MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0003	0.0317	0.0400

Construction Residential MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0304	0.0290	0.0015

250 Stockton Ave, San Jose, CA - West San Carlos Street Traffic Cancer Risk
Impacts at Construction Residential MEI - 9.1 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2024	10	0.0004	0.0272	0.0343	0.005	0.002	0.0002	0.01
1	1	0 - 1	2024	10	0.0004	0.0272	0.0343	0.061	0.025	0.0019	0.09
2	1	1 - 2	2025	10	0.0004	0.0272	0.0343	0.061	0.025	0.0019	0.09
3	1	2 - 3	2026	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
4	1	3 - 4	2027	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
5	1	4 - 5	2028	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
6	1	5 - 6	2029	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
7	1	6 - 7	2030	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
8	1	7 - 8	2031	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
9	1	8 - 9	2032	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
10	1	9 - 10	2033	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
11	1	10 - 11	2034	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
12	1	11 - 12	2035	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
13	1	12 - 13	2036	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
14	1	13 - 14	2037	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
15	1	14 - 15	2038	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
16	1	15 - 16	2039	3	0.0004	0.0272	0.0343	0.010	0.004	0.0003	0.01
17	1	16-17	2040	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
18	1	17-18	2041	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
19	1	18-19	2042	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
20	1	19-20	2043	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
21	1	20-21	2044	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
22	1	21-22	2045	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
23	1	22-23	2046	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
24	1	23-24	2047	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
25	1	24-25	2048	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
26	1	25-26	2049	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
27	1	26-27	2050	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
28	1	27-28	2051	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
29	1	28-29	2052	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
30	1	29-30	2053	1	0.0004	0.0272	0.0343	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.28	0.115	0.009	**0.40**

* Third trimester of pregnancy

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00007	0.03	0.03

250 Stockton Ave, San Jose, CA - Stockton Avenue Traffic Cancer Risk
Impacts at Construction Residential MEI - 9.1 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2024	10	0.0003	0.0317	0.0400	0.004	0.002	0.0002	0.01
1	1	0 - 1	2024	10	0.0003	0.0317	0.0400	0.051	0.030	0.0022	0.08
2	1	1 - 2	2025	10	0.0003	0.0317	0.0400	0.051	0.030	0.0022	0.08
3	1	2 - 3	2026	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
4	1	3 - 4	2027	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
5	1	4 - 5	2028	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
6	1	5 - 6	2029	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
7	1	6 - 7	2030	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
8	1	7 - 8	2031	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
9	1	8 - 9	2032	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
10	1	9 - 10	2033	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
11	1	10 - 11	2034	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
12	1	11 - 12	2035	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
13	1	12 - 13	2036	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
14	1	13 - 14	2037	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
15	1	14 - 15	2038	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
16	1	15 - 16	2039	3	0.0003	0.0317	0.0400	0.008	0.005	0.0003	0.01
17	1	16-17	2040	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
18	1	17-18	2041	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
19	1	18-19	2042	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
20	1	19-20	2043	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
21	1	20-21	2044	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
22	1	21-22	2045	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
23	1	22-23	2046	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
24	1	23-24	2047	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
25	1	24-25	2048	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
26	1	25-26	2049	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
27	1	26-27	2050	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
28	1	27-28	2051	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
29	1	28-29	2052	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
30	1	29-30	2053	1	0.0003	0.0317	0.0400	0.001	0.001	0.0000	0.00
Total Increased Cancer Risk								0.23	0.135	0.010	**0.38**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00006	0.03	0.03

* Third trimester of pregnancy

250 Stockton Ave, San Jose, CA - Off-Site Residential
Project Trips - Stockton Avenue
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2028**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	31.7	3.4	30	4,364
DPM_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	31.7	3.4	30	4,364
									Total	8,727

