TERRAINE SITE MIXED-USE PROJECT AIR QUALITY ASSESSMENT

San José, California

November 10, 2023

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Introduction

This report addresses the potential air quality and health risk impacts associated with the proposed mixed-use development located at the southwest corner of Terraine Street and Bassett Street in San José, California. Air quality impacts would be associated with the construction of the new buildings and infrastructure and operation of the project. Air pollutant emissions were estimated using appropriate computer models. In addition, the potential health risks associated with construction and operation of the project and the impact of existing toxic air contaminant (TAC) sources affecting the nearby and proposed sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The 1.57-acre project site is vacant. The project proposes to construct two residential building towers on a shared podium with one subterranean level. Both towers would share the subterranean level and first level of the building, which would contain parking, mechanical rooms, four retail spaces, lobbies, and landscaped areas. The 356,015 square feet (sf) residential tower would contain amenities on the 2nd floor and residential units from the 2nd to the 18th level, with a total of 346 units. The second building on the podium will be constructed as a 11-story parking garage with 621 parking spaces, including 84 electric vehicle parking spaces. This building will feature a future plan for conversion into a 296,064-sf office building. No changes would occur to the residential structure or central connecting podium. Construction is expected to begin in May 2024 and will be completed by July 2026. The parking garage conversion is expected to begin in May 2034 and be completed by August 2035. The project is within the San José Downtown Strategy 2040 Plan area.

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 concentrations in the air basin 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 ozone concentrations. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ambient ozone concentrations. The highest ozone concentrations in the Bay Area occur in the eastern and southern inland valleys downwind of existing air pollutant sources. High ozone concentrations

[1] Bay Area Air Quality Management District, *2022 CEQA Guidelines*, April 2023.

aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant in the air basin. 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 concentrations aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

TACs are a broad class of compounds known to cause morbidity or mortality, often because they cause cancer. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure of TACs can result in adverse health effects, they 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 from diesel exhaust exposure a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. Health risks from TACs are estimated using the Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines, which were published in February of 2015 and incorporated into BAAQMD's CEQA guidance.[2]

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, people over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, infants and small 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

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

project site are the multi-family residences to the north, east, and southeast. This project would introduce new sensitive receptors (i.e., residents) to the area.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide ambient air quality standards (NAAQS) and 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.

In the past twenty years, the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter ($PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The current standards limit the amount of sulfur allowed in diesel fuel to 15 parts per million by weight (ppmw). Ultra-low sulfur diesel (ULSD), as it is referred to, is 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

The California Air Resources Board (CARB) has set statewide ambient air quality standards (CAAQS) and emission standards for on-road and off-road mobile sources that are more stringent than those adopted by the EPA. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a regulation to reduce emissions of DPM and NO_X from on-road heavy-duty diesel

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

fueled vehicles.[4] The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements have been phased in over the compliance period and depend on the model year of the vehicle.

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 DPM 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 the Federal off-road equipment engine emission limits for new vehicles, has significantly reduce emissions of DPM and NO_X.

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

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 NAAQS and CAAQS. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[6] The

[4] Available online: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed: November 21, 2014.
[5] California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.
[6] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program.

program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program has been 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 has been used to develop emission reduction activities 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. Seven areas have been identified by BAAQMD as impacted communities. They include Eastern San Francisco, Richmond/San Pablo, Western Alameda, San José, Vallejo, Concord, and Pittsburgh/Antioch. The project site is within the San José CARE 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 score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.[7] The BAAQMD has identified several overburdened areas within its boundaries. However, the project site is not within an overburdened area as the Project site is scored at the 51st percentile on CalEnviroScreen.[8]

BAAQMD CEQA Air Quality Guidelines

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. In 2023, the BAAQMD revised the *California Environmental Quality Act* (*CEQA) Air Quality Guidelines* that include significance thresholds to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The current BAAQMD 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 include assessment methodologies for criteria air pollutants, air toxics, odors, and GHG emissions, as shown in Table 1.[9] Air quality impacts and health risks are considered potentially significant if they exceed these thresholds. Note that the DTS Plan Draft Environmental Impact Report (DEIR) evaluated emissions of criteria air pollutants (and their precursors) from planned development that includes the Proposed Project. Operational emissions from the Proposed Project are predicted in this assessment for informational purposes only.

[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.
[8] OEHHA, CalEnviroScreen 4.0 Maps https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40
[9] Bay Area Air Quality Management District, 2023. *2022 CEQA Guidelines*. April.

Table 1. BAAQMD CEQA Significance Thresholds

<table>
<tr><th rowspan="2">Criteria Air Pollutant</th><th colspan="2">Construction Thresholds</th><th colspan="2">Operational Thresholds</th></tr>
<tr><th colspan="2">Average Daily Emissions (lbs./day)</th><th>Average Daily Emissions (lbs./day)</th><th>Annual Average Emissions (tons/year)</th></tr>
<tr><td>ROG</td><td colspan="2">54</td><td colspan="2" rowspan="5">Evaluated in DTS Strategy DEIR</td></tr>
<tr><td>NO_x</td><td colspan="2">54</td></tr>
<tr><td>PM_{10}</td><td colspan="2">82 (Exhaust)</td></tr>
<tr><td>$PM_{2.5}$</td><td colspan="2">54 (Exhaust)</td></tr>
<tr><td>CO</td><td colspan="2">Not Applicable</td></tr>
<tr><td>Fugitive Dust</td><td colspan="2">Construction Dust Ordinance or other Best Management Practices (BMPs)*</td><td colspan="2">Not Applicable</td></tr>
<tr><th>Health Risks and Hazards</th><th colspan="2">Single Sources/ Individual Project</th><th colspan="2">Combined Sources (Cumulative from all sources within 1000-foot zone of influence)</th></tr>
<tr><td>Excess Cancer Risk</td><td>>10 in a million</td><td rowspan="3">OR Compliance with Qualified Community Risk Reduction Plan</td><td>>100 in a million</td><td rowspan="3">OR Compliance with Qualified Community Risk Reduction Plan</td></tr>
<tr><td>Hazard Index</td><td>>1.0</td><td>>10.0</td></tr>
<tr><td>Incremental annual $PM_{2.5}$</td><td>>0.3 $\mu g/m^3$</td><td>>0.8 $\mu g/m^3$</td></tr>
<tr><td colspan="5">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.
* BAAQMD strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses.</td></tr>
</table>

Source: Bay Area Air Quality Management District, 2022

The BAAQMD recommends all projects include a "basic" set of best management practices (BMPs) to manage fugitive dust and consider impacts from dust (i.e., fugitive PM_{10} and $PM_{2.5}$) to be less than significant if BMPs are implemented. The project would be required to implement the following BMPs recommended by BAAQMD, which have been adopted by the City of San José as Standard Permit Conditions, during all phases of construction to reduce dust and other particulate matter emissions.

Basic Best Management Practices / Standard Permit Conditions: **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. The contractor shall implement the following BMPs 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. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

8. Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.

9. Publicly visible signs shall be posted with the telephone number and name of the 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 General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

BAAQMD strongly encourages enhanced BMPs for construction sites near schools, residential areas, or other sensitive land uses. Enhanced measures include:

- Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
- Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Minimize the amount of excavated material or waste materials stored at the site.
- Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.

BAAQMD Rules and Regulations

Combustion equipment associated with the proposed project that includes new diesel engines to power generators 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 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 6-3: Wood-Burning Devices
- Regulation 9 – Inorganic Gaseous Pollutants
  - 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 requires that offsets be provided for a new or modified source that emits more than 10 tons per year of NOx or precursor organic compounds.

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:

> <u>I.C. Engine – Compression Ignition >50hp and <1.000hp</u>: 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.
>
> <u>I.C. Engine – Compression Ignition <999hp</u>: 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.

<u>San José Envision 2040 General Plan</u>

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 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.

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

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

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

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

Applicable Goals – Toxic Air Contaminants

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

Applicable Policies – Toxic Air Contaminants

MS-11.1 Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution such as freeways and industrial uses. Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.

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

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

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

Actions – Toxic Air Contaminants

MS-11.6 Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of TACs and $PM_{2.5}$, emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. The Community Risk Reduction Plan will include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, progress reporting to the public and responsible agencies, and periodic updates of the plan, as appropriate.

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

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

Applicable Goals – Construction Air Emissions
Goal MS-13 Minimize air pollutant emissions during demolition and construction activities.

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

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

MS-13.5 Prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.

MS-13.6 Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement of construction.

Downtown Strategy 2040 Plan

The San José Downtown Strategy (DTS) 2040 Plan[10] 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

[10] City of San José, *Downtown Strategy 2040 FILE NO. PP15-102* , Web: https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/active-eirs/downtown-strategy-2040#:~:text=The%20proposed%20Downtown%20Strategy%202040,Plan%204%2DYear%20Review%20recommendations.

hotel room (3,600 rooms) capacities of the DTS 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.

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 DTS 2040 and General Plan policies. All feasible and applicable measures will be required as part of project design or as conditions of approval.

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the NAAQS and the CAAQS. The area is also considered non-attainment for PM_{10} under the CAAQS, but not the NAAQS. The area has attained both State and Federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O_3, $PM_{2.5}$ and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. The O_3 precursor pollutant thresholds are for ROG and NOx, while PM_{10}, and $PM_{2.5}$ have specific thresholds. The thresholds apply to both construction period emissions and operational period emissions.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2022 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CalEEMod model output along with construction inputs are included in *Attachment 1*.

<u>CalEEMod Inputs</u>

Land Use Inputs

The proposed project land uses for the construction of the residential and parking building were entered into CalEEMod as described in Table 2a. Project plans to convert the parking structure into an office building in the future was modeled separately with CalEEMod, as described in Table 2b.

Table 2a. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
Apartments High Rise	346	Dwelling Unit	356,015	1.57
Strip Mall	13.445	1,000-sf	13,445	
Unenclosed Parking with Elevator	621	Parking Spaces	265,607	

Table 2b. Summary of Building Conversion Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
General Office Building	265.607	1,000-sf	296,064	0.65

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenarios, including the equipment quantities, average hours per day, total number of workdays, were provided by the project applicant (included in *Attachment 1*). The construction schedules assumed that the earliest possible start date for the proposed project would be May 2024 and the project would be built out over a period of approximately 26 months or 696 construction workdays. The earliest year of operation was assumed to be 2027. The earliest possible start date for the proposed office conversion would be May 2034 and the project would be built over a period of approximately 15 months or 394 construction workdays. The earliest year of operation was assumed to be 2036.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the soil imported and/or exported to the site and the estimate of concrete and asphalt truck trips to and from the site. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for grading were estimated by CalEEMod using the provided soil import/export volumes. The number of concrete/asphalt round haul trips were estimated for the project and converted to daily one-way trips, assuming two trips per delivery.

Summary of Computed Construction 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 3a and 3b shows the unmitigated annualized average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project and the office conversion. As indicated in Table 3a and 3b, predicted unmitigated annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 3a. Construction Period Emissions – Unmitigated

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2024	0.22	1.94	0.04	0.03
2025	1.97	2.98	0.03	0.03
2026	0.99	0.74	0.02	0.02
Average Daily Construction Emissions Per Year (pounds/day)				
2024 (210 construction workdays)	2.14	18.47	0.37	0.32
2025 (313 construction workdays)	12.62	19.03	0.22	0.20
2026 (173 construction workdays)	11.50	8.52	0.20	0.19
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Table 3b. Office Conversion Construction Period Emissions – Unmitigated

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2034	0.25	1.58	0.02	0.01
2035	1.49	0.82	0.01	0.01
Average Daily Construction Emissions Per Year (pounds/day)				
2034 (211 construction workdays)	2.39	14.99	0.15	0.13
2035 (183 construction workdays)	16.24	9.01	0.08	0.07
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 include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site deposit mud on local streets, which is an additional source of airborne dust after it dries. The BAAQMD recommends all projects include a "basic" set of best management practices (BMPs) to manage fugitive dust and considers impacts from dust (i.e., fugitive PM_{10} and $PM_{2.5}$) to be less-than-significant if BMPs are implemented. The DTS and San José General Policy MS-10.1 specifies that projects assess projected air emissions from new developments in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards. Construction projects must identify and implement all of these feasible air emission reduction measures. Therefore, the project would be required to implement the following BAAQMD BMPs, which have been adopted by the City as Standard Permit Conditions (per General Plan policies MS 10.1, MS 13.1, and MS 13.4), during all phases of construction.

Standard Permit Conditions / Basic BMPs: **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 listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the basic BMPs that are required of all projects, as listed above.

Effectiveness of Standard Permit Conditions / Basic BMPs

The measures above are consistent with BAAQMD-recommended basic BMPs for reducing fugitive dust contained in the BAAQMD CEQA Air Quality Guidelines. For this analysis, only the basic set of BMPs are required as the unmitigated fugitive dust emissions from construction are below the BAAQMD single-source threshold.

Operational Period Emissions

The impact of operational emissions was addressed in the DTS DEIR and found to be significant and unavoidable for the entire plan. Emissions from the project were computed for informational purposes. ROG, PM, and NO_X emissions from the project would be generated primarily from autos driven by future residents and employees and the diesel-powered emergency generator. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are also typical ROG emission sources from these types of land uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

<u>CalEEMod Inputs</u>

Land Uses

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

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest year of full operation would be 2027 if construction begins in 2024. The earliest year of full operation for the office conversion would be 2036 if construction begins in 2034. Emissions associated with build-out later than 2027 and 2036 would be lower.

Traffic Information

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rates provided by the traffic consultant were entered into the model.[11] The project would produce approximately 2,212 daily trips. When accounting for the *Residential & Retail Reduction, Location-Based Reduction and VMT-Based Reduction,* the project would produce 1,659 net daily trips. The future office conversion project would produce approximately 2,821 daily trips. When accounting for the *Residential & Employment Reduction, Employment & Retail Reduction, Location-Based Reduction and VMT-Based Reduction,* the project would produce 2,441 net daily trips. This would bring the total project trip generation to 3,988 daily trips after including additional reductions. The daily trip generation was calculated using ITE trip generation rates, the size of the project land uses, and the adjusted total automobile trips after reductions. The Saturday and Sunday trip rates were derived 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.

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

[11] Email Correspondence from Patrick Kallas, Project Manager, David J. Powers & Associates, Inc., October 13, 2023, *Terraine- Draft Trip Generation 10-3-23.*

consumption. The electricity produced emission rate was modified in CalEEMod. An emission factor of 178 pounds of CO_2 per megawatt of electricity produced was entered into CalEEMod, which is based on San José Clean Energy's (SJCE) 2020 emissions rate.[12] It should be noted that per Climate Smart San José and San José's Greenhouse Gas Reduction Strategy, SJCE's goal is to provide 100-percent carbon-free electricity prior to 2030.[13]

CalEEMod includes the 2019 Title 24 Building Standards. However, the City of San José passed an ordinance in December 2020 that prohibits the use of natural gas infrastructure in new residential, office, and most retail-type buildings.[14] This ordinance applies to any new construction starting August 1, 2021. Natural gas use for the land uses was set to zero and reassigned to electricity use in CalEEMod.

Project Generator

The project would include one diesel-fired emergency generator located in the basement on the northwestern corner of the residential building. The generator would be 1,000 kilowatts (kW) powered by a 1,350 horsepower (hp) diesel-fired 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 for testing and maintenance purposes as well as non-testing purposes per BAAQMD's newest Guidelines. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year for testing and maintenance, and new BAAQMD Guidelines recommend including 100 hours each year for non-testing and non-maintenance operations. 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. These include emission limits similar to U.S. EPA Tier 4 standards for the engines larger than 1,000-hp. The emissions from the operation of the generator were calculated using CalEEMod.

Other Inputs

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

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[12] San José Clean Energy Website, Standard GreenSource service. Web: https://sanjosecleanenergy.org/commercial-rates/

[13] City of San José, 2020. "2030 Greenhouse Gas Reduction Strategy", August. Web: https://www.sanjoseca.gov/home/showpublisheddocument/63667/637347412207870000

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

Summary of Computed Operational Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimated assuming 365 days of operation. Table 4 shows unmitigated annual and average daily operational emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project during its initial design in 2027, and after the garage is converted to office space in 2036. Operational period emissions would not exceed the BAAQMD significance thresholds.

Table 4. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2027 Annual Project Operational Emissions (*tons/year*)	3.00	1.34	1.32	0.36
2036 Annual Project Operational Emissions (*tons/year*)	5.23	1.85	3.17	0.83
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2027 Daily Project Operational Emissions (*pounds/day*)[1]	16.44	7.32	7.21	1.97
2036 Daily Project Operational Emissions (*pounds/day*)[1]	28.64	10.14	17.34	4.57
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*
Notes: [1]Assumes 365-day operation.				

Summary of Operational and Construction Emissions

There would be a period where the first phase of the Project is operational and construction to convert the parking structure to office uses would occur. The combination of operational and construction emissions are shown simply as the sum of emissions for 2027 annual operation from Table 4 and the highest office conversion construction emissions from Table 3b. Table 5 shows the annual and average daily emissions during this period. Operational and operation period emissions would not exceed the BAAQMD significance thresholds.

Table 5. Maximum Year Operational and Construction Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2034 or 2035 Annual Emissions (*tons/year*)	4.49	2.92	1.34	0.38
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2034 or 2035 Daily Average Emissions (*pounds/day*)[1]	32.68	22.31	7.36	2.10
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*
Notes: [1]Assumes 365-day operation and 183 to 211 days of construction.				

Impact AIR-2: Expose sensitive receptors to substantial pollutant concentrations?

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

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would include the installation of an emergency generator powered by diesel engine and would generate some traffic consisting of mostly light-duty gasoline-powered vehicles.

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 existing sources of TACs was assessed in terms of the cumulative risk which includes the project contribution, as well as the risk on the new sensitive receptors introduced by the project.

Health Risk Methodology for Construction and Operation

Health risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations, and by 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, emergency generator operation, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period was used, per BAAQMD guidance,[15] with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

The project increased cancer risk is computed by summing the project construction cancer risk and operation cancer risk contributions. 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 health risks impacts is contained in Appendix E of the BAAQMD CEQA Guidelines. TAC and $PM_{2.5}$ emissions are calculated, a dispersion model used to estimate ambient pollutant concentrations, and cancer risks and HI calculated using DPM concentrations.

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 existing residences surrounding portions the site, as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions. While there are additional sensitive receptors within 1,000 feet of the project site, the receptors chosen are adequate to identify maximum impacts from the project.

Health Risk from Project Construction

[15] BAAQMD, Appendix E of the 2022 *BAAQMD CEQA Guidelines*, April 2023.

The primary health risk impact issues associated with construction projects are cancer risks associated with diesel exhaust (i.e., DPM), which is a known TAC, and exposure to high ambient concentrations of dust (i.e., $PM_{2.5}$) DPM poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[16] This assessment included dispersion modeling to predict the offsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be estimated.

Construction Emissions

The CalEEMod model provided total uncontrolled annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles. Total DPM emissions were estimated to be 0.07 tons (141 pounds) and fugitive dust emissions ($PM_{2.5}$) to be 0.03 tons (56 pounds) from all construction stages during the initial project construction period in 2024 through 2026. Total DPM emissions were estimated to be 0.02 tons (43 pounds) and fugitive dust emissions ($PM_{2.5}$) to be <0.01 tons (7 pounds) from all construction stages during the garage to office conversion in 2034 through 2035. The on-road emissions are a result of haul truck travel during grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that the emissions from on-road vehicles traveling at or near the site would occur at the construction site.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (i.e., residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[17] 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 an array of point sources to reflect construction equipment and trucks operating at the site. These sources included nine-foot release heights (construction equipment exhaust stack height) that were placed at 23 feet (7 meter) intervals throughout the construction site. This resulted in 149 individual point sources being used to represent mobile equipment DPM exhaust emissions in the construction area for years 2024 through 2026. There were 52 individual point sources used for the garage to office conversion construction in 2034 through 2035. The total DPM emissions were divided into each

[16] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.
[17] BAAQMD, Appendix E of the 2022 *BAAQMD CEQA Guidelines*, April 2023.

of the point sources that were spread 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. Point source 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 array of point sources used for the modeling are shown in Figure 1.

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

AERMOD Inputs and Meteorological Data

The modeling used a five-year 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 Monday through Saturday between 7:00 a.m. to 7:00 p.m. for construction during the years 2024 through 2026, and 7:00 a.m. to 5:00 p.m. for the garage to office conversion in 2034 and 2035, according to the construction schedules provided by the project applicant. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2024-2026 and 2034-2035 period were calculated at nearby sensitive receptors using the model. 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 height on the first through fourth floors of nearby multi-family residences.[18]

Summary of Construction Health Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with BAAQMD CEQA guidance for age sensitivity factors and exposure parameters. 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.

Non-cancer health hazards and maximum $PM_{2.5}$ concentrations were also calculated. The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and

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

fugitive concentrations. The maximum computed HI value was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation DPM reference exposure level of 5 µg/m^3.

The modeled maximum annual DPM and $PM_{2.5}$ concentrations were identified at nearby sensitive receptors to find the MEIs. Results of this assessment indicated that the construction MEIs were located at the same location on two different levels. The MEIs were located at receptors in a multi-family building southeast of the project site, with the cancer risk MEI located on the third floor (25 feet above ground) and the $PM_{2.5}$ concentration MEI located on the first floor (5 feet above ground). The location of the MEIs and nearby sensitive receptors are shown in Figure 1. Table 6 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and HI for project related construction activities. *Attachment 3* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Figure 1. Locations of Project Construction Site, Point Sources, Project Generator, Off-Site Sensitive Receptors, and Maximum TAC Impact Location (MEI)

Health Risks from Project Operation

Operation of the project would have long-term emissions from mobile sources (i.e., traffic) and stationary sources (i.e., diesel generators). 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

Diesel powered vehicles are the primary concern with local traffic-generated TAC impacts. This project would initially generate 2,212 daily trips or 1,659 net daily trips.[19] The future office conversion would generate an additional 2,821 daily trips or 2,441 net daily trips. The final project would generate 3,988 net daily trips after including additional reductions. The majority of the trips would be from light-duty gasoline-powered vehicles (i.e., passenger cars). The project is not anticipated to generate large amounts of truck trips that would involve diesel vehicles. Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicle per day is considered a low-impact source of TACs and do not need to be considered in the CEQA analysis.[20] In addition, projects with the potential to cause or contribute to increased cancer risk from traffic include those that have high numbers of diesel-powered on road trucks or use off-road diesel equipment on site, such as a distribution center, a quarry, or a manufacturing facility, may potentially expose existing or future planned receptors to substantial cancer risk levels and/or health hazards. This is not a project of concern for mobile sources. Emissions from project traffic are considered negligible and not included within this analysis.

Project Stand-By Diesel Generators

The project would include one emergency generator. The generator would be 1,000 kilowatts (kW) powered by 1,350 horsepower (hp) diesel-fired engine. The generator would be located on the basement floor in the northwest corner of the residential building. The location of the modeled generator is shown in Figure 2.

Operation of the diesel generator would be a source of TAC emissions. The generator would be tested periodically and power the system in the event of a power failure. For modeling purposes, it was assumed that the generator would be operated for testing and maintenance purposes as well as non-testing purposes per BAAQMD's newest Guidelines. 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. These include emission limits similar to U.S. EPA Tier 4 standards for the engines larger than 1,000-hp. The emissions from the operation of the generator were calculated 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 it will be equipped with an engine larger than 50-HP. BACT requirements would apply to the generator that would limit

[19] Email Correspondence from Patrick Kallas, Project Manager, David J. Powers & Associates, Inc., October 13, 2023, *Terraine- Draft Trip Generation 10-3-23.*

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

DPM emissions. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions will have to meet Best Available Control Technology for Toxics (BACT) 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 health risk impact.

Dispersion Modeling

To estimate potential increased cancer risks and $PM_{2.5}$ impacts from operation of the emergency generator at the project MEI, the same AERMOD dispersion model was used to compute the maximum annual DPM concentration at off-site sensitive receptor locations (i.e., nearby residences). Emissions of DPM were based on PM_{10} exhaust emissions predicted by CalEEMod for operation of the project generator. The same receptors, breathing heights, and meteorological data used in the construction dispersion modeling were used for the generator model. Stack parameters (i.e., exhaust gas flowrate, stack diameter, stack height, and exhaust gas temperature) for modeling the generator were based on BAAQMD default parameters for stand-by diesel generators[21] or provided generator information from the applicant. Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator testing could occur at any time of the day (24 hours per day, 365 days per year).

Computed Risks and Hazards from Project Stationary Sources

Increased cancer risks from use of the generator were calculated using the modeled maximum annual DPM concentrations and BAAQMD recommended risk assessment methods and parameters. The $PM_{2.5}$ concentration and non-cancerous (i.e., Hazard Index) health risk impacts were also calculated. To calculate the increased cancer risk from the generator at the MEIs, the cancer risks were adjusted for exposure duration to account for the MEIs being exposed to construction for the first 3 years of the 30-year period. The operational exposure duration would occur over 27 years, following the 3 years of exposure to construction emissions. Table 6 lists the community risks from the emergency diesel generator at the location of MEIs. The emissions and health risk calculations for the proposed generators are included in *Attachment 3*.

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

For this project, the sensitive receptors identified in Figure 1 as the construction MEIs are also the project MEIs. At these locations, the MEIs would be exposed to emissions from 3 years of construction and 27 years of operation. The annual $PM_{2.5}$ concentration and HI values are based on an annual maximum risk for the entirety of the project. As shown in Table 5, the unmitigated maximum cancer risks from construction activities at the MEI locations would exceed the

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[21] Bay Area Air Quality Management District, San Francisco Department of Public Health, and San Francisco Planning Department, 2012. *The San Francisco Community Risk Reduction Plan: Technical Support Document,* BAAQMD, December. Web: https://www.gsweventcenter.com/Appeal_Response_References/2012_1201_BAAQMD.pdf

BAAQMD single-source significance threshold. However, with the incorporation of the basic BMPs and *Mitigation Measure AQ-1*, the mitigated risk and hazard values would reduce emissions such that cancer risk caused by construction would no longer exceed the BAAQMD single-source significance thresholds. The unmitigated annual $PM_{2.5}$ concentration and HI at the MEIs do not exceed its respective BAAQMD single-source significance thresholds.

Table 6. Maximum Construction and Operation Risk Impacts at the Off-Site Receptors

Source		Cancer Risk[1] (per million)	Annual $PM_{2.5}$[1] ($\mu g/m^3$)	Hazard Index
Project Construction (Years 0 – 3 & 10 – 12)	Unmitigated Mitigated[2]	**22.05 (infant)** 6.62 (infant)	0.14 0.11	0.01 <0.01
Project Emergency Generator (Years 3 – 30)		1.72	0.01	<0.01
Total/Maximum Project Impact (Years 0-30)	Unmitigated Mitigated[2]	**23.77 (infant)** 8.34 (infant)	0.14 0.11	0.01 <0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated Mitigated[2]	***Yes*** *No*	*No* *No*	*No* *No*

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

Mitigation Measure AQ-1: Use construction equipment that has low diesel particulate matter exhaust emissions.

Implement a feasible plan to reduce DPM emissions by 65 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 Final emission standards for PM (PM_{10} and $PM_{2.5}$), if feasible, otherwise,

    a. If use of Tier 4 Final equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 65 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).

    b. Install electric power lines during early construction phases in order to electrify generators, concrete/industrial saws, and pressure washers during the initial construction period from 2024 through 2026.

2. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in

construction diesel particulate matter emissions by 65 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 Final engines or alternatively fueled equipment,
- Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors,
- Use of electrically-powered equipment,
- Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
- Change in construction build-out plans to lengthen phases, and
- Implementation of different building techniques that result in less diesel equipment usage.

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

Effectiveness of Mitigation Measure AQ-1

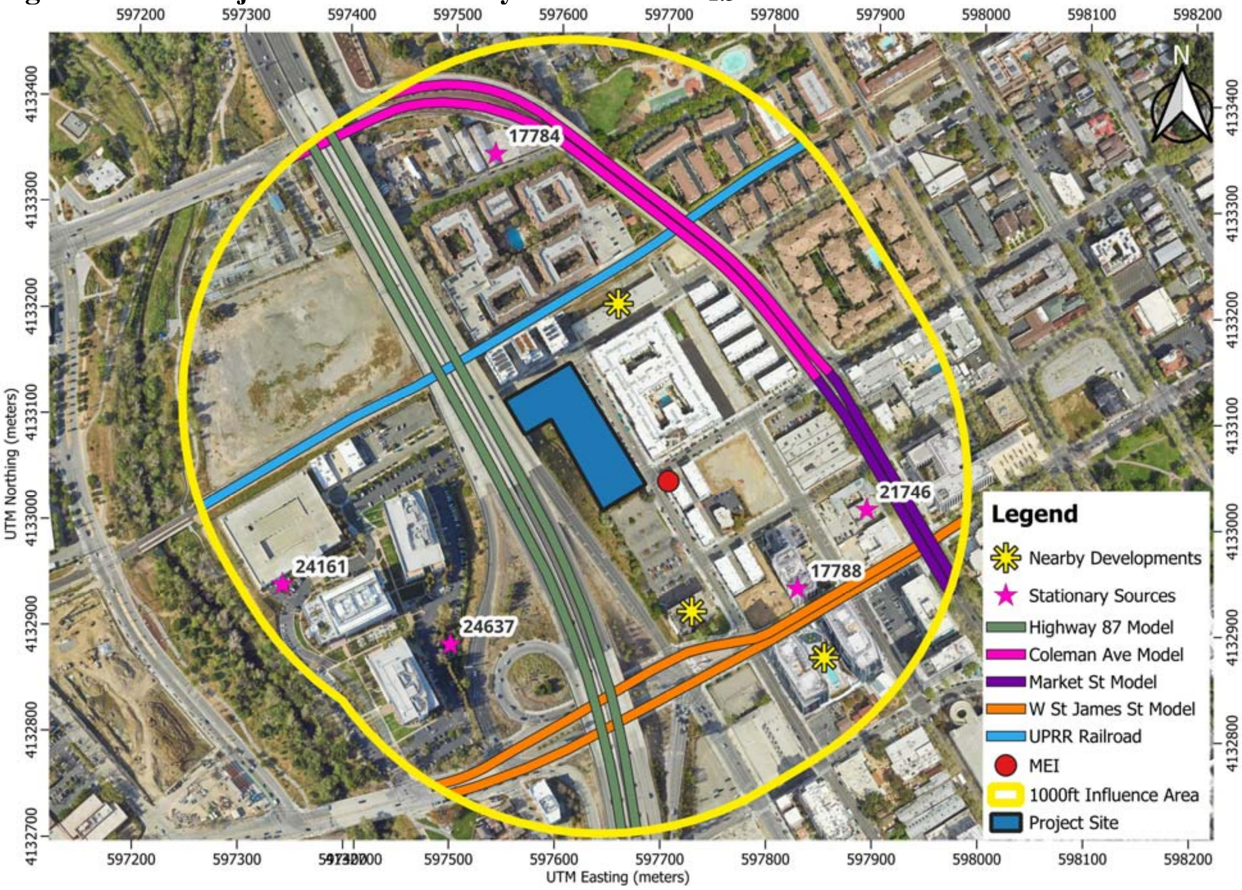
CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment used during the initial construction period from 2024 through 2026 met U.S. EPA Tier 4 Final engine standards with electrified generator sets (line power), concrete/industrial saws, and pressure washers. For the garage to office conversion in 2034 and 2035, all equipment used met U.S. EPA Tier 4 Final engine standards. With this implemented, the project's construction cancer risk levels (assuming infant exposure) would be reduced by 70 percent to 6.62 per million. As a result, the project's construction risks and hazards would be reduced below the BAAQMD single-source thresholds.

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

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

A review of the project area using traffic data collected by Santa Clara County indicates traffic on State Route 87, West Saint James Street, and Market Street/Coleman Avenue exceeds 10,000 vehicles per day. Other nearby streets would have less than 10,000 vehicles per day and are considered negligible sources of TACs. A review of BAAQMD's geographic information systems (GIS) screening maps identified the existing health risks at the MEI. There are six existing stationary sources of TACs with the potential to affect the project MEIs. The Union Pacific Railroad (UPRR) line is also located within 1,000 feet of the project site, so the screening-level impacts from rail lines were evaluated. Health risk impacts from these sources upon the MEIs are reported in Table 7. Figure 2 shows the location of the sources affecting the MEIs. Details of the modeling and health risk calculations are included in *Attachment 3.*

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



Highways – State Route 87

The project MEIs are located near State Route 87 (S.R. 87). A refined analysis of the impacts of TACs and $PM_{2.5}$ to the MEI receptor is necessary to evaluate potential cancer risks and $PM_{2.5}$ concentrations from S.R. 87. A review of the traffic information reported by Caltrans indicates that S.R. 87 traffic includes 96,000 vehicles per day (based on an annual average)[22] that are about 3.70 percent trucks, of which 1.0 percent are considered diesel heavy duty trucks and 2.7 percent are medium duty trucks.[23]

Local Roadways – West Saint James Street and Market Street/Coleman Avenue

A refined analysis of potential health impacts from vehicle traffic on West Saint James Street and Market Street/Coleman Avenue was conducted since those roadways were 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.

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[22] Caltrans. 2021. *2021 Traffic Volumes California State Highways.*
[23] Caltrans. 2021. *2021 Annual Average Daily Truck Traffic on the California State Highway System.*

Traffic Emissions Modeling

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on S.R. 87, West Saint James Street, and Market Street/Coleman Avenue using the Caltrans version of the CARB EMFAC2021 emissions model, known as CT-EMFAC2021. CT-EMFAC2021 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear from re-entrained roadway dust were included in these emissions. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2021 emissions data. Inputs to the model include region (Santa Clara County), type of road (freeway and major/collector), traffic mix assigned by CT-EMFAC2021 for the county, adjusted for the local truck mix on S.R. 87 and truck percentage for non-state highways in Santa Clara County (3.51 percent)[24] for the local roadways, year of analysis (2024 – construction start year), and season (annual).

To estimate TAC and $PM_{2.5}$ emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the MEI, the CT-EMFAC2021 model was used to develop vehicle emission factors for the year 2024 (construction start year). Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CT-EMFAC2021. Year 2024 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions, will decrease in the future.

The ADT volumes and truck percentages were based on Caltrans data for S.R. 87. Traffic volumes were assumed to increase 1 percent per year for a total of 98,880 vehicles. Hourly traffic distributions specific to these segments of S.R. 87 were obtained from Caltrans Performance Measurement System (PeMS). PeMS data is collected in real-time from nearly 40,000 individual detectors spanning the freeway system across all major metropolitan areas of California.[25] The fraction of traffic volume each hour was calculated and applied to the 2024 average daily traffic volumes estimate to estimate hourly traffic emission rates for S.R. 87.

Based on traffic data from the Caltrans PeMS, traffic speeds during the daytime and nighttime periods were identified. For northbound traffic on S.R. 87, the following was assumed for all vehicles:

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[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] https://dot.ca.gov/programs/traffic-operations/mpr/pems-source

- 70 mph – From 12:00 p.m. until 5:00 a.m.
- 65 mph – From 5:00 a.m. until 12:00 p.m.

For southbound traffic on S.R. 87, the following was assumed for all vehicles:

- 65 mph – From 7:00 p.m. until 1:00 p.m.
- 60 mph – From 1:00 p.m. until 7:00 p.m.

The ADT for each local roadway was calculated based on traffic data provided by the City of San Jose's traffic volumes website.[26] Assuming a 1 percent per year increase, the predicted ADT on West Saint James Street and Market Street/Coleman Avenue was 23,311 and 20,654 vehicles, respectively. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[27] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for each roadway. An average travel speed of 25 mph for traffic on West Saint James Street and Market Street, and 40 mph when Market Street turns into Coleman Avenue after crossing Julian Street was used for all hours of the day based on posted speed limit signs on each roadway.

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for future traffic on Highway 87 and each local roadway and using these emissions with an air quality dispersion model to calculate TAC and $PM_{2.5}$ concentrations at the project MEI receptor locations. Maximum increased lifetime cancer risks and annual $PM_{2.5}$ concentrations for the receptors were then computed using modeled TAC and $PM_{2.5}$ concentrations and BAAQMD methods and exposure parameters .

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.[28] TAC and $PM_{2.5}$ emissions from traffic on S.R. 87, West Saint James Street, and Market Street/Coleman Avenue within 1,000 feet of the project site were evaluated. Vehicle traffic on the roadways was modeled using a series of area sources along a line (line area sources); with line segments used for travel on the roadways in opposing directions. The same meteorological data and off-site sensitive receptors used in the previous construction site dispersion modeling scenario 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 using 2024 emissions from traffic on each roadway were calculated using the model. Concentrations were calculated at the construction MEIs with receptor heights of 5 feet (1.5 meters) and 25 feet (7.6 meters) to represent the breathing heights on the first and third floors of residents in the multi-family residence.

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[26] Web: https://csj.maps.arcgis.com/apps/webappviewer/index.html?id=067fbd3db8dd44f8a60f48148331b3d7
[27] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2021 does not include Burden type output with hour by hour traffic volume information.
[28] BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012

Computed Cancer and Non-Cancer Health Impacts

The cancer risk, $PM_{2.5}$ concentration, and HI impacts from each roadway on the off-site MEIs are shown in Table 7. Figure 2 shows the roadway links modeled and receptor locations where concentrations were calculated. Details of the emission calculations, dispersion modeling, and cancer risk calculations for the receptors with the maximum cancer risk from traffic on each roadway are provided in *Attachment 3.*

<u>BAAQMD Permitted Stationary Sources</u>

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2021* GIS map website.[29] This mapping tool identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for OEHHA guidance. Six sources were identified using this tool, five diesel generators and one generic source. However, one source (#20402) was misplaced in BAAQMD's database since it is located well outside of the 1,000-foot influence area. The BAAQMD GIS website provided screening risks and hazards for the remaining sources. Therefore, a stationary source information request was not required to be submitted to BAAQMD.

The screening risk and hazard levels provided by BAAQMD for the stationary sources were adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines and Generic Sources.* Health risk impacts from the stationary source upon the MEIs are reported in Table 7.

<u>UPRR Line</u>

The project MEIs are located near the UPRR line. Railway health risk screening data provided by BAAQMD was incorporated into this analysis. BAAQMD raster files provide screening-level cancer risk, $PM_{2.5}$ concentrations, and HI for railways within the Bay Area and were produced using AERMOD and 20x20-meter emissions grid.

Screening-level cancer risk, $PM_{2.5}$ concentration, and HI at the project MEI was identified using GIS software and are listed in Table 7 and included in *Attachment 3*. Refined modeling of the railway would have resulted in even lower risk values. Note that BAAQMD's screening values are considered higher than values that would be obtained with refined modeling methods.

[29] BAAQMD, Web:
https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3

Construction Risk Impacts from Nearby Developments

From the City's website,[30] three planned or approved projects[31] are located within 1,000 feet of the proposed project. The developments under construction include the Silvery Towers at 188 W. St. James Street (File Number H13-041, HA13-041-03). The developments that have been approved include the Aviato at 119 Bassett St. (File Number SP17-023, SPA17-023) and the Arbor Office at 255 West Julian St. (File Number SP21-037. The Silvery Towers project is currently under construction and is expected to be completed by the time Terraine begins construction, so it was not included in the cumulative projects. The mitigated construction risks and hazard impact values for Arbor Office development was available from the technical report conducted by *Illingworth & Rodin, Inc*.[32] Mitigated construction risks were assumed to be just below the BAAQMD single-source significance thresholds for the Aviato project since the technical documents were not available at the time of this analysis. 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 MEIs. The mitigated construction risks reported in that air quality assessment were included in the cumulative risks Table 7.

Summary of Cumulative Risks at the Project MEIs

Table 7 reports both the project and cumulative health risk impacts at the sensitive receptors most affected by project construction (i.e., the MEIs). The project's unmitigated construction maximum cancer risk exceeds the BAAQMD single-source threshold. With the implementation of *Mitigation Measure AQ-1*, the project's cancer risk would be lowered to a level below the single-source threshold. None of the BAAQMD cumulative-source thresholds are exceeded by the project.

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[30] City of San Jose, Private / Key Economic Development Projects Map, Web: https://gis.sanjoseca.gov/maps/devprojects/

[31] Developments under planning review are not included within the cumulative analysis since it is speculative to include construction emissions from projects that may or may not be approved.

[32] Illingworth & Rodkin, Inc., *Arbor Offices 255 W. Julian Street Air Quality Assessment,* April 21, 2021.

Table 6. Cumulative Health Risk Impacts at the Project MEIs

Source	Cancer Risk[1] (per million)	Annual $PM_{2.5}$[1] ($\mu g/m^3$)	Hazard Index
Project Impacts			
Total/Maximum Project Impact (Years 0-30) Unmitigated Mitigated	**23.77 (infant)** 8.34 (infant)	0.14 0.11	0.01 <0.01
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold? Unmitigated Mitigated	***Yes*** *No*	*No* *No*	*No* *No*
Cumulative Impacts			
Highway 87, ADT 98,880	3.91	0.12	<0.01
West Saint James Street, ADT 23,311	0.66	0.03	<0.01
Market Street/Coleman Avenue, ADT 20,654	0.23	0.01	<0.01
UPRR Railway, BAAQMD Raster	9.39	0.01	<0.01
Tuc's Auto Body & Paint (Facility ID #17784, Automotive Body, Paint, and Interior Repair and Maintenance), MEI at 1000+ feet	-	-	-
City Heights At Pellier Park (Facility # 17788, Generator), MEI at 415 feet	0.84	<0.01	<0.01
San José Fire Dept FS #1 (Facility #21746, Generator), MEI at 535 feet	0.01	-	-
The Sobrato Organization (Facility #24161, Generator), MEI at 1000+ feet	0.03	<0.01	<0.01
The Sobrato Organization (Facility #24637, Generator), MEI at 830 feet	0.07	<0.01	<0.01
Temporary Nearby Development Risks			
Aviato Mitigated Construction Risks	<10.00	<0.30	<1.00
Arbor Office Mitigated Construction Risks	7.63	0.15	<0.01
Combined Sources Unmitigated Mitigated	56.54 41.11	<0.79 <0.76	<1.09 <1.09
BAAQMD Cumulative Source Threshold	***100***	***0.8***	***10.0***
Exceed Threshold? Unmitigated Mitigated	*No* *No*	*No* *No*	*No* *No*

Notes: [1] Maximum cancer risk and $PM_{2.5}$ concentration occur at the same receptor location on different levels.

Non-CEQA: On-site Health Risk Assessment of TAC Sources - New Sensitive Receptors

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

A health risk assessment was completed to assess the impact that the existing TAC sources would have on the new proposed sensitive receptors (residents) introduced by the project. The same TAC sources identified above were used in this assessment.[33] Figure 3 shows the on-site sensitive receptors in relation to the nearby TAC sources. Results are listed in Table 7. *Attachment 3* includes the dispersion modeling and risk calculations for TAC source impacts upon the proposed on-site sensitive receptors.

Health Risk from Project Construction

The project construction analysis for the new project residents was conducted in the same manner as described above for the off-site MEIs. However, only the parking to office conversion portion of the project construction would impact the on-site residents. Further, since Tier 4 Final equipment is required under *Mitigation Measure AQ-1* to mitigate construction risk impacts at the off-site MEIs, only mitigated emissions were analyzed at the on-site receptors. As a result, total DPM emissions were estimated to be 0.01 tons (20 pounds) and fugitive dust emissions ($PM_{2.5}$) to be <0.01 tons (7 pounds) from those construction stages.

Local Highways – State Route 87

The highway analysis for the new project residents was conducted in the same manner as described above for the off-site MEIs. However, year 2027 (operational year) emission factors were conservatively assumed as being representative of future conditions, instead of 2024 (construction year). An analysis based on 2027 resulted in an increased ADT on S.R. 87 of 101,760 vehicles.

Local Roadways – West Saint James Street and Market Street/Coleman Avenue

The roadway impacts on new project residents was conducted in the same manner as described above for the off-site MEIs. However, year 2027 (operational year) emission factors were conservatively assumed as being representative of future conditions, instead of 2024 (construction year). An analysis based on 2027 resulted in an increased ADT on West Saint James Street of 23,965 vehicles and 21,228 vehicles on Market Street/Coleman Avenue.

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

The project set of receptors were placed throughout the multi-family building area and were spaced every 23 feet (7 meters). Construction and roadway impacts were modeled at receptor heights of 23 feet (7.0 meters), 33 feet (10.1 meters), and 43 feet (13.1 meters) representing sensitive receptors on the second, third, and fourth floors (first, second, and third floors that contain dwelling units) of the proposed project. The construction sources and portions of S.R. 87, West Saint James Street, and Market Street/Coleman Avenue included in the modeling are shown in Figure 3 along with the project site and receptor locations where impacts were modeled.

Maximum increased cancer risks were calculated for the residents at the project site using the maximum modeled TAC concentrations. A 30-year exposure period was used in calculating cancer risks assuming the residents would include infants and adults were assumed to be in the new apartments for 24 hours per day for 350 days per year. The highest impacts from project construction occurred at a receptor on the third floor (33 feet above the ground) in the southern portion of the multi-family building. The combined roadway maximum impacts occurred at a receptor on the second floor in the northwestern corner of the multi-family building. Cancer risks associated with the roadways are greatest closest to the roadways and decrease with distance from the roads. The project construction and roadway impacts at the project site are shown in Table 7. Details of the emission calculations, dispersion modeling, and cancer risk calculations are contained in *Attachment 3.*

Stationary Sources

The stationary source screening analysis for the new project sensitive receptors was conducted in the same manner as described above for the project MEIs. Table 7 includes the screening results for the stationary sources.