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00029			

Emisson Factors from CT-EMFAC2017

2028 Hourly Traffic Volumes and DPM Emissions - DPM_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.96%	173	4.54E-06	9	6.46%	282	7.40E-06	17	5.61%	245	6.43E-06
2	2.66%	116	3.05E-06	10	7.36%	321	8.43E-06	18	3.24%	142	3.71E-06
3	2.88%	126	3.30E-06	11	6.40%	279	7.33E-06	19	2.22%	97	2.54E-06
4	3.28%	143	3.76E-06	12	6.97%	304	7.98E-06	20	0.86%	37	9.83E-07
5	2.09%	91	2.40E-06	13	6.23%	272	7.14E-06	21	3.06%	134	3.51E-06
6	3.34%	146	3.82E-06	14	6.17%	269	7.07E-06	22	4.25%	186	4.87E-06
7	6.06%	264	6.94E-06	15	5.10%	223	5.84E-06	23	2.55%	111	2.92E-06
8	4.54%	198	5.20E-06	16	3.86%	168	4.42E-06	24	0.85%	37	9.72E-07
								Total		4,364	

2028 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.96%	173	4.48E-06	9	6.46%	282	7.31E-06	17	5.61%	245	6.35E-06
2	2.66%	116	3.01E-06	10	7.36%	321	8.34E-06	18	3.24%	142	3.67E-06
3	2.88%	126	3.27E-06	11	6.40%	279	7.25E-06	19	2.22%	97	2.51E-06
4	3.28%	143	3.72E-06	12	6.97%	304	7.89E-06	20	0.86%	37	9.72E-07
5	2.09%	91	2.37E-06	13	6.23%	272	7.06E-06	21	3.06%	134	3.47E-06
6	3.34%	146	3.78E-06	14	6.17%	269	6.99E-06	22	4.25%	186	4.82E-06
7	6.06%	264	6.87E-06	15	5.10%	223	5.78E-06	23	2.55%	111	2.88E-06
8	4.54%	198	5.15E-06	16	3.86%	168	4.37E-06	24	0.85%	37	9.61E-07
								Total		4,364	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Project Trips - Stockton Avenue
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2028

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	32	1.3	30	4,364
PM2.5_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	32	1.3	30	4,364
									Total	8,727

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.001402			

Emisson Factors from CT-EMFAC2017

2028 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	50	6.41E-06	9	7.11%	310	3.97E-05	17	7.39%	323	4.12E-05
2	0.42%	18	2.33E-06	10	4.39%	191	2.45E-05	18	8.18%	357	4.56E-05
3	0.40%	18	2.26E-06	11	4.66%	204	2.60E-05	19	5.70%	249	3.18E-05
4	0.26%	11	1.45E-06	12	5.89%	257	3.28E-05	20	4.27%	187	2.38E-05
5	0.49%	21	2.74E-06	13	6.15%	268	3.43E-05	21	3.25%	142	1.81E-05
6	0.90%	39	5.02E-06	14	6.04%	263	3.37E-05	22	3.30%	144	1.84E-05
7	3.79%	165	2.11E-05	15	7.01%	306	3.91E-05	23	2.46%	107	1.37E-05
8	7.76%	339	4.33E-05	16	7.14%	312	3.98E-05	24	1.87%	81	1.04E-05
								Total		4,364	

2028 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	50	6.34E-06	9	7.11%	310	3.92E-05	17	7.39%	323	4.08E-05
2	0.42%	18	2.30E-06	10	4.39%	191	2.42E-05	18	8.18%	357	4.51E-05
3	0.40%	18	2.23E-06	11	4.66%	204	2.57E-05	19	5.70%	249	3.14E-05
4	0.26%	11	1.43E-06	12	5.89%	257	3.25E-05	20	4.27%	187	2.36E-05
5	0.49%	21	2.71E-06	13	6.15%	268	3.39E-05	21	3.25%	142	1.79E-05
6	0.90%	39	4.97E-06	14	6.04%	263	3.33E-05	22	3.30%	144	1.82E-05
7	3.79%	165	2.09E-05	15	7.01%	306	3.87E-05	23	2.46%	107	1.36E-05
8	7.76%	339	4.28E-05	16	7.14%	312	3.94E-05	24	1.87%	81	1.03E-05
								Total		4,364	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Project Trips - Stockton Avenue
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2028

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	32	1.3	30	4,364
TEXH_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	32	1.3	30	4,364
									Total	8,727