UPRR Line

The railway analysis for the new project residents was conducted in the same manner as described above for the off-site MEIs. Table 7 includes the screening results for the rail line.

Construction Risk Impacts from Nearby Developments

Since the entirety of the nearby developments construction periods is assumed to overlap with the construction period of this project, it is not possible for those construction impacts to affect the new onsite receptors (residents). Therefore, the construction risk impacts from nearby developments were not included in the onsite analysis for this project. In any event, the City requires controls or mitigation of construction emissions such that impacts would be below the single-source thresholds.

Summary of Cumulative Health Risks at the Project Site

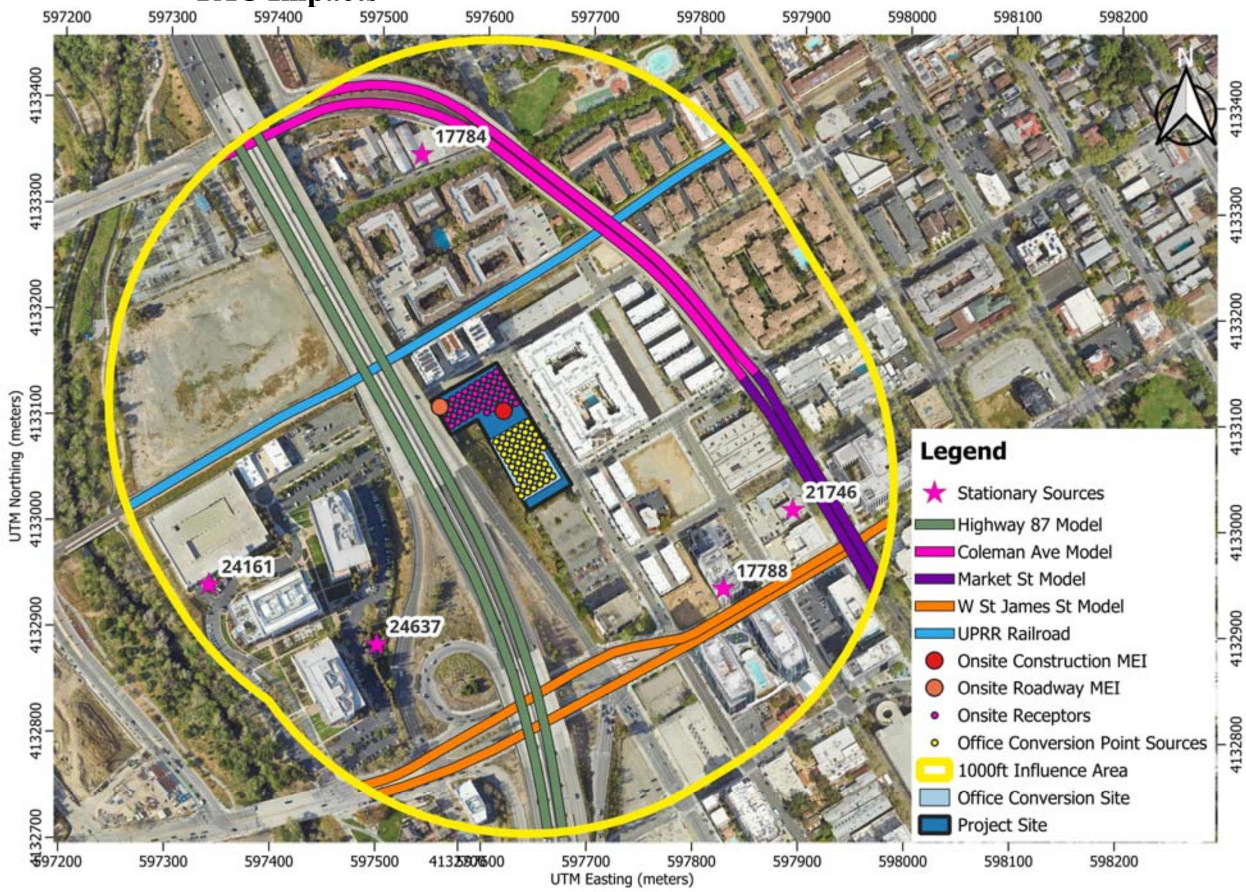
Health risk impacts from project construction and the existing TAC sources upon the project site are reported in Table 7. The risks from the singular TAC sources are compared against the

BAAQMD single-source threshold. The risks from all the sources are then combined and compared against the BAAQMD cumulative-source threshold. As shown, project construction of the office conversion does not require additional mitigation to comply with the BAAQMD single-source and cumulative-source thresholds. Further, none of the existing sources exceed the BAAQMD single-source or cumulative-source thresholds.

Table 7. Impacts from Combined Sources to Project Site Receptors

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Office Conversion Construction Mitigated	2.54	0.01	<0.01
S.R. 87, ADT 101,760	9.57	0.28	<0.01
West Saint James Street, ADT 23,965	0.35	0.02	<0.01
Market Street/Coleman Avenue, ADT 21,228	0.26	0.02	<0.01
UPRR Railway, BAAQMD Raster	9.26	0.01	<0.01
Tuc's Auto Body & Paint (Facility ID #17784, Automotive Body, Paint, and Interior Repair and Maintenance), Project Site at 670 feet	<0.01	<0.01	<0.01
City Heights at Pellier Park (Facility # 17788, Generator), Project Site at 470 feet	0.74	<0.01	<0.01
San José Fire Dept FS #1 (Facility #21746, Generator), Project Site at 580 feet	0.01	<0.01	<0.01
The Sobrato Organization (Facility #24161, Generator), Project Site at 700 feet	0.06	<0.01	<0.01
The Sobrato Organization (Facility #24637, Generator), Project Site at 500 feet	0.13	<0.01	<0.01
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold?	*No*	*No*	*No*
Cumulative Total Mitigated	22.93	<0.39	<0.10
BAAQMD Cumulative Source Threshold	***100***	***0.8***	***10.0***
Exceed Threshold?	*No*	*No*	*No*

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



Supporting Documentation

Attachment 1 includes the CalEEMod output for project construction and operational criteria air pollutant emissions. Also included are any modeling assumptions.

Attachment 2 is the project health risk assessment. AERMOD dispersion modeling files for these assessments, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 3 includes the cumulative health risk calculations, modeling results, and health risk calculations from sources affecting the MEI.

Attachment 1: CalEEMod Modeling Inputs and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: **Terraine - Terraine & Basset Streets, San Jose, CA 95110**

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	**346 Dwelling Units**	**1.57 total project acres disturbed**	
	296,607 s.f. residential	356,015	**Pile Driving? N**
	13,445 s.f. retail		
	s.f. office/commercial		**Project include on-site GENERATOR OR FIRE PUMP during project OPERATION (not construction)? TBD____**
	59,408 s.f. other, specify: Terrace and Site Structure		**IF YES (if BOTH separate values) -->**
	265,607 s.f. parking garage	**621 spaces**	**Kilowatts/Horsepower: _____95 HP_____**
	0 s.f. parking lot	**spaces**	**Fuel Type: ___T4_________**
Construction Days	**Monday to**	**Saturday**	**Location in project (Plans Desired if Available):**
Construction Hours	**7:00 am to**	**7:00 pm**	

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition	**Start Date:**	**5/1/2024**	**Total phase:**	**6**			**Overall Import/Export Volumes**
		End Date:	**5/8/2024**					
0	Concrete/Industrial Saws	81	0.73	12	6	12	0	**Demolition Volume**
0	Excavators	158	0.38	12	6	12	0	Square footage of buildings to be demolished
0	Rubber-Tired Dozers	247	0.4	12	6	12	0	(*or* total tons to be hauled)
1	Tractors/Loaders/Backhoes	97	0.37	12	6	12	2584	_0_ square feet *or*
	Other Equipment?							_0_ Hauling volume (tons)
								Any pavement demolished and hauled? _0_ tons
	Shoring/Grading/Excavation	**Start Date:**	**5/9/2024**	**Total phase:**	**76**			
		End Date:	**8/9/2024**					**Soil Hauling Volume**
2	Dumpers/Tenders	16	0.38	12	76	12	11090	Export volume = _97,040_ cubic yards
3	Excavators	158	0.38	12	76	12	164269	Import volume = _?_ cubic yards?
2	Forklifts	89	0.2	12	76	12	32467	
1	Generator Sets	84	0.74	12	76	12	56690	
	Other Equipment?							
	Below Slab Utility	**Start Date:**	**7/9/2024**	**Total phase:**	**27**			
		End Date:	**8/9/2024**					
1	Tractor/Loader/Backhoes	97	0.38	0.37	27	13	368	
	Foundation/Structure	**Start Date:**	**8/9/2024**	**Total phase:**	**377**			
		End Date:	**11/9/2025**					**Cement Trucks? _5,600_ Total Round-Trips**
4	Aerial Lifts	63	0.31	12	377	12	353415	Electric? (Y/N) _Y__ Otherwise assumed diesel
8	Air Compressors	78	0.48	12	377	12	1355028	Electric? (Y/N) _Y__ Otherwise assumed diesel
2	Bore/Drill Rigs	221	0.5	12	94.25	3	249951	Electric? (Y/N) _N__ Otherwise assumed diesel
2	Cement and Mortar Mixers	9	0.56	12	282.75	9	34201	Electric? (Y/N) _Y__ Otherwise assumed diesel
2	Concrete/Industrial Saws	81	0.73	12	188.5	6	267504	Electric? (Y/N) _Y__ Otherwise assumed diesel
2	Cranes	231	0.29	12	377	12	606126	Electric? (Y/N) _Y__ Otherwise assumed diesel
1	Dumpers/Tenders	16	0.38	12	94.25	3	6876	Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
2	Excavators	158	0.38	12	94.25	3	135810	Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
3	Forklifts	89	0.2	12	377	12	241582	Liquid Propane (LPG)? (Y/N) _Y_ Otherwise Assumed diesel
2	Other Material Handling Equipment	168	0.4	12	377	12	608026	Electric? (Y/N) _Y__ Otherwise assumed diesel
2	Plate Compactors	8	0.43	12	377	12	31125	Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
2	Pressure Washers	13	0.3	12	94.25	3	8822	Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
2	Pumps	84	0.74	12	377	12	562424	Electric? (Y/N) _Y__ Otherwise assumed diesel
2	Rough Terrain Forklifts	100	0.4	12	94.25	3	90480	Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
1	Signal Boards	6	0.82	12	377	12	22258	Electric? (Y/N) _Y__ Otherwise assumed diesel
1	Sweepers/Scrubbers	64	0.46	12	188.5	6	66593	Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
4	Welders	46	0.45	12	377	12	374587	Electric? (Y/N) _Y__ Otherwise assumed diesel
	Building - Exterior	**Start Date:**	**11/14/2024**	**Total phase:**	**433**			
		End Date:	**4/27/2026**					
4	Aerial Lifts	63	0.31	12	433	12	405912	Electric? (Y/N) _Y__ Otherwise assumed diesel
4	Air Compressors	78	0.48	12	433	12	778153	Electric? (Y/N) _Y__ Otherwise assumed diesel
2	Cement and Mortar Mixers	9	0.56	12	433	12	52376	Electric? (Y/N) _Y__ Otherwise assumed diesel
1	Concrete/Industrial Saws	81	0.73	12	108	3	76810	Electric? (Y/N) _N__ Otherwise assumed diesel
2	Cranes	231	0.29	12	433	12	696160	Electric? (Y/N) _Y__ Otherwise assumed diesel
2	Forklifts	89	0.2	12	433	12	184978	Liquid Propane (LPG)? (Y/N) _Y_ Otherwise Assumed diesel
2	Other Material Handling Equipment	168	0.4	12	433	12	698342	Electric? (Y/N) _Y__ Otherwise assumed diesel
2	Pressure Washers	13	0.3	12	108	3	10132	Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
1	Welders	46	0.45	12	217	6	53779	Electric? (Y/N) _Y__ Otherwise assumed diesel
	Other Equipment?							
Building - Interior/Architectural Coating		**Start Date:**	**12/14/2024**	**Total phase:**	**477**			
		End Date:	**7/20/2026**					
4	Aerial Lifts	63	0.31	12	333.9	8.4	313011	Electric? (Y/N) _Y__ Otherwise assumed diesel
6	Air Compressors	78	0.48	12	238.5	6	642920	Electric? (Y/N) _Y__ Otherwise assumed diesel
2	Other Construction Equipment	172	0.42	12	238.5	6	2862	Electric? (Y/N) _Y__ Otherwise assumed diesel
	Other Equipment?							
	Site Improvements	**Start Date:**	**1/14/2026**	**Total phase:**	**153**			
		Start Date:	**7/20/2026**					
1	Pavers	130	0.42	12	153	12	1836	
1	Paving Equipment	132	0.36	12	153	12	1836	**Asphalt? ___ cubic yards or ____ round trips?**
	Rollers	80	0.38	12	153	12	0	
	Tractors/Loaders/Backhoes	97	0.37	12	153	12	0	
	Other Equipment?							

Equipment types listed in "Equipment Types" worksheet tab.

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

Complete one sheet for each project component

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Air Quality/Noise Construction Information Data Request

Project Name: **Power Park - Terraine & Basset Streets, San Jose, CA 95110**

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size 0 Dwelling Units — 0.65 total project acres disturbed

0 s.f. residential

0 s.f. retail

265,607 s.f. office/commercial

0 s.f. other, specify: Terrace and Site Structure

0 s.f. parking garage ____ spaces

0 s.f. parking lot ____ spaces

Construction Days Monday to Saturday

Construction Hours 7:00 am to 5:00 pm

Pile Driving? N

Project include on-site GENERATOR OR FIRE PUMP during project OPERATION (not construction)? TBD____

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____95 HP_____

Fuel Type: ___T4_________

Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition	Start Date:	5/1/2034	Total phase:	99			**Overall Import/Export Volumes**
		End Date:	8/8/2034					
4	Concrete/Industrial Saws	81	0.73	10	99	10	234155	**Demolition Volume**
0	Excavators	158	0.38	10	99	10	0	Square footage of buildings to be demolished
0	Rubber-Tired Dozers	247	0.4	10	99	10	0	(*or* total tons to be hauled)
0	Tractors/Loaders/Backhoes	97	0.37	10	99	10	0	_0_ square feet *or*
6	Other Material Handling Equipment	168	0.4	10	99	10	399168	
1	Sweepers/Scrubbers	64	0.46	10	99	10	29146	
	Other Equipment?							_0_ Hauling volume (tons)
								Any pavement demolished and hauled? _0 tons_
	Shoring/Grading/Excavation	Start Date:		Total phase:				
		End Date:						**Soil Hauling Volume**
0	Dumpers/Tenders	16	0.38	10	0			Export volume = _0_ cubic yards
0	Excavators	158	0.38	10	0			Import volume = _?_ cubic yards?
0	Forklifts	89	0.2	10	0			
0	Generator Sets	84	0.74	10	0			
	Other Equipment?							
	Below Slab Utility	Start Date:		Total phase:				
		End Date:						
0	Tractor/Loader/Backhoes	97	0.38	0.37	0	13	0	
	Foundation/Structure	Start Date:		Total phase:				
		End Date:						Cement Trucks? _5,600_ Total Round-Trips
0	Aerial Lifts	63	0.31	10	0			Electric? (Y/N) _Y_ Otherwise assumed diesel
0	Air Compressors	78	0.48	10	0			Electric? (Y/N) _Y_ Otherwise assumed diesel
0	Bore/Drill Rigs	221	0.5	10	0			Electric? (Y/N) _N_ Otherwise assumed diesel
0	Cement and Mortar Mixers	9	0.56	10	0			Electric? (Y/N) _Y_ Otherwise assumed diesel
0	Concrete/Industrial Saws	81	0.73	10	0			Electric? (Y/N) _Y_ Otherwise assumed diesel
0	Cranes	231	0.29	10	0			Electric? (Y/N) _Y_ Otherwise assumed diesel
0	Dumpers/Tenders	16	0.38	10	0			Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
0	Excavators	158	0.38	10	0			Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
0	Forklifts	89	0.2	10	0			Liquid Propane (LPG)? (Y/N) _Y_ Otherwise Assumed diesel
0	Other Material Handling Equipment	168	0.4	10	0			Electric? (Y/N) _Y_ Otherwise assumed diesel
0	Plate Compactors	8	0.43	10	0			Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
0	Pressure Washers	13	0.3	10	0			Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
0	Pumps	84	0.74	10	0			Electric? (Y/N) _Y_ Otherwise assumed diesel
0	Rough Terrain Forklifts	100	0.4	10	0			Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
0	Signal Boards	6	0.82	10	0			Electric? (Y/N) _Y_ Otherwise assumed diesel
0	Sweepers/Scrubbers	64	0.46	10	0			Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
0	Welders	46	0.45	10	0			Electric? (Y/N) _Y_ Otherwise assumed diesel
	Building - Exterior	Start Date:	8/8/2034	Total phase:	262			
		End Date:	4/27/2035					
6	Aerial Lifts	63	0.31	10	262	10	307012	Electric? (Y/N) _Y_ Otherwise assumed diesel
9	Air Compressors	78	0.48	10	262	10	882835	Electric? (Y/N) _Y_ Otherwise assumed diesel
0	Cement and Mortar Mixers	9	0.56	10	262	10	0	Electric? (Y/N) _Y_ Otherwise assumed diesel
4	Concrete/Industrial Saws	81	0.73	10	262	10	619682	Electric? (Y/N) _N_ Otherwise assumed diesel
0	Cranes	231	0.29	10	262	10	0	Electric? (Y/N) _Y_ Otherwise assumed diesel
4	Forklifts	89	0.2	10	262	10	186544	Liquid Propane (LPG)? (Y/N) _Y_ Otherwise Assumed diesel
6	Other Material Handling Equipment	168	0.4	10	262	10	1056384	Electric? (Y/N) _Y_ Otherwise assumed diesel
2	Pressure Washers	13	0.3	10	262	10	20436	Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diesel
1	Welders	46	0.45	10	262	10	54234	Electric? (Y/N) _Y_ Otherwise assumed diesel
	Other Equipment?							
Building - Interior/Architectural Coating		Start Date:	12/14/2034	Total phase:	230			
		End Date:	8/1/2035					
9	Aerial Lifts	63	0.31	10	161	7	282990	Electric? (Y/N) _Y_ Otherwise assumed diesel
5	Air Compressors	78	0.48	10	115	5	215280	Electric? (Y/N) _Y_ Otherwise assumed diesel
11	Other Construction Equipment	172	0.42	10	115	5	6325	Electric? (Y/N) _Y_ Otherwise assumed diesel
	Other Equipment?							
	Site Improvements	Start Date:	5/1/2035	Total phase:	153			
		End Date:	8/1/2035					
1	Pavers	130	0.42	10	153	10	1530	
1	Paving Equipment	132	0.36	10	153	10	1530	Asphalt? ___ cubic yards or ____ round trips?
	Rollers	80	0.38	10	153	10	0	
	Tractors/Loaders/Backhoes	97	0.37	10	153	10	0	
	Other Equipment?							

Equipment types listed in "Equipment Types" worksheet tab.

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

Complete one sheet for each project component

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Construction Criteria Air Pollutants							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	**CO2e**	
Year	Tons					MT	
Construction Equipment							
2024	0.22	1.94	0.04	0.03	0.07	901	
2025	1.97	2.98	0.03	0.03	0.20	1579	
2026	0.99	0.74	0.02	0.02	0.06	395	
	Total Construction Emissions						
Tons	3.19	5.65	0.09	0.08		2874.93	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2024	2.14	18.47	0.37	0.32			**210**
2025	12.62	19.03	0.22	0.20			**313**
2026	11.50	8.52	0.20	0.19			**173**
	Total Construction Emissions						
Pounds	26.26	46.01	0.79	0.70		0.00	
Average	9.18	16.25	0.26	0.23		0.00	696.00
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	3.00	1.34	1.32	0.36			
	Net Annual Operational Emissions						
Tons/year	3.00	1.34	1.32	0.36			
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**			
	Average Daily Emissions						
Pounds Per Day	16.44	7.32	7.21	1.97			
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Construction Criteria Air Pollutants - Office Conversion							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	**CO2e**	
Year	Tons					MT	
Construction Equipment							
2034	0.25	1.58	0.02	0.01	0.02	412	
2035	1.49	0.82	0.01	0.01	0.02	236	
	Total Construction Emissions						
Tons	1.74	2.41	0.02	0.02		648.24	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2034	2.39	14.99	0.15	0.13			**211**
2035	16.24	9.01	0.08	0.07			**183**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	18.64	24.00	0.22	0.21		0.00	
Average	8.83	12.21	0.11	0.10		0.00	394.00
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	2.23	0.51	1.85	0.47			
	Net Annual Operational Emissions						
Tons/year	2.23	0.51	1.85	0.47			
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**			
	Average Daily Emissions						
Pounds Per Day	12.20	2.82	10.13	2.60			
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

23-085 Terraine Site, San Jose T4i BMPs 2027 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-085 Terraine Site, San Jose T4i BMPs 2027
Construction Start Date	5/1/2024
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	1.60
Location	212 Bassett St, San Jose, CA 95110, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1850
EDFZ	1
Electric Utility	San Jose Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments High Rise	346	Dwelling Unit	1.57	356,015	0.00	—	1,035	—
Strip Mall	13.4	1000sqft	0.00	13,445	0.00	—	—	—
Unenclosed Parking with Elevator	621	Space	0.00	265,607	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-1-A	Use Electric or Hybrid Powered Equipment
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	12.8	37.4	0.87	5.59	5.84	0.74	1.36	1.90	33.1	18,919
Mit.	12.5	29.5	0.38	5.59	5.72	0.29	1.36	1.47	33.1	18,792
% Reduced	3%	21%	56%	—	2%	60%	—	23%	—	1%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	12.9	21.8	0.28	5.59	5.87	0.25	1.36	1.60	0.79	11,965
Mit.	12.5	18.8	0.13	5.59	5.72	0.11	1.36	1.47	0.79	11,871
% Reduced	3%	14%	54%	—	3%	55%	—	9%	—	1%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—

Unmit.	10.8	16.3	0.21	4.62	4.81	0.18	1.12	1.29	10.2	9,540
Mit.	10.5	14.2	0.10	4.62	4.72	0.09	1.12	1.21	10.2	9,457
% Reduced	3%	13%	54%	—	2%	53%	—	6%	—	1%
Annual (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	1.97	2.98	0.04	0.84	0.88	0.03	0.20	0.23	1.69	1,579
Mit.	1.92	2.59	0.02	0.84	0.86	0.02	0.20	0.22	1.69	1,566
% Reduced	3%	13%	54%	—	2%	53%	—	6%	—	1%

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—
2024	2.48	37.4	0.87	4.42	5.29	0.74	1.16	1.90	33.1	18,919
2025	12.8	20.5	0.25	5.59	5.84	0.22	1.36	1.58	28.7	12,142
2026	12.2	11.9	0.24	4.24	4.48	0.22	1.02	1.24	18.9	7,887
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—
2024	12.9	21.8	0.28	5.59	5.87	0.25	1.36	1.60	0.79	11,965
2025	12.8	21.1	0.25	5.59	5.84	0.22	1.36	1.58	0.74	11,777
2026	12.1	12.3	0.24	4.24	4.48	0.22	1.02	1.24	0.49	7,600
Average Daily	—	—	—	—	—	—	—	—	—	—
2024	1.23	10.6	0.21	1.56	1.78	0.18	0.40	0.58	4.56	5,442
2025	10.8	16.3	0.19	4.62	4.81	0.17	1.12	1.29	10.2	9,540
2026	5.45	4.04	0.10	1.29	1.39	0.09	0.31	0.40	2.45	2,383
Annual	—	—	—	—	—	—	—	—	—	—
2024	0.22	1.94	0.04	0.29	0.32	0.03	0.07	0.11	0.75	901
2025	1.97	2.98	0.03	0.84	0.88	0.03	0.20	0.23	1.69	1,579

2026	0.99	0.74	0.02	0.24	0.25	0.02	0.06	0.07	0.40	395

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—
2024	1.33	29.5	0.38	4.42	4.80	0.29	1.16	1.46	33.1	18,792
2025	12.5	17.7	0.13	5.59	5.72	0.11	1.36	1.47	28.7	12,027
2026	11.9	7.51	0.05	4.24	4.29	0.05	1.02	1.07	18.9	7,773
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—
2024	12.5	18.8	0.13	5.59	5.72	0.11	1.36	1.47	0.79	11,871
2025	12.4	18.3	0.13	5.59	5.72	0.11	1.36	1.47	0.74	11,663
2026	11.7	7.95	0.05	4.24	4.29	0.05	1.02	1.07	0.49	7,485
Average Daily	—	—	—	—	—	—	—	—	—	—
2024	0.95	8.73	0.10	1.56	1.66	0.08	0.40	0.48	4.56	5,417
2025	10.5	14.2	0.10	4.62	4.72	0.09	1.12	1.21	10.2	9,457
2026	5.30	2.24	0.02	1.29	1.31	0.02	0.31	0.33	2.45	2,361
Annual	—	—	—	—	—	—	—	—	—	—
2024	0.17	1.59	0.02	0.29	0.30	0.01	0.07	0.09	0.75	897
2025	1.92	2.59	0.02	0.84	0.86	0.02	0.20	0.22	1.69	1,566
2026	0.97	0.41	< 0.005	0.24	0.24	< 0.005	0.06	0.06	0.40	391

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	18.0	3.28	0.08	7.45	7.53	0.07	1.89	1.96	28.2	10,286
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	14.0	3.50	0.05	7.45	7.50	0.05	1.89	1.94	3.30	9,699
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	16.4	7.32	0.20	7.01	7.21	0.19	1.78	1.97	13.0	9,839
Annual (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	3.00	1.34	0.04	1.28	1.32	0.03	0.32	0.36	2.16	1,629

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Mobile	4.92	2.99	0.05	7.45	7.50	0.05	1.89	1.94	25.6	8,119
Area	13.0	0.29	0.03	—	0.03	0.02	—	0.02	—	103
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,459
Water	—	—	—	—	—	—	—	—	—	93.5
Waste	—	—	—	—	—	—	—	—	—	509
Refrig.	—	—	—	—	—	—	—	—	2.63	2.63
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18.0	3.28	0.08	7.45	7.53	0.07	1.89	1.96	28.2	10,286
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Mobile	4.69	3.50	0.05	7.45	7.50	0.05	1.89	1.94	0.66	7,634
Area	9.32	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00

Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,459
Water	—	—	—	—	—	—	—	—	—	93.5
Waste	—	—	—	—	—	—	—	—	—	509
Refrig.	—	—	—	—	—	—	—	—	2.63	2.63
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	14.0	3.50	0.05	7.45	7.50	0.05	1.89	1.94	3.30	9,699
Average Daily	—	—	—	—	—	—	—	—	—	—
Mobile	4.38	3.10	0.05	7.01	7.06	0.04	1.78	1.82	10.4	7,257
Area	11.2	0.14	0.02	—	0.02	0.01	—	0.01	—	50.7
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,459
Water	—	—	—	—	—	—	—	—	—	93.5
Waste	—	—	—	—	—	—	—	—	—	509
Refrig.	—	—	—	—	—	—	—	—	2.63	2.63
Stationary	0.91	4.07	0.13	0.00	0.13	0.13	0.00	0.13	0.00	467
Total	16.4	7.32	0.20	7.01	7.21	0.19	1.78	1.97	13.0	9,839
Annual	—	—	—	—	—	—	—	—	—	—
Mobile	0.80	0.57	0.01	1.28	1.29	0.01	0.32	0.33	1.72	1,201
Area	2.04	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.39
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	242
Water	—	—	—	—	—	—	—	—	—	15.5
Waste	—	—	—	—	—	—	—	—	—	84.3
Refrig.	—	—	—	—	—	—	—	—	0.44	0.44
Stationary	0.17	0.74	0.02	0.00	0.02	0.02	0.00	0.02	0.00	77.4
Total	3.00	1.34	0.04	1.28	1.32	0.03	0.32	0.36	2.16	1,629

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Mobile	4.92	2.99	0.05	7.45	7.50	0.05	1.89	1.94	25.6	8,119
Area	13.0	0.29	0.03	—	0.03	0.02	—	0.02	—	103
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,459
Water	—	—	—	—	—	—	—	—	—	93.5
Waste	—	—	—	—	—	—	—	—	—	509
Refrig.	—	—	—	—	—	—	—	—	2.63	2.63
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18.0	3.28	0.08	7.45	7.53	0.07	1.89	1.96	28.2	10,286
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Mobile	4.69	3.50	0.05	7.45	7.50	0.05	1.89	1.94	0.66	7,634
Area	9.32	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,459
Water	—	—	—	—	—	—	—	—	—	93.5
Waste	—	—	—	—	—	—	—	—	—	509
Refrig.	—	—	—	—	—	—	—	—	2.63	2.63
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	14.0	3.50	0.05	7.45	7.50	0.05	1.89	1.94	3.30	9,699
Average Daily	—	—	—	—	—	—	—	—	—	—
Mobile	4.38	3.10	0.05	7.01	7.06	0.04	1.78	1.82	10.4	7,257
Area	11.2	0.14	0.02	—	0.02	0.01	—	0.01	—	50.7
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,459
Water	—	—	—	—	—	—	—	—	—	93.5
Waste	—	—	—	—	—	—	—	—	—	509
Refrig.	—	—	—	—	—	—	—	—	2.63	2.63

Stationary	0.91	4.07	0.13	0.00	0.13	0.13	0.00	0.13	0.00	467
Total	16.4	7.32	0.20	7.01	7.21	0.19	1.78	1.97	13.0	9,839
Annual	—	—	—	—	—	—	—	—	—	—
Mobile	0.80	0.57	0.01	1.28	1.29	0.01	0.32	0.33	1.72	1,201
Area	2.04	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.39
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	242
Water	—	—	—	—	—	—	—	—	—	15.5
Waste	—	—	—	—	—	—	—	—	—	84.3
Refrig.	—	—	—	—	—	—	—	—	0.44	0.44
Stationary	0.17	0.74	0.02	0.00	0.02	0.02	0.00	0.02	0.00	77.4
Total	3.00	1.34	0.04	1.28	1.32	0.03	0.32	0.36	2.16	1,629

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	1.80	0.08	—	0.08	0.07	—	0.07	—	437
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.39

Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.39
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	0.09	22.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	0.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	0.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.21	0.01	—	0.01	0.01	—	0.01	—	437
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.39
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.39
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	0.09	22.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	0.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	0.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Below Slab Utility (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	1.80	0.08	—	0.08	0.07	—	0.07	—	437
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.14	0.01	—	0.01	0.01	—	0.01	—	33.5
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.55

Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	0.09	22.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	1.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	0.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Below Slab Utility (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.21	0.01	—	0.01	0.01	—	0.01	—	437

Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	33.5
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.55
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	0.09	22.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	1.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	0.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Shoring/Grading/Excavation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	8.79	0.37	—	0.37	0.34	—	0.34	—	1,440
Dust From Material Movement	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	1.93	0.08	—	0.08	0.07	—	0.07	—	316
Dust From Material Movement	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.35	0.01	—	0.01	0.01	—	0.01	—	52.3

Dust From Material Movement	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.00	0.17	0.17	0.00	0.04	0.04	0.75	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.23	14.1	0.20	2.81	3.01	0.13	0.77	0.90	23.9	11,644
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	0.07	36.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	3.19	0.04	0.62	0.66	0.03	0.17	0.20	2.26	2,550
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	0.01	6.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.58	0.01	0.11	0.12	0.01	0.03	0.04	0.37	422

3.6. Shoring/Grading/Excavation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	4.62	0.07	—	0.07	0.07	—	0.07	—	1,284

Dust From Material Movement	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.01	0.02	—	0.02	0.01	—	0.01	—	281
Dust From Material Movement	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.18	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	46.6
Dust From Material Movement	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.00	0.17	0.17	0.00	0.04	0.04	0.75	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.23	14.1	0.20	2.81	3.01	0.13	0.77	0.90	23.9	11,644
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	0.07	36.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	3.19	0.04	0.62	0.66	0.03	0.17	0.20	2.26	2,550

Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	0.01	6.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.58	0.01	0.11	0.12	0.01	0.03	0.04	0.37	422

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	4.23	0.03	—	0.03	0.03	—	0.03	—	875
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.48	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	98.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.09	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.22	1.23	0.00	3.02	3.02	0.00	0.71	0.71	0.35	2,995

Vendor	0.08	3.17	0.03	0.58	0.61	0.03	0.16	0.19	0.15	2,373
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.00	0.34	0.34	0.00	0.08	0.08	0.66	342
Vendor	0.01	0.35	< 0.005	0.07	0.07	< 0.005	0.02	0.02	0.29	268
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.06	0.06	0.00	0.01	0.01	0.11	56.6
Vendor	< 0.005	0.06	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.05	44.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	3.39	0.00	—	0.00	0.00	—	0.00	—	750
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.38	0.00	—	0.00	0.00	—	0.00	—	84.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.07	0.00	—	0.00	0.00	—	0.00	—	14.0

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.22	1.23	0.00	3.02	3.02	0.00	0.71	0.71	0.35	2,995
Vendor	0.08	3.17	0.03	0.58	0.61	0.03	0.16	0.19	0.15	2,373
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.00	0.34	0.34	0.00	0.08	0.08	0.66	342
Vendor	0.01	0.35	< 0.005	0.07	0.07	< 0.005	0.02	0.02	0.29	268
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.06	0.06	0.00	0.01	0.01	0.11	56.6
Vendor	< 0.005	0.06	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.05	44.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	4.21	0.03	—	0.03	0.02	—	0.02	—	875
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.10	4.21	0.03	—	0.03	0.02	—	0.02	—	875
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	3.61	0.02	—	0.02	0.02	—	0.02	—	750
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.66	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	124
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.21	0.88	0.00	3.02	3.02	0.00	0.71	0.71	12.4	3,177
Vendor	0.08	2.87	0.03	0.58	0.61	0.03	0.16	0.19	5.91	2,336
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.17	1.12	0.00	3.02	3.02	0.00	0.71	0.71	0.32	2,937
Vendor	0.08	3.01	0.03	0.58	0.61	0.03	0.16	0.19	0.15	2,332
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.99	0.86	0.00	2.58	2.58	0.00	0.61	0.61	4.57	2,547
Vendor	0.07	2.54	0.03	0.50	0.53	0.03	0.14	0.16	2.20	2,000
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.16	0.00	0.47	0.47	0.00	0.11	0.11	0.76	422
Vendor	0.01	0.46	< 0.005	0.09	0.10	< 0.005	0.03	0.03	0.36	331

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	3.39	0.00	—	0.00	0.00	—	0.00	—	750
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	3.39	0.00	—	0.00	0.00	—	0.00	—	750
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	2.91	0.00	—	0.00	0.00	—	0.00	—	643
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.53	0.00	—	0.00	0.00	—	0.00	—	106
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.21	0.88	0.00	3.02	3.02	0.00	0.71	0.71	12.4	3,177
Vendor	0.08	2.87	0.03	0.58	0.61	0.03	0.16	0.19	5.91	2,336
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.17	1.12	0.00	3.02	3.02	0.00	0.71	0.71	0.32	2,937
Vendor	0.08	3.01	0.03	0.58	0.61	0.03	0.16	0.19	0.15	2,332
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.99	0.86	0.00	2.58	2.58	0.00	0.61	0.61	4.57	2,547
Vendor	0.07	2.54	0.03	0.50	0.53	0.03	0.14	0.16	2.20	2,000
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.16	0.00	0.47	0.47	0.00	0.11	0.11	0.76	422
Vendor	0.01	0.46	< 0.005	0.09	0.10	< 0.005	0.03	0.03	0.36	331
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	4.20	0.02	—	0.02	0.02	—	0.02	—	874
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	4.20	0.02	—	0.02	0.02	—	0.02	—	874
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	1.15	0.01	—	0.01	0.01	—	0.01	—	240
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.21	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.15	0.77	0.00	3.02	3.02	0.00	0.71	0.71	11.2	3,117
Vendor	0.07	2.72	0.03	0.58	0.61	0.03	0.16	0.19	5.35	2,297
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.02	1.01	0.00	3.02	3.02	0.00	0.71	0.71	0.29	2,883
Vendor	0.06	2.88	0.03	0.58	0.61	0.03	0.16	0.19	0.14	2,293
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.25	0.00	0.83	0.83	0.00	0.19	0.19	1.33	801
Vendor	0.02	0.77	0.01	0.16	0.17	0.01	0.04	0.05	0.63	630
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.00	0.15	0.15	0.00	0.04	0.04	0.22	133
Vendor	< 0.005	0.14	< 0.005	0.03	0.03	< 0.005	0.01	0.01	0.10	104
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	3.39	0.00	—	0.00	0.00	—	0.00	—	750
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	3.39	0.00	—	0.00	0.00	—	0.00	—	750
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.93	0.00	—	0.00	0.00	—	0.00	—	206
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.17	0.00	—	0.00	0.00	—	0.00	—	34.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.15	0.77	0.00	3.02	3.02	0.00	0.71	0.71	11.2	3,117
Vendor	0.07	2.72	0.03	0.58	0.61	0.03	0.16	0.19	5.35	2,297
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.02	1.01	0.00	3.02	3.02	0.00	0.71	0.71	0.29	2,883
Vendor	0.06	2.88	0.03	0.58	0.61	0.03	0.16	0.19	0.14	2,293

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.25	0.00	0.83	0.83	0.00	0.19	0.19	1.33	801
Vendor	0.02	0.77	0.01	0.16	0.17	0.01	0.04	0.05	0.63	630
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.00	0.15	0.15	0.00	0.04	0.04	0.22	133
Vendor	< 0.005	0.14	< 0.005	0.03	0.03	< 0.005	0.01	0.01	0.10	104
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Site Improvements (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	4.03	0.18	—	0.18	0.17	—	0.17	—	924
Paving	0.00	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	4.03	0.18	—	0.18	0.17	—	0.17	—	924
Paving	0.00	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.78	0.08	—	0.08	0.07	—	0.07	—	407

Paving	0.00	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.01	—	0.01	0.01	—	0.01	—	67.5
Paving	0.00	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	0.04	0.04	0.00	0.01	0.01	0.15	42.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	< 0.005	39.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	0.03	17.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	2.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Site Improvements (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.45	0.02	—	0.02	0.02	—	0.02	—	924
Paving	0.00	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.45	0.02	—	0.02	0.02	—	0.02	—	924
Paving	0.00	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.20	0.01	—	0.01	0.01	—	0.01	—	407
Paving	0.00	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	67.5
Paving	0.00	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	0.04	0.04	0.00	0.01	0.01	0.15	42.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	< 0.005	39.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	0.03	17.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	2.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	0.44	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	0.08	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.25	0.00	0.60	0.60	0.00	0.14	0.14	0.07	599
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.03	0.03	0.00	0.01	0.01	0.05	25.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.01	4.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	0.44	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	0.08	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.25	0.00	0.60	0.60	0.00	0.14	0.14	0.07	599
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.03	0.03	0.00	0.01	0.01	0.05	25.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.01	4.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	8.84	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	1.61	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.18	0.00	0.60	0.60	0.00	0.14	0.14	2.47	635
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.22	0.00	0.60	0.60	0.00	0.14	0.14	0.06	587
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.17	0.00	0.52	0.52	0.00	0.12	0.12	0.91	509
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.09	0.09	0.00	0.02	0.02	0.15	84.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	8.84	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	1.61	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.18	0.00	0.60	0.60	0.00	0.14	0.14	2.47	635
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.22	0.00	0.60	0.60	0.00	0.14	0.14	0.06	587
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.17	0.00	0.52	0.52	0.00	0.12	0.12	0.91	509
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.09	0.09	0.00	0.02	0.02	0.15	84.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	4.87	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	0.89	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.15	0.00	0.60	0.60	0.00	0.14	0.14	2.24	623
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.20	0.00	0.60	0.60	0.00	0.14	0.14	0.06	577
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.00	0.28	0.28	0.00	0.07	0.07	0.46	275
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.05	0.05	0.00	0.01	0.01	0.08	45.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	10.3	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00

Architectural Coatings	4.87	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Architectural Coatings	0.89	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.15	0.00	0.60	0.60	0.00	0.14	0.14	2.24	623
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.20	0.00	0.60	0.60	0.00	0.14	0.14	0.06	577
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.00	0.28	0.28	0.00	0.07	0.07	0.46	275
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.05	0.05	0.00	0.01	0.01	0.08	45.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Foundation/Structure (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	9.77	0.18	—	0.18	0.17	—	0.17	—	2,077
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	9.77	0.18	—	0.18	0.17	—	0.17	—	2,077
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	3.33	0.06	—	0.06	0.06	—	0.06	—	707
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.61	0.01	—	0.01	0.01	—	0.01	—	117
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.28	0.00	0.87	0.87	0.00	0.20	0.20	3.91	932
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.61	0.04	0.52	0.56	0.02	0.14	0.17	4.43	2,159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—

Worker	0.35	0.35	0.00	0.87	0.87	0.00	0.20	0.20	0.10	862
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.75	0.04	0.52	0.56	0.02	0.14	0.17	0.11	2,156
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.00	0.30	0.30	0.00	0.07	0.07	0.57	297
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.92	0.01	0.18	0.19	0.01	0.05	0.06	0.65	734
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.05	0.05	0.00	0.01	0.01	0.09	49.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.17	< 0.005	0.03	0.03	< 0.005	0.01	0.01	0.11	122

3.22. Foundation/Structure (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	7.63	0.06	—	0.06	0.06	—	0.06	—	2,077
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	7.63	0.06	—	0.06	0.06	—	0.06	—	2,077
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	2.60	0.02	—	0.02	0.02	—	0.02	—	707

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.47	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	117
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.28	0.00	0.87	0.87	0.00	0.20	0.20	3.91	932
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.61	0.04	0.52	0.56	0.02	0.14	0.17	4.43	2,159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.35	0.00	0.87	0.87	0.00	0.20	0.20	0.10	862
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.75	0.04	0.52	0.56	0.02	0.14	0.17	0.11	2,156
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.00	0.30	0.30	0.00	0.07	0.07	0.57	297
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.92	0.01	0.18	0.19	0.01	0.05	0.06	0.65	734
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.05	0.05	0.00	0.01	0.01	0.09	49.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.17	< 0.005	0.03	0.03	< 0.005	0.01	0.01	0.11	122

3.23. Foundation/Structure (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	9.54	0.15	—	0.15	0.14	—	0.14	—	2,078
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	9.54	0.15	—	0.15	0.14	—	0.14	—	2,078
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	7.02	0.11	—	0.11	0.10	—	0.10	—	1,527
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.28	0.02	—	0.02	0.02	—	0.02	—	253
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.25	0.00	0.87	0.87	0.00	0.20	0.20	3.56	914
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.52	0.04	0.52	0.56	0.02	0.14	0.17	4.38	2,117
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.32	0.00	0.87	0.87	0.00	0.20	0.20	0.09	845
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.65	0.04	0.52	0.56	0.02	0.14	0.17	0.11	2,114

Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.00	0.64	0.64	0.00	0.15	0.15	1.13	628
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.91	0.03	0.38	0.41	0.02	0.10	0.12	1.39	1,554
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.12	0.12	0.00	0.03	0.03	0.19	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.35	< 0.005	0.07	0.07	< 0.005	0.02	0.02	0.23	257

3.24. Foundation/Structure (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	7.63	0.06	—	0.06	0.06	—	0.06	—	2,078
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	7.63	0.06	—	0.06	0.06	—	0.06	—	2,078
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	5.61	0.04	—	0.04	0.04	—	0.04	—	1,527
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	1.02	0.01	—	0.01	0.01	—	0.01	—	253
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.25	0.00	0.87	0.87	0.00	0.20	0.20	3.56	914
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.52	0.04	0.52	0.56	0.02	0.14	0.17	4.38	2,117
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.32	0.00	0.87	0.87	0.00	0.20	0.20	0.09	845
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.65	0.04	0.52	0.56	0.02	0.14	0.17	0.11	2,114
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.00	0.64	0.64	0.00	0.15	0.15	1.13	628
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.91	0.03	0.38	0.41	0.02	0.10	0.12	1.39	1,554
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.12	0.12	0.00	0.03	0.03	0.19	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.35	< 0.005	0.07	0.07	< 0.005	0.02	0.02	0.23	257

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	3.49	2.02	0.03	4.87	4.90	0.03	1.23	1.26	16.7	5,320
Strip Mall	1.44	0.97	0.02	2.59	2.60	0.02	0.66	0.67	8.88	2,798
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	4.92	2.99	0.05	7.45	7.50	0.05	1.89	1.94	25.6	8,119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	3.32	2.37	0.03	4.87	4.90	0.03	1.23	1.26	0.43	5,005
Strip Mall	1.37	1.13	0.02	2.59	2.60	0.02	0.66	0.67	0.23	2,629
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	4.69	3.50	0.05	7.45	7.50	0.05	1.89	1.94	0.66	7,634
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.57	0.39	0.01	0.85	0.85	0.01	0.21	0.22	1.14	799
Strip Mall	0.23	0.18	< 0.005	0.43	0.43	< 0.005	0.11	0.11	0.58	402
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.80	0.57	0.01	1.28	1.29	0.01	0.32	0.33	1.72	1,201