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.02846			

Emisson Factors from CT-EMFAC2017

2028 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	50	1.30E-04	9	7.11%	310	8.05E-04	17	7.39%	323	8.37E-04
2	0.42%	18	4.73E-05	10	4.39%	191	4.97E-04	18	8.18%	357	9.26E-04
3	0.40%	18	4.58E-05	11	4.66%	204	5.28E-04	19	5.70%	249	6.45E-04
4	0.26%	11	2.94E-05	12	5.89%	257	6.66E-04	20	4.27%	187	4.84E-04
5	0.49%	21	5.57E-05	13	6.15%	268	6.96E-04	21	3.25%	142	3.68E-04
6	0.90%	39	1.02E-04	14	6.04%	263	6.83E-04	22	3.30%	144	3.74E-04
7	3.79%	165	4.29E-04	15	7.01%	306	7.94E-04	23	2.46%	107	2.79E-04
8	7.76%	339	8.78E-04	16	7.14%	312	8.08E-04	24	1.87%	81	2.11E-04
								Total		4,364	

2028 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	50	1.29E-04	9	7.11%	310	7.96E-04	17	7.39%	323	8.27E-04
2	0.42%	18	4.68E-05	10	4.39%	191	4.91E-04	18	8.18%	357	9.16E-04
3	0.40%	18	4.53E-05	11	4.66%	204	5.22E-04	19	5.70%	249	6.38E-04
4	0.26%	11	2.91E-05	12	5.89%	257	6.59E-04	20	4.27%	187	4.78E-04
5	0.49%	21	5.51E-05	13	6.15%	268	6.89E-04	21	3.25%	142	3.64E-04
6	0.90%	39	1.01E-04	14	6.04%	263	6.76E-04	22	3.30%	144	3.69E-04
7	3.79%	165	4.24E-04	15	7.01%	306	7.85E-04	23	2.46%	107	2.76E-04
8	7.76%	339	8.69E-04	16	7.14%	312	7.99E-04	24	1.87%	81	2.09E-04
								Total		4,364	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Project Trips - Stockton Avenue
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2028

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	32	1.3	30	4,364
TEVAP_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	32	1.3	30	4,364
									Total	8,727

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle per Hour (g/hour)	1.12271			
Emissions per Vehicle per Mile (g/VMT)	0.03742			

Emisson Factors from CT-EMFAC2017

2028 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	50	1.71E-04	9	7.11%	310	1.06E-03	17	7.39%	323	1.10E-03
2	0.42%	18	6.22E-05	10	4.39%	191	6.53E-04	18	8.18%	357	1.22E-03
3	0.40%	18	6.02E-05	11	4.66%	204	6.94E-04	19	5.70%	249	8.48E-04
4	0.26%	11	3.87E-05	12	5.89%	257	8.76E-04	20	4.27%	187	6.36E-04
5	0.49%	21	7.32E-05	13	6.15%	268	9.16E-04	21	3.25%	142	4.84E-04
6	0.90%	39	1.34E-04	14	6.04%	263	8.98E-04	22	3.30%	144	4.91E-04
7	3.79%	165	5.64E-04	15	7.01%	306	1.04E-03	23	2.46%	107	3.66E-04
8	7.76%	339	1.16E-03	16	7.14%	312	1.06E-03	24	1.87%	81	2.78E-04
								Total		4,364	

2028 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	50	1.69E-04	9	7.11%	310	1.05E-03	17	7.39%	323	1.09E-03
2	0.42%	18	6.15E-05	10	4.39%	191	6.46E-04	18	8.18%	357	1.20E-03
3	0.40%	18	5.96E-05	11	4.66%	204	6.86E-04	19	5.70%	249	8.39E-04
4	0.26%	11	3.83E-05	12	5.89%	257	8.67E-04	20	4.27%	187	6.29E-04
5	0.49%	21	7.24E-05	13	6.15%	268	9.06E-04	21	3.25%	142	4.79E-04
6	0.90%	39	1.33E-04	14	6.04%	263	8.88E-04	22	3.30%	144	4.86E-04
7	3.79%	165	5.57E-04	15	7.01%	306	1.03E-03	23	2.46%	107	3.62E-04
8	7.76%	339	1.14E-03	16	7.14%	312	1.05E-03	24	1.87%	81	2.75E-04
								Total		4,364	