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	3.49	2.02	0.03	4.87	4.90	0.03	1.23	1.26	16.7	5,320
Strip Mall	1.44	0.97	0.02	2.59	2.60	0.02	0.66	0.67	8.88	2,798
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	4.92	2.99	0.05	7.45	7.50	0.05	1.89	1.94	25.6	8,119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	3.32	2.37	0.03	4.87	4.90	0.03	1.23	1.26	0.43	5,005
Strip Mall	1.37	1.13	0.02	2.59	2.60	0.02	0.66	0.67	0.23	2,629
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	4.69	3.50	0.05	7.45	7.50	0.05	1.89	1.94	0.66	7,634
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.57	0.39	0.01	0.85	0.85	0.01	0.21	0.22	1.14	799
Strip Mall	0.23	0.18	< 0.005	0.43	0.43	< 0.005	0.11	0.11	0.58	402
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.80	0.57	0.01	1.28	1.29	0.01	0.32	0.33	1.72	1,201

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	1,022
Strip Mall	—	—	—	—	—	—	—	—	—	67.7
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	369
Total	—	—	—	—	—	—	—	—	—	1,459
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	1,022
Strip Mall	—	—	—	—	—	—	—	—	—	67.7
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	369
Total	—	—	—	—	—	—	—	—	—	1,459
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	169
Strip Mall	—	—	—	—	—	—	—	—	—	11.2
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	61.1
Total	—	—	—	—	—	—	—	—	—	242

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—

Apartments High Rise	—	—	—	—	—	—	—	—	—	1,022
Strip Mall	—	—	—	—	—	—	—	—	—	67.7
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	369
Total	—	—	—	—	—	—	—	—	—	1,459
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	1,022
Strip Mall	—	—	—	—	—	—	—	—	—	67.7
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	369
Total	—	—	—	—	—	—	—	—	—	1,459
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	169
Strip Mall	—	—	—	—	—	—	—	—	—	11.2
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	61.1
Total	—	—	—	—	—	—	—	—	—	242

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00

Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00

Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Consumer Products	7.91	—	—	—	—	—	—	—	—	—

Architectural Coatings	1.41	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.72	0.29	0.03	—	0.03	0.02	—	0.02	—	103
Total	13.0	0.29	0.03	—	0.03	0.02	—	0.02	—	103
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Consumer Products	7.91	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.41	—	—	—	—	—	—	—	—	—
Total	9.32	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Consumer Products	1.44	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.33	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.39
Total	2.04	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.39

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Consumer Products	7.91	—	—	—	—	—	—	—	—	—

Architectural Coatings	1.41	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.72	0.29	0.03	—	0.03	0.02	—	0.02	—	103
Total	13.0	0.29	0.03	—	0.03	0.02	—	0.02	—	103
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Consumer Products	7.91	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.41	—	—	—	—	—	—	—	—	—
Total	9.32	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00
Consumer Products	1.44	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.33	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.39
Total	2.04	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.39

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—

Apartments High Rise	—	—	—	—	—	—	—	—	—	86.7
Strip Mall	—	—	—	—	—	—	—	—	—	6.88
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	93.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	86.7
Strip Mall	—	—	—	—	—	—	—	—	—	6.88
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	93.5
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	14.3
Strip Mall	—	—	—	—	—	—	—	—	—	1.14
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	15.5

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	86.7

Strip Mall	—	—	—	—	—	—	—	—	—	6.88
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	93.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	86.7
Strip Mall	—	—	—	—	—	—	—	—	—	6.88
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	93.5
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	14.3
Strip Mall	—	—	—	—	—	—	—	—	—	1.14
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	15.5

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	483

Strip Mall	—	—	—	—	—	—	—	—	—	26.6
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	509
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	483
Strip Mall	—	—	—	—	—	—	—	—	—	26.6
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	509
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	79.9
Strip Mall	—	—	—	—	—	—	—	—	—	4.41
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	84.3

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	483
Strip Mall	—	—	—	—	—	—	—	—	—	26.6

Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	509
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	483
Strip Mall	—	—	—	—	—	—	—	—	—	26.6
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	509
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	79.9
Strip Mall	—	—	—	—	—	—	—	—	—	4.41
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	84.3

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	2.55	2.55
Strip Mall	—	—	—	—	—	—	—	—	0.08	0.08

Total	—	—	—	—	—	—	—	—	2.63	2.63
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	2.55	2.55
Strip Mall	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	2.63	2.63
Annual	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	0.42	0.42
Strip Mall	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	0.44	0.44

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	2.55	2.55
Strip Mall	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	2.63	2.63
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	2.55	2.55
Strip Mall	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	2.63	2.63
Annual	—	—	—	—	—	—	—	—	—	—

Apartments High Rise	—	—	—	—	—	—	—	—	0.42	0.42
Strip Mall	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	0.44	0.44

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.17	0.74	0.02	0.00	0.02	0.02	0.00	0.02	0.00	77.4
Total	0.17	0.74	0.02	0.00	0.02	0.02	0.00	0.02	0.00	77.4

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.17	0.74	0.02	0.00	0.02	0.02	0.00	0.02	0.00	77.4
Total	0.17	0.74	0.02	0.00	0.02	0.02	0.00	0.02	0.00	77.4

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	5/1/2024	5/8/2024	6.00	7.00	—
Below Slab Utility	Site Preparation	7/9/2024	8/9/2024	6.00	28.0	—
Shoring/Grading/Excavation	Grading	5/9/2024	8/9/2024	6.00	80.0	—
Building Construction	Building Construction	11/14/2024	4/27/2026	6.00	454	—
Site Improvements	Paving	1/14/2026	7/20/2026	6.00	161	—
Architectural Coating	Architectural Coating	12/14/2024	7/20/2026	6.00	500	—
Foundation/Structure	Trenching	8/9/2024	11/9/2025	6.00	392	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	12.0	84.0	0.37
Below Slab Utility	Tractors/Loaders/Backhoes	Diesel	Average	1.00	12.0	84.0	0.37
Shoring/Grading/Excavation	Dumpers/Tenders	Diesel	Average	2.00	12.0	16.0	0.38
Shoring/Grading/Excavation	Excavators	Diesel	Average	3.00	12.0	36.0	0.38

Shoring/Grading/Excav	Forklifts	Diesel	Average	2.00	12.0	82.0	0.20
Shoring/Grading/Excavation	Generator Sets	Diesel	Average	1.00	12.0	14.0	0.74
Building Construction	Aerial Lifts	Electric	Average	4.00	12.0	46.0	0.31
Building Construction	Air Compressors	Electric	Average	4.00	12.0	37.0	0.48
Building Construction	Cement and Mortar Mixers	Electric	Average	2.00	12.0	10.0	0.56
Building Construction	Concrete/Industrial Saws	Diesel	Average	1.00	3.00	33.0	0.73
Building Construction	Cranes	Electric	Average	2.00	12.0	367	0.29
Building Construction	Forklifts	CNG	Average	2.00	12.0	70.0	0.30
Building Construction	Other Material Handling Equipment	Electric	Average	2.00	12.0	93.0	0.40
Building Construction	Pressure Washers	Diesel	Average	2.00	3.00	14.0	0.30
Building Construction	Welders	Electric	Average	1.00	6.00	46.0	0.45
Site Improvements	Pavers	Diesel	Average	1.00	12.0	81.0	0.42
Site Improvements	Paving Equipment	Diesel	Average	1.00	12.0	89.0	0.36
Architectural Coating	Aerial Lifts	Electric	Average	4.00	8.40	46.0	0.31
Architectural Coating	Air Compressors	Electric	Average	6.00	6.00	37.0	0.48
Architectural Coating	Other Construction Equipment	Electric	Average	2.00	6.00	82.0	0.42
Foundation/Structure	Aerial Lifts	Electric	Average	4.00	12.0	46.0	0.31
Foundation/Structure	Air Compressors	Electric	Average	8.00	12.0	37.0	0.48
Foundation/Structure	Bore/Drill Rigs	Diesel	Average	2.00	3.00	83.0	0.50
Foundation/Structure	Cement and Mortar Mixers	Electric	Average	2.00	9.00	10.0	0.56
Foundation/Structure	Concrete/Industrial Saws	Electric	Average	2.00	6.00	33.0	0.73
Foundation/Structure	Cranes	Electric	Average	2.00	12.0	367	0.29
Foundation/Structure	Dumpers/Tenders	Diesel	Average	1.00	3.00	16.0	0.38

Foundation/Structure	Excavators	Diesel	Average	2.00	3.00	36.0	0.38
Foundation/Structure	Forklifts	CNG	Average	3.00	12.0	70.0	0.30
Foundation/Structure	Other Material Handling Equipment	Electric	Average	2.00	12.0	93.0	0.40
Foundation/Structure	Plate Compactors	Diesel	Average	2.00	12.0	8.00	0.43
Foundation/Structure	Pressure Washers	Diesel	Average	2.00	3.00	14.0	0.30
Foundation/Structure	Pumps	Electric	Average	2.00	12.0	11.0	0.74
Foundation/Structure	Rough Terrain Forklifts	Diesel	Average	2.00	3.00	96.0	0.40
Foundation/Structure	Signal Boards	Electric	Average	1.00	12.0	6.00	0.82
Foundation/Structure	Sweepers/Scrubbers	Diesel	Average	1.00	6.00	36.0	0.46
Foundation/Structure	Welders	Electric	Average	4.00	12.0	46.0	0.45

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	12.0	84.0	0.37
Below Slab Utility	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	12.0	84.0	0.37
Shoring/Grading/Excavation	Dumpers/Tenders	Diesel	Average	2.00	12.0	16.0	0.38
Shoring/Grading/Excavation	Excavators	Diesel	Tier 4 Final	3.00	12.0	36.0	0.38
Shoring/Grading/Excavation	Forklifts	Diesel	Tier 4 Final	2.00	12.0	82.0	0.20
Shoring/Grading/Excavation	Generator Sets	Electric	Average	1.00	12.0	14.0	0.74
Building Construction	Aerial Lifts	Electric	Average	4.00	12.0	46.0	0.31
Building Construction	Air Compressors	Electric	Average	4.00	12.0	37.0	0.48
Building Construction	Cement and Mortar Mixers	Electric	Average	2.00	12.0	10.0	0.56

Building Construction	Concrete/Industrial Saws	Electric	Average	1.00	3.00	33.0	0.73
Building Construction	Cranes	Electric	Average	2.00	12.0	367	0.29
Building Construction	Forklifts	CNG	Average	2.00	12.0	70.0	0.30
Building Construction	Other Material Handling Equipment	Electric	Average	2.00	12.0	93.0	0.40
Building Construction	Pressure Washers	Electric	Average	2.00	3.00	14.0	0.30
Building Construction	Welders	Electric	Average	1.00	6.00	46.0	0.45
Site Improvements	Pavers	Diesel	Tier 4 Final	1.00	12.0	81.0	0.42
Site Improvements	Paving Equipment	Diesel	Tier 4 Final	1.00	12.0	89.0	0.36
Architectural Coating	Aerial Lifts	Electric	Average	4.00	8.40	46.0	0.31
Architectural Coating	Air Compressors	Electric	Average	6.00	6.00	37.0	0.48
Architectural Coating	Other Construction Equipment	Electric	Average	2.00	6.00	82.0	0.42
Foundation/Structure	Aerial Lifts	Electric	Average	4.00	12.0	46.0	0.31
Foundation/Structure	Air Compressors	Electric	Average	8.00	12.0	37.0	0.48
Foundation/Structure	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	3.00	83.0	0.50
Foundation/Structure	Cement and Mortar Mixers	Electric	Average	2.00	9.00	10.0	0.56
Foundation/Structure	Concrete/Industrial Saws	Electric	Average	2.00	6.00	33.0	0.73
Foundation/Structure	Cranes	Electric	Average	2.00	12.0	367	0.29
Foundation/Structure	Dumpers/Tenders	Diesel	Average	1.00	3.00	16.0	0.38
Foundation/Structure	Excavators	Diesel	Tier 4 Final	2.00	3.00	36.0	0.38
Foundation/Structure	Forklifts	CNG	Average	3.00	12.0	70.0	0.30
Foundation/Structure	Other Material Handling Equipment	Electric	Average	2.00	12.0	93.0	0.40
Foundation/Structure	Plate Compactors	Diesel	Average	2.00	12.0	8.00	0.43
Foundation/Structure	Pressure Washers	Diesel	Average	2.00	3.00	14.0	0.30
Foundation/Structure	Pumps	Electric	Average	2.00	12.0	11.0	0.74

Foundation/Structure	Rough Terrain Forklifts	Diesel	Tier 4 Final	2.00	3.00	96.0	0.40
Foundation/Structure	Signal Boards	Electric	Average	1.00	12.0	6.00	0.82
Foundation/Structure	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	6.00	36.0	0.46
Foundation/Structure	Welders	Electric	Average	4.00	12.0	46.0	0.45

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	2.50	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Shoring/Grading/Excavation	—	—	—	—
Shoring/Grading/Excavation	Worker	20.0	11.7	LDA,LDT1,LDT2
Shoring/Grading/Excavation	Vendor	—	8.40	HHDT,MHDT
Shoring/Grading/Excavation	Hauling	152	20.0	HHDT
Shoring/Grading/Excavation	Onsite truck	—	—	HHDT
Below Slab Utility	—	—	—	—
Below Slab Utility	Worker	2.50	11.7	LDA,LDT1,LDT2
Below Slab Utility	Vendor	—	8.40	HHDT,MHDT
Below Slab Utility	Hauling	0.00	20.0	HHDT
Below Slab Utility	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	365	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	82.7	8.40	HHDT,MHDT

Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Site Improvements	—	—	—	—
Site Improvements	Worker	5.00	11.7	LDA,LDT1,LDT2
Site Improvements	Vendor	—	8.40	HHDT,MHDT
Site Improvements	Hauling	0.00	20.0	HHDT
Site Improvements	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	73.0	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Foundation/Structure	—	—	—	—
Foundation/Structure	Worker	105	11.7	LDA,LDT1,LDT2
Foundation/Structure	Vendor	—	8.40	HHDT,MHDT
Foundation/Structure	Hauling	28.1	20.0	HHDT
Foundation/Structure	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	2.50	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Shoring/Grading/Excavation	—	—	—	—
Shoring/Grading/Excavation	Worker	20.0	11.7	LDA,LDT1,LDT2

Shoring/Grading/Excavation	Vendor	—	8.40	HHDT,MHDT
Shoring/Grading/Excavation	Hauling	152	20.0	HHDT
Shoring/Grading/Excavation	Onsite truck	—	—	HHDT
Below Slab Utility	—	—	—	—
Below Slab Utility	Worker	2.50	11.7	LDA,LDT1,LDT2
Below Slab Utility	Vendor	—	8.40	HHDT,MHDT
Below Slab Utility	Hauling	0.00	20.0	HHDT
Below Slab Utility	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	365	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	82.7	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Site Improvements	—	—	—	—
Site Improvements	Worker	5.00	11.7	LDA,LDT1,LDT2
Site Improvements	Vendor	—	8.40	HHDT,MHDT
Site Improvements	Hauling	0.00	20.0	HHDT
Site Improvements	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	73.0	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Foundation/Structure	—	—	—	—
Foundation/Structure	Worker	105	11.7	LDA,LDT1,LDT2
Foundation/Structure	Vendor	—	8.40	HHDT,MHDT
Foundation/Structure	Hauling	28.1	20.0	HHDT

Foundation/Structure	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	720,930	240,310	20,168	6,723	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	—	—
Below Slab Utility	—	—	0.00	0.00	—
Shoring/Grading/Excavation	—	97,040	0.00	0.00	—
Site Improvements	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments High Rise	—	0%
Strip Mall	0.00	0%
Unenclosed Parking with Elevator	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	10,625	809	0.03	< 0.005
2025	10,625	809	0.03	< 0.005
2026	5,052	809	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments High Rise	1,183	1,208	955	421,267	6,760	6,899	5,456	2,406,769
Strip Mall	474	450	218	158,398	3,669	3,481	1,692	1,226,389
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments High Rise	1,183	1,208	955	421,267	6,760	6,899	5,456	2,406,769

Strip Mall	474	450	218	158,398	3,669	3,481	1,692	1,226,389
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments High Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments High Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
720930.375	240,310	20,168	6,723	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments High Rise	2,073,118	178	0.0330	0.0040	0.00

Strip Mall	137,341	178	0.0330	0.0040	0.00
Unenclosed Parking with Elevator	748,481	178	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments High Rise	2,073,118	178	0.0330	0.0040	0.00
Strip Mall	137,341	178	0.0330	0.0040	0.00
Unenclosed Parking with Elevator	748,481	178	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments High Rise	12,548,174	0.00
Strip Mall	995,905	0.00
Unenclosed Parking with Elevator	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments High Rise	12,548,174	0.00
Strip Mall	995,905	0.00
Unenclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments High Rise	256	—
Strip Mall	14.1	—
Unenclosed Parking with Elevator	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments High Rise	256	—
Strip Mall	14.1	—
Unenclosed Parking with Elevator	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments High Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments High Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments High Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments High Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	0.00	150	1,350	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.6	annual days of extreme heat
Extreme Precipitation	2.55	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score

Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	20.8
AQ-PM	38.7
AQ-DPM	82.8
Drinking Water	22.7
Lead Risk Housing	29.5
Pesticides	2.90
Toxic Releases	34.5
Traffic	72.7
Effect Indicators	—
CleanUp Sites	72.5
Groundwater	97.5
Haz Waste Facilities/Generators	96.7
Impaired Water Bodies	43.8
Solid Waste	23.0
Sensitive Population	—
Asthma	48.0
Cardio-vascular	15.5
Low Birth Weights	71.8
Socioeconomic Factor Indicators	—

Education	54.4
Housing	40.3
Linguistic	42.8
Poverty	19.9
Unemployment	44.4

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	54.71577056
Employed	42.62799949
Median HI	75.5806493
Education	—
Bachelor's or higher	71.62838445
High school enrollment	100
Preschool enrollment	88.01488515
Transportation	—
Auto Access	38.0341332
Active commuting	82.15064802
Social	—
2-parent households	3.849608623
Voting	72.57795457
Neighborhood	—
Alcohol availability	48.37674836
Park access	81.35506224
Retail density	91.76183755

Supermarket access	55.65250866
Tree canopy	59.01450019
Housing	—
Homeownership	15.06480175
Housing habitability	62.95393302
Low-inc homeowner severe housing cost burden	77.08199666
Low-inc renter severe housing cost burden	81.80418324
Uncrowded housing	54.63877839
Health Outcomes	—
Insured adults	60.27203901
Arthritis	96.4
Asthma ER Admissions	53.7
High Blood Pressure	94.4
Cancer (excluding skin)	89.7
Asthma	72.9
Coronary Heart Disease	92.9
Chronic Obstructive Pulmonary Disease	89.8
Diagnosed Diabetes	89.8
Life Expectancy at Birth	83.6
Cognitively Disabled	64.4
Physically Disabled	65.4
Heart Attack ER Admissions	72.4
Mental Health Not Good	62.3
Chronic Kidney Disease	93.4
Obesity	56.2
Pedestrian Injuries	91.5
Physical Health Not Good	77.4

Stroke	93.8
Health Risk Behaviors	—
Binge Drinking	7.5
Current Smoker	56.0
No Leisure Time for Physical Activity	69.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	59.5
Elderly	92.4
English Speaking	55.7
Foreign-born	48.6
Outdoor Workers	59.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	18.7
Traffic Density	69.8
Traffic Access	87.4
Other Indices	—
Hardship	26.4
Other Decision Support	—
2016 Voting	70.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	51.0
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	San Jose Clean Energy 2020 rate = 178 lb/MWh.
Land Use	Total lot acreage and square footages from provided construction worksheet filled out by applicant (residential and other added together for res square footage). Total number of parking spaces provided by project plans.
Construction: Construction Phases	Schedule provided by project applicant.
Construction: Off-Road Equipment	Construction equipment information provided by filled out construction worksheet from project applicant.
Construction: Trips and VMT	Foundation/Paving = 5,600 concrete truck round trips (28.117 trips/day).
Construction: On-Road Fugitive Dust	Air District Recommended BMP Practices.
Operations: Hearths	No hearths.
Operations: Energy Use	San Jose REACH Code - all electric buildings. Convert natural gas to electricity.
Operations: Water and Waste Water	Wastewater treatment 100% aerobic - no septic tanks or lagoons.
Operations: Vehicle Data	Provided trip gen with adjustments.
Operations: Emergency Generators and Fire Pumps	150 hours for criteria analysis.