250 Stockton Ave, San Jose, CA - Off-Site Residential
Project Trips - Stockton Avenue
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = **2028**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NB_STK	Stockton Avenue Northbound	NB	1	528.1	0.33	9.7	32	1.3	30	4,364
FUG_SB_STK	Stockton Avenue Southbound	SB	1	522.2	0.32	9.7	32	1.3	30	4,364
									Total	8,727

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01680			
Road Dust - Emissions per Vehicle (g/VMT)	0.01490			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03381			

Emisson Factors from CT-EMFAC2017

2028 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_STK

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	50	1.55E-04	9	7.11%	310	9.56E-04	17	7.39%	323	9.94E-04
2	0.42%	18	5.62E-05	10	4.39%	191	5.90E-04	18	8.18%	357	1.10E-03
3	0.40%	18	5.44E-05	11	4.66%	204	6.27E-04	19	5.70%	249	7.66E-04
4	0.26%	11	3.50E-05	12	5.89%	257	7.92E-04	20	4.27%	187	5.75E-04
5	0.49%	21	6.62E-05	13	6.15%	268	8.27E-04	21	3.25%	142	4.38E-04
6	0.90%	39	1.21E-04	14	6.04%	263	8.12E-04	22	3.30%	144	4.44E-04
7	3.79%	165	5.09E-04	15	7.01%	306	9.43E-04	23	2.46%	107	3.31E-04
8	7.76%	339	1.04E-03	16	7.14%	312	9.60E-04	24	1.87%	81	2.51E-04
								Total		4,364	

2028 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_STK

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	50	1.53E-04	9	7.11%	310	9.46E-04	17	7.39%	323	9.83E-04
2	0.42%	18	5.55E-05	10	4.39%	191	5.83E-04	18	8.18%	357	1.09E-03
3	0.40%	18	5.38E-05	11	4.66%	204	6.20E-04	19	5.70%	249	7.58E-04
4	0.26%	11	3.46E-05	12	5.89%	257	7.83E-04	20	4.27%	187	5.68E-04
5	0.49%	21	6.54E-05	13	6.15%	268	8.18E-04	21	3.25%	142	4.33E-04
6	0.90%	39	1.20E-04	14	6.04%	263	8.03E-04	22	3.30%	144	4.39E-04
7	3.79%	165	5.04E-04	15	7.01%	306	9.32E-04	23	2.46%	107	3.27E-04
8	7.76%	339	1.03E-03	16	7.14%	312	9.50E-04	24	1.87%	81	2.48E-04
								Total		4,364	

250 Stockton Ave, San Jose, CA - Stockton Avenue Project Trips - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Residential MEI Receptor (9.1 meter receptor height)

Emission Year	2028
Receptor Information	Construction Residential MEI receptor
Number of Receptors	2
Receptor Height	9.1 meters
Receptor Distances	At Construction Residential MEI location

Meteorological Conditions

BAAQMD San Jose International Met D	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction Residential MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0002	0.0248	0.0326

Construction Residential MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0286	0.0275	0.0011

250 Stockton Ave, San Jose, CA - Stockton Avenue Project Trips Cancer Risk
Impacts at Construction Residential MEI - 9.1 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**TOTAL**
0	0.25	-0.25 - 0*	2024	10	0.0000	0.0000	0.0000	0.000	0.000	0.0000	0.00
1	1	0 - 1	2024	10	0.0000	0.0000	0.0000	0.000	0.000	0.0000	0.00
2	1	1 - 2	2025	10	0.0000	0.0000	0.0000	0.000	0.000	0.0000	0.00
3	1	2 - 3	2026	3	0.0000	0.0000	0.0000	0.000	0.000	0.0000	0.00
4	1	3 - 4	2027	3	0.0000	0.0000	0.0000	0.000	0.000	0.0000	0.00
5	1	4 - 5	2028	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
6	1	5 - 6	2029	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
7	1	6 - 7	2030	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
8	1	7 - 8	2031	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
9	1	8 - 9	2032	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
10	1	9 - 10	2033	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
11	1	10 - 11	2034	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
12	1	11 - 12	2035	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
13	1	12 - 13	2036	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
14	1	13 - 14	2037	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
15	1	14 - 15	2038	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
16	1	15 - 16	2039	3	0.0002	0.0248	0.0326	0.006	0.004	0.0003	0.01
17	1	16-17	2040	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
18	1	17-18	2041	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
19	1	18-19	2042	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
20	1	19-20	2043	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
21	1	20-21	2044	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
22	1	21-22	2045	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
23	1	22-23	2046	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
24	1	23-24	2047	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
25	1	24-25	2048	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
26	1	25-26	2049	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
27	1	26-27	2050	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
28	1	27-28	2051	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
29	1	28-29	2052	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
30	1	29-30	2053	1	0.0002	0.0248	0.0326	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.08	0.050	0.004	**0.14**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00005	0.03	0.03

* Third trimester of pregnancy

250 Stockton Ave, San Jose, CA

Standby Emergency Generator Impacts

Off-site Sensitive Receptors

MEI Locations = 9.1 meter receptor height

DPM Emission Rates		
	DPM Emissions per Generator	
	Max Daily	Annual
Source Type	(lb/day)	(lb/year)
95-kW, 127-hp diesel fired emergency generator	0.004	1.54
CalEEMod DPM Emissions	7.70E-04	tons/year

Modeling Information	
Model	AERMOD
Source	Diesel Generator Engine
Source Type	Point
Meteorological Data	2013 - 2017 San Jose International Airport
Point Source Stack Parameters	
Generator Engine Size (hp)	127
Stack Height (ft)	10.00
Stack Diameter (ft)**	0.60
Exhaust Gas Flowrate (CFM)*	2527.73
Stack Exit Velocity (ft/sec)**	149.00
Exhaust Temperature (˚F)**	872.00
Emissions Rate (lb/hr)	0.000176

* AERMOD default

**BAAQMD default generator parameters

250 Stockton Ave, San Jose, CA - Cancer Risks from Project Operation
Project Emergency Generators
Impacts at Off-Site Receptors- 9.1m MEI Receptor Heights
Impact at Project MEI (26-year Exposure)

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

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

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

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

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2024	0.0000	10	0.000				
1	1	0 - 1	2024	0.0000	10	0.000				
2	1	1 - 2	2025	0.0000	10	0.000				
3	1	2 - 3	2026	0.0000	3	0.000				
4	1	3 - 4	2027	0.0000	3	0.000				
5	1	4 - 5	2028	0.0050	3	0.129		0.00100	0.0000	0.0050
6	1	5 - 6	2029	0.0050	3	0.129		0.00100	0.0000	0.0050
7	1	6 - 7	2030	0.0050	3	0.129		0.00100	0.0000	0.0050
8	1	7 - 8	2031	0.0050	3	0.129		0.00100	0.0000	0.0050
9	1	8 - 9	2032	0.0050	3	0.129		0.00100	0.0000	0.0050
10	1	9 - 10	2033	0.0050	3	0.129		0.00100	0.0000	0.0050
11	1	10 - 11	2034	0.0050	3	0.129		0.00100	0.0000	0.0050
12	1	11 - 12	2035	0.0050	3	0.129		0.00100	0.0000	0.0050
13	1	12 - 13	2036	0.0050	3	0.129		0.00100	0.0000	0.0050
14	1	13 - 14	2037	0.0050	3	0.129		0.00100	0.0000	0.0050
15	1	14 - 15	2038	0.0050	3	0.129		0.00100	0.0000	0.0050
16	1	15 - 16	2039	0.0050	3	0.129		0.00100	0.0000	0.0050
17	1	16-17	2040	0.0050	1	0.014		0.00100	0.0000	0.0050
18	1	17-18	2041	0.0050	1	0.014		0.00100	0.0000	0.0050
19	1	18-19	2042	0.0050	1	0.014		0.00100	0.0000	0.0050
20	1	19-20	2043	0.0050	1	0.014		0.00100	0.0000	0.0050
21	1	20-21	2044	0.0050	1	0.014		0.00100	0.0000	0.0050
22	1	21-22	2045	0.0050	1	0.014		0.00100	0.0000	0.0050
23	1	22-23	2046	0.0050	1	0.014		0.00100	0.0000	0.0050
24	1	23-24	2047	0.0050	1	0.014		0.00100	0.0000	0.0050
25	1	24-25	2048	0.0050	1	0.014		0.00100	0.0000	0.0050
26	1	25-26	2049	0.0050	1	0.014		0.00100	0.0000	0.0050
27	1	26-27	2050	0.0050	1	0.014		0.00100	0.0000	0.0050
28	1	27-28	2051	0.0050	1	0.014		0.00100	0.0000	0.0050
29	1	28-29	2052	0.0050	1	0.014		0.00100	0.0000	0.0050
30	1	29-30	2053	0.0050	1	0.014		0.00100	0.0000	0.0050
Total Increased Cancer Risk						**1.75**	**Max**	**0.00100**	**0.0000**	**0.0050**