2. Emissions Summary - HRA

2.2 Construction Emissions by Year, Unmitigated

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO_2e
Daily - Summer (Max)										
2024	2.2665679	23.728350	0.6411441	0.2883160	0.9294602	0.5868410	0.0715201	0.6583612	1.8226186	5098.421966235955
2025	12.513311	15.737512	0.1851834	0.4790851	0.6642685	0.1701894	0.1162296	0.2864191	2.4945120	3974.1284031556975
2026	12.008894	9.5713968	0.2112879	0.3823669	0.5936548	0.1946767	0.0925325	0.2872092	1.7982489	2561.509513664959
Daily - Winter (Max)										
2024	12.570817	16.219435	0.2160644	0.4790851	0.6951495	0.1985999	0.1162296	0.3148296	0.0688076	3989.3329521964206
2025	12.446128	15.905489	0.1851834	0.4790851	0.6642685	0.1701894	0.1162296	0.2864191	0.0647302	3951.950052425865
2026	11.946651	9.7005889	0.2112879	0.3823669	0.5936548	0.1946767	0.0925325	0.2872092	0.0466471	2543.520194001758
Average Daily										
2024	1.1506896	6.9019394	0.1566101	0.1141078	0.2707180	0.1433969	0.0280607	0.1714577	0.2959004	1541.7390568127291
2025	10.552545	12.322910	0.1397433	0.3980073	0.5377506	0.1284677	0.0965318	0.2249995	0.8962772	3117.7183374180654
2026	5.4114546	3.3301026	0.0886941	0.1157025	0.2043967	0.0816787	0.0279172	0.1095960	0.2302249	873.9331702786797
Annual										
2024	0.2100008	1.2596039	0.0285813	0.0208246	0.0494060	0.0261699	0.0051210	0.0312910	0.0489897	255.25249509513935
2025	1.9258396	2.2489311	0.0255031	0.0726363	0.0981395	0.0234453	0.0176170	0.0410624	0.1483889	516.1738499866616
2026	0.9875904	0.6077437	0.0161866	0.0211157	0.0373024	0.0149063	0.0050948	0.0200012	0.0381163	144.6896096160418

2. Emissions Summary - HRA

2.3 Construction Emissions by Year, Mitigated

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO_2e
Daily - Summer (Max)										
2024	1.1149248	15.830618	0.1529840	0.2883160	0.4413000	0.1411197	0.0715201	0.2126399	1.8226186	4971.68956203359
2025	12.155846	13.004525	0.0661395	0.4790851	0.5452246	0.0618346	0.1162296	0.1780642	2.4945120	3859.6860208780577
2026	11.626873	5.1916092	0.0211239	0.3823669	0.4034909	0.0211239	0.0925325	0.1136565	1.7982489	2447.058009032419
Daily - Winter (Max)										
2024	12.162563	13.243779	0.0663411	0.4790851	0.5454262	0.0620200	0.1162296	0.1782497	0.0688076	3894.7368992305624
2025	12.088663	13.172501	0.0661395	0.4790851	0.5452246	0.0618346	0.1162296	0.1780642	0.0647302	3837.5076701482253
2026	11.564630	5.3208013	0.0211239	0.3823669	0.4034909	0.0211239	0.0925325	0.1136565	0.0466471	2429.068689369218
Average Daily										
2024	0.8663677	5.0129477	0.0405348	0.1141078	0.1546427	0.0374101	0.0280607	0.0654709	0.2959004	1517.4510798691726
2025	10.277662	10.213674	0.0490599	0.3980073	0.4470672	0.0458956	0.0965318	0.1424274	0.8962772	3035.069075255186
2026	5.2587387	1.5318420	0.0087109	0.1157025	0.1244135	0.0087109	0.0279172	0.0366282	0.2302249	851.2350861086632
Annual										
2024	0.1581121	0.9148629	0.0073976	0.0208246	0.0282222	0.0068273	0.0051210	0.0119484	0.0489897	251.23134333910065
2025	1.8756733	1.8639955	0.0089534	0.0726363	0.0815897	0.0083759	0.0176170	0.0259930	0.1483889	502.49032144684475
2026	0.9597198	0.2795611	0.0015897	0.0211157	0.0227054	0.0015897	0.0050948	0.0066846	0.0381163	140.9316827524299

4.8. Stationary Emissions By Equipment Type - HRA

4.8.1 Unmitigated

Equipment	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	R	CO_2e
Daily, Summer (Max)										
Emergency	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)										
Emergency	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Annual										
Emergency	0.0553786	0.2476827	0.0081474	0	0.0081474	0.0081474	0	0.0081474	0	25.78965127142863
Total	0.0553786	0.2476827	0.0081474	0	0.0081474	0.0081474	0	0.0081474	0	25.78965127142863

5.3. Construction Vehicles - HRA

5.3.1 Unmitigated

Phase Nam	Trip Type	One-Way T	Miles per T	Vehicle Mix
Demolition				
Demolitior	Worker	2.5	1	LDA,LDT1,LDT2
Demolitior	Vendor		1	HHDT,MHDT
Demolitior	Hauling	0	1	HHDT
Demolitior	Onsite truc			HHDT
Shoring/Grading/Excavation				
Shoring/Gr	Worker	20	1	LDA,LDT1,LDT2
Shoring/Gr	Vendor		1	HHDT,MHDT
Shoring/Gr	Hauling	151.625	1	HHDT
Shoring/Gr	Onsite truc			HHDT
Below Slab Utility				
Below Slab	Worker	2.5	1	LDA,LDT1,LDT2
Below Slab	Vendor		1	HHDT,MHDT
Below Slab	Hauling	0	1	HHDT
Below Slab	Onsite truc			HHDT
Building Construction				
Building Cc	Worker	364.97734	1	LDA,LDT1,LDT2
Building Cc	Vendor	82.724022	1	HHDT,MHDT
Building Cc	Hauling	0	1	HHDT
Building Cc	Onsite truc			HHDT
Site Improvements				
Site Impro	Worker	5	1	LDA,LDT1,LDT2
Site Impro	Vendor		1	HHDT,MHDT
Site Impro	Hauling	0	1	HHDT
Site Impro	Onsite truc			HHDT
Architectural Coating				
Architectu	Worker	72.995468	1	LDA,LDT1,LDT2
Architectu	Vendor		1	HHDT,MHDT
Architectu	Hauling	0	1	HHDT
Architectu	Onsite truc			HHDT
Foundation/Structure				
Foundatior	Worker	105	1	LDA,LDT1,LDT2
Foundatior	Vendor		1	HHDT,MHDT
Foundatior	Hauling	28.117	1	HHDT
Foundatior	Onsite truc			HHDT

5.3. Construction Vehicles - HRA

5.3.2 Mitigated

Phase Nam	Trip Type	One-Way T	Miles per T	Vehicle Mix
Demolition				
Demolitior	Worker	2.5	1	LDA,LDT1,LDT2
Demolitior	Vendor		1	HHDT,MHDT
Demolitior	Hauling	0	1	HHDT
Demolitior	Onsite truc			HHDT
Shoring/Grading/Excavation				
Shoring/Gr	Worker	20	1	LDA,LDT1,LDT2
Shoring/Gr	Vendor		1	HHDT,MHDT
Shoring/Gr	Hauling	151.625	1	HHDT
Shoring/Gr	Onsite truc			HHDT
Below Slab Utility				
Below Slab	Worker	2.5	1	LDA,LDT1,LDT2
Below Slab	Vendor		1	HHDT,MHDT
Below Slab	Hauling	0	1	HHDT
Below Slab	Onsite truc			HHDT
Building Construction				
Building Cc	Worker	364.97734	1	LDA,LDT1,LDT2
Building Cc	Vendor	82.724022	1	HHDT,MHDT
Building Cc	Hauling	0	1	HHDT
Building Cc	Onsite truc			HHDT
Site Improvements				
Site Impro	Worker	5	1	LDA,LDT1,LDT2
Site Impro	Vendor		1	HHDT,MHDT
Site Impro	Hauling	0	1	HHDT
Site Impro	Onsite truc			HHDT
Architectural Coating				
Architectu	Worker	72.995468	1	LDA,LDT1,LDT2
Architectu	Vendor		1	HHDT,MHDT
Architectu	Hauling	0	1	HHDT
Architectu	Onsite truc			HHDT
Foundation/Structure				
Foundatior	Worker	105	1	LDA,LDT1,LDT2
Foundatior	Vendor		1	HHDT,MHDT
Foundatior	Hauling	28.117	1	HHDT
Foundatior	Onsite truc			HHDT

23-085 Power Park (Terraine Site), San Jose BMPs T4i 2036 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-085 Power Park (Terraine Site), San Jose BMPs T4i 2036
Construction Start Date	5/1/2034
Operational Year	2036
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	1.60
Location	Terraine St & Bassett St, San Jose, CA 95110, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1850
EDFZ	1
Electric Utility	San Jose Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

General Office Building	296	1000sqft	0.65	296,064	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	16.6	30.2	0.31	1.35	1.67	0.29	0.33	0.62	8,618
Mit.	16.1	21.7	0.13	1.35	1.49	0.13	0.33	0.46	8,618
% Reduced	3%	28%	57%	—	11%	54%	—	25%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	16.6	14.5	0.09	1.28	1.37	0.08	0.31	0.40	4,443
Mit.	16.1	13.6	0.06	1.28	1.34	0.06	0.31	0.37	4,443
% Reduced	3%	6%	33%	—	2%	31%	—	6%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	8.14	8.66	0.08	0.45	0.53	0.08	0.11	0.19	2,492
Mit.	7.98	6.57	0.04	0.45	0.48	0.04	0.11	0.15	2,492
% Reduced	2%	24%	54%	—	9%	52%	—	21%	—
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	1.49	1.58	0.02	0.08	0.10	0.01	0.02	0.03	412

Mit.	1.46	1.20	0.01	0.08	0.09	0.01	0.02	0.03	412
% Reduced	2%	24%	54%	—	9%	52%	—	21%	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2034	2.63	30.2	0.31	1.35	1.67	0.29	0.33	0.62	8,618
2035	16.6	14.3	0.09	1.28	1.37	0.08	0.31	0.39	4,451
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2034	16.6	14.5	0.09	1.28	1.37	0.08	0.31	0.40	4,443
2035	16.6	14.4	0.09	1.28	1.37	0.08	0.31	0.39	4,389
Average Daily	—	—	—	—	—	—	—	—	—
2034	1.38	8.66	0.08	0.45	0.53	0.08	0.11	0.19	2,492
2035	8.14	4.52	0.04	0.40	0.43	0.04	0.10	0.13	1,424
Annual	—	—	—	—	—	—	—	—	—
2034	0.25	1.58	0.02	0.08	0.10	0.01	0.02	0.03	412
2035	1.49	0.82	0.01	0.07	0.08	0.01	0.02	0.02	236

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2034	1.04	21.7	0.13	1.35	1.49	0.13	0.33	0.46	8,618
2035	16.1	13.5	0.06	1.28	1.34	0.06	0.31	0.37	4,451

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2034	16.1	13.6	0.06	1.28	1.34	0.06	0.31	0.37	4,443
2035	16.1	13.6	0.06	1.28	1.34	0.06	0.31	0.37	4,389
Average Daily	—	—	—	—	—	—	—	—	—
2034	0.96	6.57	0.04	0.45	0.48	0.04	0.11	0.15	2,492
2035	7.98	3.81	0.02	0.40	0.42	0.02	0.10	0.12	1,424
Annual	—	—	—	—	—	—	—	—	—
2034	0.17	1.20	0.01	0.08	0.09	0.01	0.02	0.03	412
2035	1.46	0.70	< 0.005	0.07	0.08	< 0.005	0.02	0.02	236

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	14.8	3.43	0.08	13.3	13.4	0.07	3.38	3.44	17,205
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	12.5	3.89	0.05	13.3	13.4	0.05	3.38	3.43	16,404
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	12.2	2.82	0.05	10.1	10.1	0.05	2.55	2.60	13,622
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	2.23	0.51	0.01	1.84	1.85	0.01	0.47	0.47	2,255

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	5.48	3.32	0.05	13.3	13.4	0.05	3.38	3.43	12,621
Area	9.30	0.11	0.02	—	0.02	0.02	—	0.02	53.1
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	3,685
Water	—	—	—	—	—	—	—	—	326
Waste	—	—	—	—	—	—	—	—	519
Refrig.	—	—	—	—	—	—	—	—	0.72
Total	14.8	3.43	0.08	13.3	13.4	0.07	3.38	3.44	17,205
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	5.31	3.89	0.05	13.3	13.4	0.05	3.38	3.43	11,874
Area	7.18	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	3,685
Water	—	—	—	—	—	—	—	—	326
Waste	—	—	—	—	—	—	—	—	519
Refrig.	—	—	—	—	—	—	—	—	0.72
Total	12.5	3.89	0.05	13.3	13.4	0.05	3.38	3.43	16,404
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	3.97	2.77	0.04	10.1	10.1	0.04	2.55	2.59	9,065
Area	8.23	0.05	0.01	—	0.01	0.01	—	0.01	26.2
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	3,685
Water	—	—	—	—	—	—	—	—	326
Waste	—	—	—	—	—	—	—	—	519
Refrig.	—	—	—	—	—	—	—	—	0.72
Total	12.2	2.82	0.05	10.1	10.1	0.05	2.55	2.60	13,622
Annual	—	—	—	—	—	—	—	—	—
Mobile	0.73	0.50	0.01	1.84	1.85	0.01	0.47	0.47	1,501
Area	1.50	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.34

Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	610
Water	—	—	—	—	—	—	—	—	54.0
Waste	—	—	—	—	—	—	—	—	86.0
Refrig.	—	—	—	—	—	—	—	—	0.12
Total	2.23	0.51	0.01	1.84	1.85	0.01	0.47	0.47	2,255

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	5.48	3.32	0.05	13.3	13.4	0.05	3.38	3.43	12,621
Area	9.30	0.11	0.02	—	0.02	0.02	—	0.02	53.1
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	3,685
Water	—	—	—	—	—	—	—	—	326
Waste	—	—	—	—	—	—	—	—	519
Refrig.	—	—	—	—	—	—	—	—	0.72
Total	14.8	3.43	0.08	13.3	13.4	0.07	3.38	3.44	17,205
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	5.31	3.89	0.05	13.3	13.4	0.05	3.38	3.43	11,874
Area	7.18	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	3,685
Water	—	—	—	—	—	—	—	—	326
Waste	—	—	—	—	—	—	—	—	519
Refrig.	—	—	—	—	—	—	—	—	0.72
Total	12.5	3.89	0.05	13.3	13.4	0.05	3.38	3.43	16,404
Average Daily	—	—	—	—	—	—	—	—	—

Mobile	3.97	2.77	0.04	10.1	10.1	0.04	2.55	2.59	9,065
Area	8.23	0.05	0.01	—	0.01	0.01	—	0.01	26.2
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	3,685
Water	—	—	—	—	—	—	—	—	326
Waste	—	—	—	—	—	—	—	—	519
Refrig.	—	—	—	—	—	—	—	—	0.72
Total	12.2	2.82	0.05	10.1	10.1	0.05	2.55	2.60	13,622
Annual	—	—	—	—	—	—	—	—	—
Mobile	0.73	0.50	0.01	1.84	1.85	0.01	0.47	0.47	1,501
Area	1.50	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.34
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	610
Water	—	—	—	—	—	—	—	—	54.0
Waste	—	—	—	—	—	—	—	—	86.0
Refrig.	—	—	—	—	—	—	—	—	0.12
Total	2.23	0.51	0.01	1.84	1.85	0.01	0.47	0.47	2,255

3. Construction Emissions Details

3.1. Demolition (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	15.8	0.22	—	0.22	0.21	—	0.21	4,048
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	3.71	0.05	—	0.05	0.05	—	0.05	954
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.68	0.01	—	0.01	0.01	—	0.01	158
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.03	0.00	0.23	0.23	0.00	0.05	0.05	206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.05	0.05	0.00	0.01	0.01	45.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Demolition (2034) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	8.13	0.07	—	0.07	0.07	—	0.07	4,048
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.91	0.02	—	0.02	0.02	—	0.02	954
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.35	< 0.005	—	< 0.005	< 0.005	—	< 0.005	158
Demolition	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.03	0.00	0.23	0.23	0.00	0.05	0.05	206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.05	0.05	0.00	0.01	0.01	45.4

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Building Construction (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	13.1	0.08	—	0.08	0.08	—	0.08	2,581
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	13.1	0.08	—	0.08	0.08	—	0.08	2,581
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	4.51	0.03	—	0.03	0.03	—	0.03	885
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.82	0.01	—	0.01	< 0.005	—	< 0.005	147
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.20	0.11	0.00	0.78	0.78	0.00	0.18	0.18	709
Vendor	0.03	1.12	0.01	0.34	0.35	0.01	0.09	0.10	1,052
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.19	0.15	0.00	0.78	0.78	0.00	0.18	0.18	656
Vendor	0.03	1.19	0.01	0.34	0.35	0.01	0.09	0.10	1,052
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.00	0.27	0.27	0.00	0.06	0.06	228
Vendor	0.01	0.40	< 0.005	0.12	0.12	< 0.005	0.03	0.04	361
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.05	0.05	0.00	0.01	0.01	37.7
Vendor	< 0.005	0.07	< 0.005	0.02	0.02	< 0.005	0.01	0.01	59.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Building Construction (2034) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	12.3	0.05	—	0.05	0.05	—	0.05	2,581
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.29	12.3	0.05	—	0.05	0.05	—	0.05	2,581
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	4.21	0.02	—	0.02	0.02	—	0.02	885
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.77	< 0.005	—	< 0.005	< 0.005	—	< 0.005	147
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.20	0.11	0.00	0.78	0.78	0.00	0.18	0.18	709
Vendor	0.03	1.12	0.01	0.34	0.35	0.01	0.09	0.10	1,052
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.19	0.15	0.00	0.78	0.78	0.00	0.18	0.18	656
Vendor	0.03	1.19	0.01	0.34	0.35	0.01	0.09	0.10	1,052
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.00	0.27	0.27	0.00	0.06	0.06	228
Vendor	0.01	0.40	< 0.005	0.12	0.12	< 0.005	0.03	0.04	361
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.05	0.05	0.00	0.01	0.01	37.7
Vendor	< 0.005	0.07	< 0.005	0.02	0.02	< 0.005	0.01	0.01	59.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	13.1	0.08	—	0.08	0.07	—	0.07	2,581
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	13.1	0.08	—	0.08	0.07	—	0.07	2,581
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	3.60	0.02	—	0.02	0.02	—	0.02	709
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.66	< 0.005	—	< 0.005	< 0.005	—	< 0.005	117
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.20	0.11	0.00	0.78	0.78	0.00	0.18	0.18	701
Vendor	0.03	1.09	0.01	0.34	0.35	0.01	0.09	0.10	1,015
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.19	0.12	0.00	0.78	0.78	0.00	0.18	0.18	649

Vendor	0.03	1.15	0.01	0.34	0.35	0.01	0.09	0.10	1,015
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.05	0.03	0.00	0.21	0.21	0.00	0.05	0.05	180
Vendor	0.01	0.31	< 0.005	0.09	0.10	< 0.005	0.03	0.03	279
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	29.9
Vendor	< 0.005	0.06	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	46.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Building Construction (2035) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	12.3	0.05	—	0.05	0.05	—	0.05	2,581
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	12.3	0.05	—	0.05	0.05	—	0.05	2,581
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	3.37	0.01	—	0.01	0.01	—	0.01	709
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.62	< 0.005	—	< 0.005	< 0.005	—	< 0.005	117
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.20	0.11	0.00	0.78	0.78	0.00	0.18	0.18	701
Vendor	0.03	1.09	0.01	0.34	0.35	0.01	0.09	0.10	1,015
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.19	0.12	0.00	0.78	0.78	0.00	0.18	0.18	649
Vendor	0.03	1.15	0.01	0.34	0.35	0.01	0.09	0.10	1,015
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.05	0.03	0.00	0.21	0.21	0.00	0.05	0.05	180
Vendor	0.01	0.31	< 0.005	0.09	0.10	< 0.005	0.03	0.03	279
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	29.9
Vendor	< 0.005	0.06	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	46.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Site Improvements (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.23	2.58	0.07	—	0.07	0.06	—	0.06	770
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.56	0.02	—	0.02	0.01	—	0.01	169
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.9
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	37.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Site Improvements (2035) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.38	0.01	—	0.01	0.01	—	0.01	770
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	169
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.9
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	37.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	15.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	0.66	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	0.12	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.16	0.16	0.00	0.04	0.04	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.61
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.93
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Architectural Coating (2034) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	15.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	0.66	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	0.12	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.16	0.16	0.00	0.04	0.04	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.61
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.93

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	15.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	15.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	7.80	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Architectural Coatings	1.42	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.02	0.00	0.16	0.16	0.00	0.04	0.04	140
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.02	0.00	0.16	0.16	0.00	0.04	0.04	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	0.08	0.08	0.00	0.02	0.02	65.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2035) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	15.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	15.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	7.80	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	1.42	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.02	0.00	0.16	0.16	0.00	0.04	0.04	140
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.02	0.00	0.16	0.16	0.00	0.04	0.04	130

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	0.08	0.08	0.00	0.02	0.02	65.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	5.48	3.32	0.05	13.3	13.4	0.05	3.38	3.43	12,621
Total	5.48	3.32	0.05	13.3	13.4	0.05	3.38	3.43	12,621
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	5.31	3.89	0.05	13.3	13.4	0.05	3.38	3.43	11,874
Total	5.31	3.89	0.05	13.3	13.4	0.05	3.38	3.43	11,874
Annual	—	—	—	—	—	—	—	—	—

General Office Building	0.73	0.50	0.01	1.84	1.85	0.01	0.47	0.47	1,501
Total	0.73	0.50	0.01	1.84	1.85	0.01	0.47	0.47	1,501

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	5.48	3.32	0.05	13.3	13.4	0.05	3.38	3.43	12,621
Total	5.48	3.32	0.05	13.3	13.4	0.05	3.38	3.43	12,621
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	5.31	3.89	0.05	13.3	13.4	0.05	3.38	3.43	11,874
Total	5.31	3.89	0.05	13.3	13.4	0.05	3.38	3.43	11,874
Annual	—	—	—	—	—	—	—	—	—
General Office Building	0.73	0.50	0.01	1.84	1.85	0.01	0.47	0.47	1,501
Total	0.73	0.50	0.01	1.84	1.85	0.01	0.47	0.47	1,501

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	3,685

Total	—	—	—	—	—	—	—	—	3,685
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	3,685
Total	—	—	—	—	—	—	—	—	3,685
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	610
Total	—	—	—	—	—	—	—	—	610

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	3,685
Total	—	—	—	—	—	—	—	—	3,685
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	3,685
Total	—	—	—	—	—	—	—	—	3,685
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	610
Total	—	—	—	—	—	—	—	—	610

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Consumer Products	6.34	—	—	—	—	—	—	—	—
Architectural Coatings	0.85	—	—	—	—	—	—	—	—
Landscape Equipment	2.12	0.11	0.02	—	0.02	0.02	—	0.02	53.1
Total	9.30	0.11	0.02	—	0.02	0.02	—	0.02	53.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Consumer Products	6.34	—	—	—	—	—	—	—	—
Architectural Coatings	0.85	—	—	—	—	—	—	—	—
Total	7.18	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Consumer Products	1.16	—	—	—	—	—	—	—	—
Architectural Coatings	0.15	—	—	—	—	—	—	—	—
Landscape Equipment	0.19	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.34
Total	1.50	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.34

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Consumer Products	6.34	—	—	—	—	—	—	—	—
Architectural Coatings	0.85	—	—	—	—	—	—	—	—
Landscape Equipment	2.12	0.11	0.02	—	0.02	0.02	—	0.02	53.1
Total	9.30	0.11	0.02	—	0.02	0.02	—	0.02	53.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Consumer Products	6.34	—	—	—	—	—	—	—	—
Architectural Coatings	0.85	—	—	—	—	—	—	—	—
Total	7.18	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Consumer Products	1.16	—	—	—	—	—	—	—	—
Architectural Coatings	0.15	—	—	—	—	—	—	—	—
Landscape Equipment	0.19	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.34
Total	1.50	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.34

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	326
Total	—	—	—	—	—	—	—	—	326
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	326
Total	—	—	—	—	—	—	—	—	326
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	54.0
Total	—	—	—	—	—	—	—	—	54.0

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	326
Total	—	—	—	—	—	—	—	—	326
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	326
Total	—	—	—	—	—	—	—	—	326
Annual	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	54.0
Total	—	—	—	—	—	—	—	—	54.0

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	519
Total	—	—	—	—	—	—	—	—	519
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	519
Total	—	—	—	—	—	—	—	—	519
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	86.0
Total	—	—	—	—	—	—	—	—	86.0

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	519

Total	—	—	—	—	—	—	—	—	519
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	519
Total	—	—	—	—	—	—	—	—	519
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	86.0
Total	—	—	—	—	—	—	—	—	86.0

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.72
Total	—	—	—	—	—	—	—	—	0.72
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.72
Total	—	—	—	—	—	—	—	—	0.72
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.12
Total	—	—	—	—	—	—	—	—	0.12

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.72
Total	—	—	—	—	—	—	—	—	0.72
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.72
Total	—	—	—	—	—	—	—	—	0.72
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.12
Total	—	—	—	—	—	—	—	—	0.12