* Third trimester of pregnancy

Evaporative Cooling Tower PM Emissions

No. Cooling Tower Cells			3
Total Water Flow Rate (gpm)			5,400
Cooling Tower Circulating Water TDS (ppm)*			460
Mist Eliminator Efficiency (%)			0.005
Total Cooling Tower Drift (gpm)			0.27
Particulate Matter Emissions			
	PM	PM10	PM2.5
Fraction of PM**	1.0	0.7	0.42
Hourly (lb/hr)	0.06	0.04	0.03
Daily (lb/day)	1.5	1.0	0.6
Annual lb/yr)	544	381.1	228.7
Annual (ton/yr)	0.27	0.19	0.11

* Maximum TDS value provided by applicant.

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

250 Stockton Ave, San Jose, CA - Project Cooling Tower - PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations - Project Cooling Towers at Childcare MEI and MAX Residential Receptors (1 m and 1.5 m receptor heights)

Emission Year	2028
Receptor Information	Max residential receptors
Number of Receptors	2
Receptor Height	9.1 meters
Receptor Distances	At Max residential locations
Meteorological Conditions	
BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3) Max Residential
2013-2017	0.0217

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

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

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

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

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

Table A: Requester Contact Information

Date of Request	**4/6/2022**
Contact Name	Zachary Palm
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x117
Email	zpalm@illingworthrodkin.com
Project Name	250 Stockton Ave
Address	250 Stockton Ave
City	San Jose
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	General office
Project Size (# of units or building square feet)	908,587sf
Comments:	

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

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

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

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

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

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

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

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

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

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Construction MEIs

Distance from Receptor (feet) or MEI[1]	Plant No.	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
525	3100	Pacific Gas and Electric Company	308 Stockton Street	0.24	0.00	0.00		(1) Gasoline Dispensing Facility, (1) Nat. Gas Generator		2018 Dataset	0.10	0.02	0.000	0.00
1000	11819	Fleet Body Worx Inc	345 N Montgomery St		0.00			Auto Body Coating Operation		2018 Dataset	0.13	0.00	0.000	0.00
420	22305	Unison Energy, LLC	155 Stockton Avenue	0.75	0.00	0.29		Generators		2018 Dataset	0.16	0.12	0.000	0.05
1000+	200395	S & S Toy Shop	350B N MONTGOMERY ST		0.00			Auto Body Coating Operation		2018 Dataset	0.13	0.00	0.000	0.00

Project Site

Distance from Receptor (feet) or MEI[1]	FACID (Plant No.)	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
210	3100	0.41	0.10	0.000	0.000
690	11819	0.24	0.00	0.000	0.000
230	22305	0.31	0.23	0.000	0.089
810	200395	0.19	0.00	0.000	0.000

Footnotes:

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

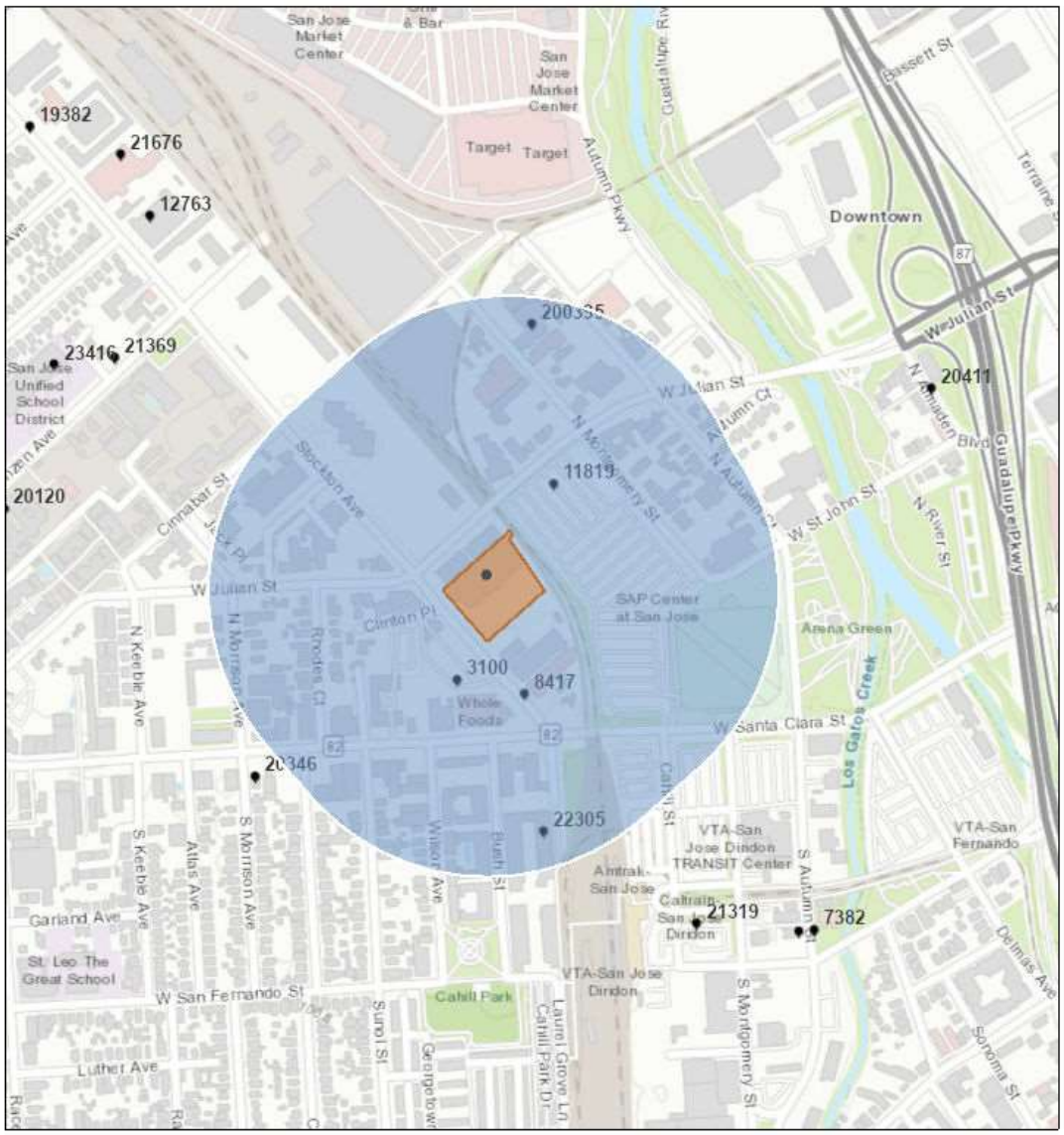
Date last updated:
03/13/2018

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 4,528,148.34 ft²

Apr 5 2022 14:36:16 Pacific Daylight Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Facilities 2018	5	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	3100	Pacific Gas and Electric Company	308 Stockton Street	San Jose	CA
2	8417	Century Collision & Repair	60 Stockton Ave	San Jose	CA
3	11819	Fleet Body Worx Inc	345 N Montgomery St	San Jose	CA
4	22305	Unison Energy, LLC	155 Stockton Avenue	San Jose	CA
5	200395	S & S Toy Shop	350B N MONTGOMERY ST	SAN JOSE	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	95126	Santa Clara	0.240	0.000	0.000	Contact BAAQMD	1
2	95126	Santa Clara	0.000	0.000	0.000	Contact BAAQMD	1
3	95110	Santa Clara	0.000	0.000	0.000	Contact BAAQMD	1
4	95126	Santa Clara	0.750	0.000	0.290	Generators	1
5	95110	Santa Clara	0.000	0.000	0.000	Contact BAAQMD	1

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

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