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	5/1/2034	8/8/2034	6.00	86.0	—
Building Construction	Building Construction	8/8/2034	4/27/2035	6.00	226	—
Site Improvements	Paving	5/1/2035	8/1/2035	6.00	80.0	—
Architectural Coating	Architectural Coating	12/14/2034	8/1/2035	6.00	198	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	4.00	10.0	33.0	0.73
Demolition	Other Material Handling Equipment	Diesel	Average	6.00	10.0	93.0	0.40
Demolition	Sweepers/Scrubbers	Diesel	Average	1.00	10.0	36.0	0.46
Building Construction	Aerial Lifts	Electric	Average	6.00	10.0	46.0	0.31
Building Construction	Air Compressors	Electric	Average	9.00	10.0	37.0	0.48
Building Construction	Concrete/Industrial Saws	Diesel	Average	4.00	10.0	33.0	0.73
Building Construction	Forklifts	CNG	Average	4.00	10.0	70.0	0.30
Building Construction	Other Material Handling Equipment	Electric	Average	6.00	10.0	93.0	0.40
Building Construction	Pressure Washers	Diesel	Average	2.00	10.0	14.0	0.30
Building Construction	Welders	Electric	Average	1.00	10.0	46.0	0.45
Site Improvements	Pavers	Diesel	Average	1.00	10.0	81.0	0.42
Site Improvements	Paving Equipment	Diesel	Average	1.00	10.0	89.0	0.36
Architectural Coating	Air Compressors	Electric	Average	5.00	5.00	37.0	0.48

Architectural Coating	Aerial Lifts	Electric	Average	9.00	7.00	46.0	0.31
Architectural Coating	Other Construction Equipment	Electric	Average	11.0	5.00	82.0	0.42

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Final	4.00	10.0	33.0	0.73
Demolition	Other Material Handling Equipment	Diesel	Tier 4 Final	6.00	10.0	93.0	0.40
Demolition	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	10.0	36.0	0.46
Building Construction	Aerial Lifts	Electric	Average	6.00	10.0	46.0	0.31
Building Construction	Air Compressors	Electric	Average	9.00	10.0	37.0	0.48
Building Construction	Concrete/Industrial Saws	Diesel	Tier 4 Final	4.00	10.0	33.0	0.73
Building Construction	Forklifts	CNG	Average	4.00	10.0	70.0	0.30
Building Construction	Other Material Handling Equipment	Electric	Average	6.00	10.0	93.0	0.40
Building Construction	Pressure Washers	Diesel	Average	2.00	10.0	14.0	0.30
Building Construction	Welders	Electric	Average	1.00	10.0	46.0	0.45
Site Improvements	Pavers	Diesel	Tier 4 Final	1.00	10.0	81.0	0.42
Site Improvements	Paving Equipment	Diesel	Tier 4 Final	1.00	10.0	89.0	0.36
Architectural Coating	Air Compressors	Electric	Average	5.00	5.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	9.00	7.00	46.0	0.31
Architectural Coating	Other Construction Equipment	Electric	Average	11.0	5.00	82.0	0.42

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	27.5	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	94.7	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	48.5	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Site Improvements	—	—	—	—
Site Improvements	Worker	5.00	11.7	LDA,LDT1,LDT2
Site Improvements	Vendor	—	8.40	HHDT,MHDT
Site Improvements	Hauling	0.00	20.0	HHDT
Site Improvements	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	18.9	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—

Demolition	Worker	27.5	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	94.7	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	48.5	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Site Improvements	—	—	—	—
Site Improvements	Worker	5.00	11.7	LDA,LDT1,LDT2
Site Improvements	Vendor	—	8.40	HHDT,MHDT
Site Improvements	Hauling	0.00	20.0	HHDT
Site Improvements	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	18.9	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	444,096	148,032	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	—	—
Site Improvements	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2034	6,062	809	0.03	< 0.005
2035	6,062	809	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	2,440	554	175	674,007	18,888	4,287	1,352	5,218,474

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	2,440	554	175	674,007	18,888	4,287	1,352	5,218,474

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	444,096	148,032	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	7,471,301	178	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	7,471,301	178	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	47,207,328	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	47,207,328	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	275	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	275	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.6	annual days of extreme heat

Extreme Precipitation	2.55	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	20.8
AQ-PM	38.7
AQ-DPM	82.8
Drinking Water	22.7
Lead Risk Housing	29.5
Pesticides	2.90

Toxic Releases	34.5
Traffic	72.7
Effect Indicators	—
CleanUp Sites	72.5
Groundwater	97.5
Haz Waste Facilities/Generators	96.7
Impaired Water Bodies	43.8
Solid Waste	23.0
Sensitive Population	—
Asthma	48.0
Cardio-vascular	15.5
Low Birth Weights	71.8
Socioeconomic Factor Indicators	—
Education	54.4
Housing	40.3
Linguistic	42.8
Poverty	19.9
Unemployment	44.4

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	54.71577056
Employed	42.62799949
Median HI	75.5806493
Education	—

Bachelor's or higher	71.62838445
High school enrollment	100
Preschool enrollment	88.01488515
Transportation	—
Auto Access	38.0341332
Active commuting	82.15064802
Social	—
2-parent households	3.849608623
Voting	72.57795457
Neighborhood	—
Alcohol availability	48.37674836
Park access	81.35506224
Retail density	91.76183755
Supermarket access	55.65250866
Tree canopy	59.01450019
Housing	—
Homeownership	15.06480175
Housing habitability	62.95393302
Low-inc homeowner severe housing cost burden	77.08199666
Low-inc renter severe housing cost burden	81.80418324
Uncrowded housing	54.63877839
Health Outcomes	—
Insured adults	60.27203901
Arthritis	96.4
Asthma ER Admissions	53.7
High Blood Pressure	94.4
Cancer (excluding skin)	89.7

Asthma	72.9
Coronary Heart Disease	92.9
Chronic Obstructive Pulmonary Disease	89.8
Diagnosed Diabetes	89.8
Life Expectancy at Birth	83.6
Cognitively Disabled	64.4
Physically Disabled	65.4
Heart Attack ER Admissions	72.4
Mental Health Not Good	62.3
Chronic Kidney Disease	93.4
Obesity	56.2
Pedestrian Injuries	91.5
Physical Health Not Good	77.4
Stroke	93.8
Health Risk Behaviors	—
Binge Drinking	7.5
Current Smoker	56.0
No Leisure Time for Physical Activity	69.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	59.5
Elderly	92.4
English Speaking	55.7
Foreign-born	48.6
Outdoor Workers	59.1
Climate Change Adaptive Capacity	—

Impervious Surface Cover	18.7
Traffic Density	69.8
Traffic Access	87.4
Other Indices	—
Hardship	26.4
Other Decision Support	—
2016 Voting	70.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	51.0
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Characteristics: Utility Information	San Jose Clean Energy 2020 rate = 178 lb/mWh.
Land Use	Square footage of parking lot conversion to office building. Total lot acreage estimated from Google Earth.
Construction: Construction Phases	Provided dates.
Construction: Off-Road Equipment	Provided by construction worksheet filled out by applicant.
Construction: On-Road Fugitive Dust	Air District BMPS required by San Jose as Standard Permit Conditions.
Operations: Energy Use	San Jose REACH Code - all electric buildings. Convert natural gas to electricity.
Operations: Water and Waste Water	Wastewater treatment 100% aerobic - no septic tanks or lagoons.
Operations: Vehicle Data	Provided trip gen with adjustments.
Construction: Trips and VMT	One mile for onsite trips.

2. Emissions Summary - HRA

2.2 Construction Emissions by Year, Unmitigated

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily - Summer (Max)									
2034	2.5968388	29.448796	0.3066589	0.1270708	0.4337297	0.2822118	0.0314900	0.3137018	6915.4290352631115
2035	16.589187	13.638538	0.0771634	0.1210286	0.1981920	0.0710759	0.0300737	0.1011497	2846.8443019116007
Daily - Winter (Max)									
2034	16.588701	13.731263	0.0827354	0.1210286	0.2037640	0.0762022	0.0300737	0.1062759	2856.7023250888
2035	16.582035	13.677448	0.0771634	0.1210286	0.1981920	0.0710759	0.0300737	0.1011497	2842.8725296609723
Average Daily									
2034	1.3711468	8.4126537	0.0811264	0.0420084	0.1231349	0.0746657	0.0104305	0.0850963	1939.8230782183853
2035	8.1325459	4.3199794	0.0365010	0.0370093	0.0735104	0.0336045	0.0091427	0.0427473	963.5577757459289
Annual									
2034	0.2502342	1.5353093	0.0148055	0.0076665	0.0224721	0.0136264	0.0019035	0.0155300	321.1598477514087
2035	1.4841896	0.7883962	0.0066614	0.0067542	0.0134156	0.0061328	0.0016685	0.0078013	159.52798584212428

2. Emissions Summary - HRA

2.3 Construction Emissions by Year, Mitigated

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily - Summer (Max)									
2034	1.0045860	20.961319	0.1270780	0.1270708	0.2541488	0.1246250	0.0314900	0.1561150	6915.4290352631115
2035	16.114394	12.815492	0.0528820	0.1210286	0.1739106	0.0504365	0.0300737	0.0805103	2846.8443019116007
Daily - Winter (Max)									
2034	16.109821	12.873186	0.0529762	0.1210286	0.1740048	0.0505232	0.0300737	0.0805969	2856.7023250888
2035	16.107242	12.854402	0.0528820	0.1210286	0.1739106	0.0504365	0.0300737	0.0805103	2842.8725296609723
Average Daily									
2034	0.9446305	6.3208437	0.0356228	0.0420084	0.0776313	0.0347818	0.0104305	0.0452124	1939.8230782183853
2035	7.9667782	3.6120390	0.0177216	0.0370093	0.0547310	0.0170497	0.0091427	0.0261925	963.5577757459289
Annual									
2034	0.1723950	1.1535539	0.0065011	0.0076665	0.0141677	0.0063476	0.0019035	0.0082512	321.1598477514087
2035	1.4539370	0.6591971	0.0032342	0.0067542	0.0099884	0.0031115	0.0016685	0.0047801	159.52798584212428

5.3. Construction Vehicles - HRA

5.3.1 Unmitigated

Phase Nam	Trip Type	One-Way T	Miles per T	Vehicle Mix
Demolition				
Demolitior	Worker	27.5	1	LDA,LDT1,LDT2
Demolitior	Vendor		1	HHDT,MHDT
Demolitior	Hauling	0	1	HHDT
Demolitior	Onsite truc			HHDT
Building Construction				
Building Cc	Worker	94.74048	1	LDA,LDT1,LDT2
Building Cc	Vendor	48.524889	1	HHDT,MHDT
Building Cc	Hauling	0	1	HHDT
Building Cc	Onsite truc			HHDT
Site Improvements				
Site Impro	Worker	5	1	LDA,LDT1,LDT2
Site Impro	Vendor		1	HHDT,MHDT
Site Impro	Hauling	0	1	HHDT
Site Impro	Onsite truc			HHDT
Architectural Coating				
Architectui	Worker	18.948096	1	LDA,LDT1,LDT2
Architectui	Vendor		1	HHDT,MHDT
Architectui	Hauling	0	1	HHDT
Architectui	Onsite truc			HHDT

5.3. Construction Vehicles - HRA

5.3.2 Mitigated

Phase Nam	Trip Type	One-Way T	Miles per T	Vehicle Mix
Demolition				
Demolitior	Worker	27.5	1	LDA,LDT1,LDT2
Demolitior	Vendor		1	HHDT,MHDT
Demolitior	Hauling	0	1	HHDT
Demolitior	Onsite truc			HHDT
Building Construction				
Building Cc	Worker	94.74048	1	LDA,LDT1,LDT2
Building Cc	Vendor	48.524889	1	HHDT,MHDT
Building Cc	Hauling	0	1	HHDT
Building Cc	Onsite truc			HHDT
Site Improvements				
Site Impro	Worker	5	1	LDA,LDT1,LDT2
Site Impro	Vendor		1	HHDT,MHDT
Site Impro	Hauling	0	1	HHDT
Site Impro	Onsite truc			HHDT
Architectural Coating				
Architectu	Worker	18.948096	1	LDA,LDT1,LDT2
Architectu	Vendor		1	HHDT,MHDT
Architectu	Hauling	0	1	HHDT
Architectu	Onsite truc			HHDT

Attachment 2: Project Construction and Operation Emissions and Health Risk Calculations

Terraine Site, 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	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2024	0.0617	0.0273	10.96	0.01	0.08
2025	0.0550	0.0942	9.04	0.01	0.14
2026	0.0349	0.0272	0.90	0.01	0.06
2034	0.0306	0.0092	0.79	0.01	0.04
2035	0.0138	0.0080	0.36	0.00	0.02
Total	-	-	**22.05**		-
Maximum	0.0617	0.0942	**-**	**0.01**	**0.14**

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	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2024	0.0160	0.0273	2.84	0.00	0.04
2025	0.0193	0.0942	3.17	0.00	0.11
2026	0.0034	0.0272	0.09	0.00	0.03
2034	0.0134	0.0092	0.35	0.00	0.02
2035	0.0067	0.0080	0.17	0.00	0.01
Total	-	-	**6.62**	-	-
Maximum	0.0193	0.0942	**-**	**0.00**	**0.11**

Terraine Site, 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	0.0286	Point	149	57.2	0.01305	1.64E-03	1.10E-05
2025	Construction	0.0255	Point	149	51.0	0.01165	1.47E-03	9.85E-06
2026	Construction	0.0162	Point	149	32.4	0.00739	9.31E-04	6.25E-06
2034	Construction	0.0148	Point	52	29.6	0.00676	8.51E-04	1.64E-05
2035	Construction	0.0067	Point	52	13.3	0.00304	3.83E-04	7.36E-06
Total		***0.0917***			***183.5***	***0.0419***	***0.0053***	

Emissions assumed to be evenly distributed over each construction areas

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

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	0.0074	Point	149	14.8	0.00338	4.26E-04	2.86E-06
2025	Construction	0.0090	Point	149	17.9	0.00409	5.15E-04	3.46E-06
2026	Construction	0.0016	Point	149	3.2	0.00073	9.15E-05	6.14E-07
2034	Construction	0.0065	Point	52	13.0	0.00297	3.74E-04	7.19E-06
2035	Construction	0.0032	Point	52	6.5	0.00148	1.86E-04	3.58E-06
Total		***0.0277***			***55.4***	***0.0126***	***0.0016***	

Emissions assumed to be evenly distributed over each construction areas

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

Terraine Site, San Jose, CA

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	0.0051	10.2	0.00234	2.95E-04	7197.4	4.09E-08
2025	Construction	CON_FUG	0.0176	35.2	0.00804	1.01E-03	7197.4	1.41E-07
2026	Construction	CON_FUG	0.0051	10.2	0.00233	2.93E-04	7197.4	4.07E-08
2034	Construction	CON_FUG	0.0019	3.8	0.00087	1.10E-04	2734.4	4.01E-08
2035	Construction	CON_FUG	0.0017	3.3	0.00076	9.60E-05	2734.4	3.51E-08
Total			***0.0314***	***62.8***	***0.0143***	***0.0018***		

Emissions assumed to be evenly distributed over each construction areas

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

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	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	0.0051	10.2	0.00234	2.95E-04	7197.4	4.09E-08
2025	Construction	CON_FUG	0.0176	35.2	0.00804	1.01E-03	7197.4	1.41E-07
2026	Construction	CON_FUG	0.0051	10.2	0.00233	2.93E-04	7197.4	4.07E-08
2034	Construction	CON_FUG	0.0019	3.8	0.00087	1.10E-04	2734.4	4.01E-08
2035	Construction	CON_FUG	0.0017	3.3	0.00076	9.60E-05	2734.4	3.51E-08
Total			***0.0314***	***62.8***	***0.0143***	***0.0018***		

Emissions assumed to be evenly distributed over each construction areas

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

Terraine Site, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 10.7 meter receptor height

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

Where: CPF = Cancer potency factor (mg/kg-day)[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 (μg/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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2024	0.0505	10	0.69	2024	0.0505	-	-			
1	1	0 - 1	2024	0.0505	10	8.29	2024	0.0505	1	0.14	0.010	0.01	0.06
2	1	1 - 2	2025	0.0450	10	7.40	2025	0.0450	1	0.13	0.009	0.03	0.07
3	1	2 - 3	2026	0.0286	3	0.74	2026	0.0286	1	0.08	0.006	0.01	0.04
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11	2034	0.0232	3	0.60	2034	0.0232	1	0.07	0.005	0.00	0.02
12	1	11 - 12	2035	0.0104	3	0.27	2035	0.0104	1	0.03	0.002	0.00	0.01
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						**17.98**				**0.45**			

* Third trimester of pregnancy

Terraine Site, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 7.6 meter receptor height

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

Where: CPF = Cancer potency factor (mg/kg-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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2024	0.0617	10	0.84	2024	0.0617	-	-			
1	1	0 - 1	2024	0.0617	10	10.13	2024	0.0617	1	0.18	0.012	0.01	0.08
2	1	1 - 2	2025	0.0550	10	9.04	2025	0.0550	1	0.16	0.011	0.05	0.10
3	1	2 - 3	2026	0.0349	3	0.90	2026	0.0349	1	0.10	0.007	0.01	0.05
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11	2034	0.0306	3	0.79	2034	0.0306	1	0.09	0.006	0.00	0.04
12	1	11 - 12	2035	0.0138	3	0.36	2035	0.0138	1	0.04	0.003	0.00	0.02
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						**22.05**				**0.56**			

* Third trimester of pregnancy

Terraine Site, 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-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			Infant/Child	Adult - Exposure Information			Adult		Maximum	
	Exposure				Age	Cancer	Modeled		Age	Cancer			
Exposure	Duration		DPM Conc (ug/m3)		Sensitivity	Risk	DPM Conc (ug/m3)		Sensitivity	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	0.0601	10	0.82	2024	0.0601	-	-			
1	1	0 - 1	2024	0.0601	10	9.87	2024	0.0601	1	0.17	0.012	0.02	0.08
2	1	1 - 2	2025	0.0536	10	8.81	2025	0.0536	1	0.15	0.011	0.07	0.13
3	1	2 - 3	2026	0.0340	3	0.88	2026	0.0340	1	0.10	0.007	0.02	0.06
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11	2034	0.0296	3	0.77	2034	0.0296	1	0.09	0.006	0.01	0.04
12	1	11 - 12	2035	0.0133	3	0.34	2035	0.0133	1	0.04	0.003	0.01	0.02
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						**21.48**				**0.55**			

* Third trimester of pregnancy

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

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

Where: CPF = Cancer potency factor (mg/kg-day)[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 (μg/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			Infant/Child	Adult - Exposure Information			Adult			
	Exposure				**Age**	**Cancer**	**Modeled**		**Age**	**Cancer**	**Maximum**		
Exposure	**Duration**		**DPM Conc (ug/m3)**		**Sensitivity**	**Risk**	**DPM Conc (ug/m3)**		**Sensitivity**	**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	0.0546	10	0.74	2024	0.0546	-	-			
1	1	0 - 1	2024	0.0546	10	8.97	2024	0.0546	1	0.16	0.011	0.03	0.08
2	1	1 - 2	2025	0.0487	10	8.01	2025	0.0487	1	0.14	0.010	0.09	0.14
3	1	2 - 3	2026	0.0309	3	0.80	2026	0.0309	1	0.09	0.006	0.03	0.06
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11	2034	0.0282	3	0.73	2034	0.0282	1	0.08	0.006	0.01	0.04
12	1	11 - 12	2035	0.0127	3	0.33	2035	0.0127	1	0.04	0.003	0.01	0.02
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						**19.58**				**0.50**			

* Third trimester of pregnancy

Terraine Site, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 10.7 meter receptor height

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

Where: CPF = Cancer potency factor (mg/kg-day)[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 (μg/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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum Hazard Index	Maximum Fugitive PM2.5	Maximum Total PM2.5
0	0.25	-0.25 - 0*	2024	0.0131	10	0.18	2024	0.0131	-	-			
1	1	0 - 1	2024	0.0131	10	2.15	2024	0.0131	1	0.04	0.003	0.01	0.02
2	1	1 - 2	2025	0.0158	10	2.60	2025	0.0158	1	0.05	0.003	0.03	0.04
3	1	2 - 3	2026	0.0028	3	0.07	2026	0.0028	1	0.01	0.001	0.01	0.01
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11	2034	0.0102	3	0.26	2034	0.0102	1	0.03	0.002	0.00	0.01
12	1	11 - 12	2035	0.0051	3	0.13	2035	0.0051	1	0.01	0.001	0.00	0.01
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						**5.39**				**0.13**			

* Third trimester of pregnancy

Terraine Site, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 7.6 meter receptor height

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

Where: CPF = Cancer potency factor (mg/kg-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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	Infant/Child - Exposure Information: DPM Conc (ug/m3) Annual	Infant/Child - Exposure Information: Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information: Modeled DPM Conc (ug/m3) Year	Adult - Exposure Information: Modeled DPM Conc (ug/m3) Annual	Adult - Exposure Information: Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum Hazard Index	Maximum Fugitive PM2.5	Maximum Total PM2.5
0	0.25	-0.25 - 0*	2024	0.0160	10	0.22	2024	0.0160	-	-			
1	1	0 - 1	2024	0.0160	10	2.62	2024	0.0160	1	0.05	0.003	0.01	0.03
2	1	1 - 2	2025	0.0193	10	3.17	2025	0.0193	1	0.06	0.004	0.05	0.07
3	1	2 - 3	2026	0.0034	3	0.09	2026	0.0034	1	0.01	0.001	0.01	0.02
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11	2034	0.0134	3	0.35	2034	0.0134	1	0.04	0.003	0.00	0.02
12	1	11 - 12	2035	0.0067	3	0.17	2035	0.0067	1	0.02	0.001	0.00	0.01
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						**6.62**				**0.17**			

* Third trimester of pregnancy

Terraine Site, 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			Infant/Child	Adult - Exposure Information			Adult			
	Exposure				Age	Cancer	Modeled		Age	Cancer	Maximum		
Exposure	Duration		DPM Conc (ug/m3)		Sensitivity	Risk	DPM Conc (ug/m3)		Sensitivity	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	0.0156	10	0.21	2024	0.0156	-	-			
1	1	0 - 1	2024	0.0156	10	2.55	2024	0.0156	1	0.04	0.003	0.02	0.04
2	1	1 - 2	2025	0.0188	10	3.09	2025	0.0188	1	0.05	0.004	0.07	0.09
3	1	2 - 3	2026	0.0033	3	0.09	2026	0.0033	1	0.01	0.001	0.02	0.02
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11	2034	0.0130	3	0.34	2034	0.0130	1	0.04	0.003	0.01	0.02
12	1	11 - 12	2035	0.0065	3	0.17	2035	0.0065	1	0.02	0.001	0.01	0.01
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						**6.45**				**0.16**			

* Third trimester of pregnancy

Terraine Site, 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			Infant/Child	Adult - Exposure Information			Adult			
	Exposure				Age	Cancer	Modeled		Age	Cancer	Maximum		
Exposure	Duration		DPM Conc (ug/m3)		Sensitivity	Risk	DPM Conc (ug/m3)		Sensitivity	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	0.0141	10	0.19	2024	0.0141	-	-			
1	1	0 - 1	2024	0.0141	10	2.32	2024	0.0141	1	0.04	0.003	0.03	0.04
2	1	1 - 2	2025	0.0171	10	2.81	2025	0.0171	1	0.05	0.003	0.09	0.11
3	1	2 - 3	2026	0.0030	3	0.08	2026	0.0030	1	0.01	0.001	0.03	0.03
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11	2034	0.0118	3	0.31	2034	0.0118	1	0.03	0.002	0.01	0.02
12	1	11 - 12	2035	0.0059	3	0.15	2035	0.0059	1	0.02	0.001	0.01	0.01
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						**5.86**				**0.15**			

* Third trimester of pregnancy

Terraine Site, San Jose, CA

Standby Emergency Generator Impacts

Off-site Sensitive Receptors

MEI Location = 7.6 meter receptor height

DPM Emission Rates			
	DPM Emissions per Generator		
	Max Daily	Annual	
Source Type	(lb/day)	(lb/year)	
(1) 70kW Generator	0.045	16.29	
CalEEMod DPM Emissions	0.0081	tons/year	

Modeling Information	
Model	AERMOD
Source	Diesel Generator Engine
Source Type	Point
Meteorological Data	2013 - 2017 San Jose International Airport Meteorological Data
Point Source Stack Parameters	
Generator Engine Size (hp)	95
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)	0.001860

* AERMOD default

**BAAQMD default generator parameters

Terraine Site, San Jose, CA - Cancer Risks from Project Operation
Project Emergency Generator
Impacts at Off-Site Receptors- 7.6m MEI Receptor Heights
Impact at Project MEI (27-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-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 (μg/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

			Infant/Child - Exposure Information			Infant/Child				
	Exposure				Age	Cancer				
Exposure	Duration		DPM Conc (ug/m3)		Sensitivity	Risk		Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)		Index	PM2.5	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	0.0046	3	0.118		0.00092	0.0046	0.0092
5	1	4 - 5	2028	0.0046	3	0.118		0.00092	0.0046	0.0092
6	1	5 - 6	2029	0.0046	3	0.118		0.00092	0.0046	0.0092
7	1	6 - 7	2030	0.0046	3	0.118		0.00092	0.0046	0.0092
8	1	7 - 8	2031	0.0046	3	0.118		0.00092	0.0046	0.0092
9	1	8 - 9	2032	0.0046	3	0.118		0.00092	0.0046	0.0092
10	1	9 - 10	2033	0.0046	3	0.118		0.00092	0.0046	0.0092
11	1	10 - 11	2034	0.0046	3	0.118		0.00092	0.0046	0.0092
12	1	11 - 12	2035	0.0046	3	0.118		0.00092	0.0046	0.0092
13	1	12 - 13	2036	0.0046	3	0.118		0.00092	0.0046	0.0092
14	1	13 - 14	2037	0.0046	3	0.118		0.00092	0.0046	0.0092
15	1	14 - 15	2038	0.0046	3	0.118		0.00092	0.0046	0.0092
16	1	15 - 16	2039	0.0046	3	0.118		0.00092	0.0046	0.0092
17	1	16-17	2040	0.0046	1	0.013		0.00092	0.0046	0.0092
18	1	17-18	2041	0.0046	1	0.013		0.00092	0.0046	0.0092
19	1	18-19	2042	0.0046	1	0.013		0.00092	0.0046	0.0092
20	1	19-20	2043	0.0046	1	0.013		0.00092	0.0046	0.0092
21	1	20-21	2044	0.0046	1	0.013		0.00092	0.0046	0.0092
22	1	21-22	2045	0.0046	1	0.013		0.00092	0.0046	0.0092
23	1	22-23	2046	0.0046	1	0.013		0.00092	0.0046	0.0092
24	1	23-24	2047	0.0046	1	0.013		0.00092	0.0046	0.0092
25	1	24-25	2048	0.0046	1	0.013		0.00092	0.0046	0.0092
26	1	25-26	2049	0.0046	1	0.013		0.00092	0.0046	0.0092
27	1	26-27	2050	0.0046	1	0.013		0.00092	0.0046	0.0092
28	1	27-28	2051	0.0046	1	0.013		0.00092	0.0046	0.0092
29	1	28-29	2052	0.0046	1	0.013		0.00092	0.0046	0.0092
30	1	29-30	2053	0.0046	1	0.013		0.00092	0.0046	0.0092
Total Increased Cancer Risk						**1.72**	**Max**	**0.00092**	**0.0046**	**0.0092**

* Third trimester of pregnancy

Attachment 3: Health Risk Modeling Information and Calculations

BAAQMD Rail Raster Cancer Risk at MEI
BAAQMD Rail Raster Annual $PM_{2.5}$ Concentration at MEI
BAAQMD Rail Raster Hazard Index at MEI
BAAQMD Rail Raster Cancer Risk at Project Site
BAAQMD Rail Raster Annual $PM_{2.5}$ Concentration at Project Site
BAAQMD Rail Raster Hazard Index at Project Site


9.388741


0.011851


0.002521


9.256993


0.013698


0.002915

Terraine Site, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at On-Site MEI Location - 13.1 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-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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2034	0.0082	10	0.11	2034	0.0082	-	-			
1	1	0 - 1	2034	0.0082	10	1.34	2034	0.0082	1	0.02	0.002	0.00	0.01
2	1	1 - 2	2035	0.0041	10	0.67	2035	0.0041	1	0.01	0.001	0.00	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**2.12**				**0.04**			

* Third trimester of pregnancy

Terraine Site, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at On-Site MEI Location - 10.1 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-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 (μg/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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	Infant/Child DPM Conc (ug/m3) Annual	Infant/Child Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	Adult Modeled DPM Conc (ug/m3) Annual	Adult Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum Hazard Index	Maximum Fugitive PM2.5	Maximum Total PM2.5
0	0.25	-0.25 - 0*	2034	0.0098	10	0.13	2034	0.0098	-	-			
1	1	0 - 1	2034	0.0098	10	1.61	2034	0.0098	1	0.03	0.002	0.00	0.01
2	1	1 - 2	2035	0.0049	10	0.80	2035	0.0049	1	0.01	0.001	0.00	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**2.54**				**0.04**			

* Third trimester of pregnancy

Terraine Site, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at On-Site MEI Location - 7.0 meter receptor height

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

Where: CPF = Cancer potency factor (mg/kg-day)[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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum Hazard Index	Maximum Fugitive PM2.5	Maximum Total PM2.5
0	0.25	-0.25 - 0*	2034	0.0053	10	0.07	2034	0.0053	-	-			
1	1	0 - 1	2034	0.0053	10	0.86	2034	0.0053	1	0.02	0.001	0.00	0.01
2	1	1 - 2	2035	0.0026	10	0.43	2035	0.0026	1	0.01	0.001	0.00	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**1.37**				**0.02**			

* Third trimester of pregnancy

File Name: Highway 87 2024.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/10/2023 3:10:14 PM
Area: Santa Clara (SF)
Analysis Year: 2024
Season: Annual

===

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.027	0.415	0.581
Truck 2	0.010	0.914	0.046
Non-Truck	0.963	0.007	0.923

===

Road Type:	Major/Collector			
Silt Loading Factor:		CARB	0.032 g/m2	
Precipitation Correction:		CARB	P = 63 days	N = 365 days

===

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

Pollutant Name	50 mph	55 mph	60 mph	65 mph	70 mph
PM2.5	0.001255	0.001307	0.001428	0.001626	0.001749
TOG	0.017675	0.017812	0.018903	0.021085	0.022697
Diesel PM	0.000422	0.000461	0.000513	0.000572	0.000576

===

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

Pollutant Name	Emission Factor
TOG	1.041685

===

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

Pollutant Name Emission Factor

PM2.5 0.002067

==

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

Pollutant Name	50 mph	55 mph	60 mph	65 mph	70 mph
PM2.5	0.003049	0.002406	0.002103	0.001800	0.001800

==

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

Pollutant Name	Emission Factor
PM2.5	0.014466

==============================END===

File Name: Highway 87 2027.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/10/2023 3:10:27 PM
Area: Santa Clara (SF)
Analysis Year: 2027
Season: Annual

===

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.027	0.414	0.553
Truck 2	0.010	0.896	0.045
Non-Truck	0.963	0.007	0.911

===

Road Type: Major/Collector
Silt Loading Factor: CARB 0.032 g/m2
Precipitation Correction: CARB P = 63 days N = 365 days

===

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

Pollutant Name	50 mph	55 mph	60 mph	65 mph	70 mph
PM2.5	0.001084	0.001132	0.001240	0.001416	0.001519
TOG	0.013907	0.013978	0.014785	0.016423	0.017627
Diesel PM	0.000352	0.000388	0.000438	0.000495	0.000498

===

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

Pollutant Name	Emission Factor
TOG	0.964792

===

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

Pollutant Name Emission Factor

PM2.5 0.002067

==

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

Pollutant Name	50 mph	55 mph	60 mph	65 mph	70 mph
PM2.5	0.003026	0.002389	0.002087	0.001785	0.001785

==

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

Pollutant Name	Emission Factor
PM2.5	0.014556

=============================END===

File Name: Local Roadways 2024.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/10/2023 3:07:44 PM
Area: Santa Clara (SF)
Analysis Year: 2024
Season: Annual

===

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.016	0.415	0.581
Truck 2	0.019	0.914	0.046
Non-Truck	0.965	0.007	0.923

===

Road Type: Major/Collector
Silt Loading Factor: CARB 0.032 g/m2
Precipitation Correction: CARB P = 63 days N = 365 days

===

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

Pollutant Name	25 mph	30 mph	35 mph	40 mph	45 mph
PM2.5	0.002200	0.001763	0.001493	0.001340	0.001278
TOG	0.034749	0.027622	0.023027	0.020115	0.018414
Diesel PM	0.000502	0.000439	0.000404	0.000397	0.000417

===

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

Pollutant Name	Emission Factor
TOG	1.028536

===

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

Pollutant Name Emission Factor

```
                PM2.5          0.002107

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

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

       Pollutant Name        25 mph          30 mph          35 mph          40 mph
     45 mph
                PM2.5      0.005407        0.005497        0.005517        0.005020
   0.003974

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

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

       Pollutant Name   Emission Factor
                PM2.5          0.015281

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

File Name: Local Roadways 2027.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/10/2023 3:09:18 PM
Area: Santa Clara (SF)
Analysis Year: 2027
Season: Annual

===

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.017	0.414	0.553
Truck 2	0.018	0.896	0.045
Non-Truck	0.965	0.007	0.911

===

Road Type: Major/Collector
Silt Loading Factor: CARB 0.032 g/m2
Precipitation Correction: CARB P = 63 days N = 365 days

===

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

Pollutant Name	25 mph	30 mph	35 mph	40 mph	45 mph
PM2.5	0.001891	0.001513	0.001282	0.001152	0.001101
TOG	0.027249	0.021722	0.018152	0.015881	0.014543
Diesel PM	0.000398	0.000350	0.000325	0.000324	0.000345

===

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

Pollutant Name	Emission Factor
TOG	0.954655

===

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

Pollutant Name Emission Factor

PM2.5	0.002102

==

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

Pollutant Name	25 mph	30 mph	35 mph	40 mph	45 mph
PM2.5	0.005372	0.005458	0.005477	0.004985	0.003950

==

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

Pollutant Name	Emission Factor
PM2.5	0.015277

=============================END===

Terraine Site, San Jose, CA - Highway 87 Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor (7.6 & 1.5 meter receptor height)

Emission Year	2024
Receptor Information	Construction MEI receptor
Number of Receptors	2
Receptor Height	7.6 & 1.5 meters
Receptor Distances	At Construction MEI location

Meteorological Conditions	
BAAQMD San Jose International Airport Me	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0043	0.1666	0.1213

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.1183	0.1021	0.0162

Terraine Site, San Jose, CA - Highway 87 Traffic Cancer Risk
Impacts at Construction Residential MEI - 7.6 & 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-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 (μg/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-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	0.0043	0.1666	0.1213	0.058	0.013	0.0006	0.07
1	1	0 - 1	2024	10	0.0043	0.1666	0.1213	0.700	0.156	0.0067	0.86
2	1	1 - 2	2025	10	0.0043	0.1666	0.1213	0.700	0.156	0.0067	0.86
3	1	2 - 3	2026	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
4	1	3 - 4	2027	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
5	1	4 - 5	2028	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
6	1	5 - 6	2029	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
7	1	6 - 7	2030	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
8	1	7 - 8	2031	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
9	1	8 - 9	2032	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
10	1	9 - 10	2033	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
11	1	10 - 11	2034	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
12	1	11 - 12	2035	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
13	1	12 - 13	2036	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
14	1	13 - 14	2037	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
15	1	14 - 15	2038	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
16	1	15 - 16	2039	3	0.0043	0.1666	0.1213	0.110	0.025	0.0011	0.14
17	1	16-17	2040	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
18	1	17-18	2041	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
19	1	18-19	2042	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
20	1	19-20	2043	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
21	1	20-21	2044	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
22	1	21-22	2045	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
23	1	22-23	2046	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
24	1	23-24	2047	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
25	1	24-25	2048	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
26	1	25-26	2049	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
27	1	26-27	2050	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
28	1	27-28	2051	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
29	1	28-29	2052	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
30	1	29-30	2053	1	0.0043	0.1666	0.1213	0.012	0.003	0.0001	0.02
Total Increased Cancer Risk								3.17	0.708	0.030	**3.91**

* Third trimester of pregnancy

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00085	0.10	0.12

Terraine Site, San Jose, CA - W St James St Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor (7.6 & 1.5 meter receptor height)

Emission Year	2024
Receptor Information	Construction MEI receptor
Number of Receptors	2
Receptor Height	7.6 & 1.5 meters
Receptor Distances	At Construction MEI location

Meteorological Conditions

BAAQMD San Jose International Airport Me	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological	Concentration (µg/m3)*		
Data Years	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0007	0.0341	0.0403

Construction MEI PM2.5 Maximum Concentrations

Meteorological	PM2.5 Concentration (µg/m3)*		
Data Years	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0290	0.0265	0.0025

Terraine Site, San Jose, CA - W St James St Traffic Cancer Risk
Impacts at Construction Residential MEI - 7.6 & 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-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 (μg/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-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	0.0007	0.0341	0.0403	0.009	0.003	0.0002	0.01
1	1	0 - 1	2024	10	0.0007	0.0341	0.0403	0.112	0.032	0.0022	0.15
2	1	1 - 2	2025	10	0.0007	0.0341	0.0403	0.112	0.032	0.0022	0.15
3	1	2 - 3	2026	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
4	1	3 - 4	2027	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
5	1	4 - 5	2028	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
6	1	5 - 6	2029	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
7	1	6 - 7	2030	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
8	1	7 - 8	2031	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
9	1	8 - 9	2032	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
10	1	9 - 10	2033	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
11	1	10 - 11	2034	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
12	1	11 - 12	2035	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
13	1	12 - 13	2036	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
14	1	13 - 14	2037	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
15	1	14 - 15	2038	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
16	1	15 - 16	2039	3	0.0007	0.0341	0.0403	0.018	0.005	0.0004	0.02
17	1	16-17	2040	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
18	1	17-18	2041	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
19	1	18-19	2042	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
20	1	19-20	2043	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
21	1	20-21	2044	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
22	1	21-22	2045	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
23	1	22-23	2046	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
24	1	23-24	2047	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
25	1	24-25	2048	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
26	1	25-26	2049	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
27	1	26-27	2050	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
28	1	27-28	2051	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
29	1	28-29	2052	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
30	1	29-30	2053	1	0.0007	0.0341	0.0403	0.002	0.001	0.0000	0.00
Total Increased Cancer Risk								0.51	0.145	0.010	**0.66**

* Third trimester of pregnancy

Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00014	0.03	0.03

Terraine Site, San Jose, CA - Market St Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor (7.6 & 1.5 meter receptor height)

Emission Year	2024
Receptor Information	Construction MEI receptor
Number of Receptors	2
Receptor Height	7.6 & 1.5 meters
Receptor Distances	At Construction MEI location

Meteorological Conditions	
BAAQMD San Jose International Airport Me	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (μg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0001	0.0061	0.0072

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (μg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0050	0.0046	0.0004

Terraine Site, San Jose, CA - Market St Traffic Cancer Risk
Impacts at Construction Residential MEI - 7.6 & 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-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 (μg/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-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	0.0001	0.0061	0.0072	0.002	0.000	0.0000	0.00
1	1	0 - 1	2024	10	0.0001	0.0061	0.0072	0.021	0.006	0.0004	0.03
2	1	1 - 2	2025	10	0.0001	0.0061	0.0072	0.021	0.006	0.0004	0.03
3	1	2 - 3	2026	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
4	1	3 - 4	2027	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
5	1	4 - 5	2028	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
6	1	5 - 6	2029	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
7	1	6 - 7	2030	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
8	1	7 - 8	2031	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
9	1	8 - 9	2032	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
10	1	9 - 10	2033	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
11	1	10 - 11	2034	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
12	1	11 - 12	2035	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
13	1	12 - 13	2036	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
14	1	13 - 14	2037	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
15	1	14 - 15	2038	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
16	1	15 - 16	2039	3	0.0001	0.0061	0.0072	0.003	0.001	0.0001	0.00
17	1	16-17	2040	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
18	1	17-18	2041	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
19	1	18-19	2042	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
20	1	19-20	2043	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
21	1	20-21	2044	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
22	1	21-22	2045	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
23	1	22-23	2046	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
24	1	23-24	2047	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
25	1	24-25	2048	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
26	1	25-26	2049	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
27	1	26-27	2050	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
28	1	27-28	2051	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
29	1	28-29	2052	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
30	1	29-30	2053	1	0.0001	0.0061	0.0072	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.10	0.026	0.002	**0.12**

* Third trimester of pregnancy

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00003	0.00	0.00

Terraine Site, San Jose, CA - Coleman Avenue Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor (7.6 & 1.5 meter receptor height)

Emission Year	2024
Receptor Information	Construction MEI receptor
Number of Receptors	2
Receptor Height	7.6 & 1.5 meters
Receptor Distances	At Construction MEI location

Meteorological Conditions	
BAAQMD San Jose International Airport Me	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (μg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0001	0.0054	0.0069

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (μg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0071	0.0067	0.0004

Terraine Site, San Jose, CA - Market St Traffic Cancer Risk
Impacts at Construction Residential MEI - 7.6 & 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-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 (μg/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-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	0.0001	0.0054	0.0069	0.002	0.000	0.0000	0.00
1	1	0 - 1	2024	10	0.0001	0.0054	0.0069	0.020	0.005	0.0004	0.03
2	1	1 - 2	2025	10	0.0001	0.0054	0.0069	0.020	0.005	0.0004	0.03
3	1	2 - 3	2026	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
4	1	3 - 4	2027	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
5	1	4 - 5	2028	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
6	1	5 - 6	2029	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
7	1	6 - 7	2030	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
8	1	7 - 8	2031	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
9	1	8 - 9	2032	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
10	1	9 - 10	2033	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
11	1	10 - 11	2034	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
12	1	11 - 12	2035	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
13	1	12 - 13	2036	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
14	1	13 - 14	2037	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
15	1	14 - 15	2038	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
16	1	15 - 16	2039	3	0.0001	0.0054	0.0069	0.003	0.001	0.0001	0.00
17	1	16-17	2040	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
18	1	17-18	2041	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
19	1	18-19	2042	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
20	1	19-20	2043	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
21	1	20-21	2044	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
22	1	21-22	2045	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
23	1	22-23	2046	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
24	1	23-24	2047	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
25	1	24-25	2048	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
26	1	25-26	2049	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
27	1	26-27	2050	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
28	1	27-28	2051	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
29	1	28-29	2052	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
30	1	29-30	2053	1	0.0001	0.0054	0.0069	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.09	0.023	0.002	**0.11**

* Third trimester of pregnancy

Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00002	0.01	0.01

Terraine Site, San Jose, CA - Highway 87 Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Onsite MEI Receptor (7.0 & 10.1 meter receptor height)

Emission Year	2027
Receptor Information	Construction MEI receptor
Number of Receptors	
Receptor Height	7.0 & 10.1 meters
Receptor Distances	At Onsite MEI location

Meteorological Conditions	
BAAQMD San Jose International Airport Me	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological	Concentration (µg/m3)*		
Data Years	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0106	0.3713	0.3257
2013-2017	0.0080	0.2278	0.1954

Construction MEI PM2.5 Maximum Concentrations

Meteorological	PM2.5 Concentration (µg/m3)*		
Data Years	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.2827	0.2498	0.0329

Terraine Site, San Jose, CA - Highway 87 Traffic Cancer Risk
Impacts at Onsite Residential MEI - 7.0 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-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 (μg/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-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*	2027	10	0.0106	0.3713	0.3257	0.145	0.029	0.0015	0.17
1	1	0 - 1	2027	10	0.0106	0.3713	0.3257	1.746	0.348	0.0180	2.11
2	1	1 - 2	2028	10	0.0106	0.3713	0.3257	1.746	0.348	0.0180	2.11
3	1	2 - 3	2029	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
4	1	3 - 4	2030	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
5	1	4 - 5	2031	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
6	1	5 - 6	2032	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
7	1	6 - 7	2033	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
8	1	7 - 8	2034	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
9	1	8 - 9	2035	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
10	1	9 - 10	2036	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
11	1	10 - 11	2037	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
12	1	11 - 12	2038	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
13	1	12 - 13	2039	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
14	1	13 - 14	2040	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
15	1	14 - 15	2041	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
16	1	15 - 16	2042	3	0.0106	0.3713	0.3257	0.275	0.055	0.0028	0.33
17	1	16-17	2043	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
18	1	17-18	2044	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
19	1	18-19	2045	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
20	1	19-20	2046	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
21	1	20-21	2047	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
22	1	21-22	2048	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
23	1	22-23	2049	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
24	1	23-24	2050	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
25	1	24-25	2051	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
26	1	25-26	2052	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
27	1	26-27	2053	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
28	1	27-28	2054	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
29	1	28-29	2055	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
30	1	29-30	2056	1	0.0106	0.3713	0.3257	0.031	0.006	0.0003	0.04
Total Increased Cancer Risk								7.91	1.578	0.082	**9.57**

* Third trimester of pregnancy

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00213	0.25	0.28

Terraine Site, San Jose, CA - Highway 87 Traffic Cancer Risk
Impacts at Onsite Residential MEI - 10.1 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-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 (μg/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-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*	2027	10	0.0080	0.2278	0.1954	0.109	0.018	0.0009	0.13
1	1	0 - 1	2027	10	0.0080	0.2278	0.1954	1.314	0.214	0.0108	1.54
2	1	1 - 2	2028	10	0.0080	0.2278	0.1954	1.314	0.214	0.0108	1.54
3	1	2 - 3	2029	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
4	1	3 - 4	2030	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
5	1	4 - 5	2031	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
6	1	5 - 6	2032	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
7	1	6 - 7	2033	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
8	1	7 - 8	2034	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
9	1	8 - 9	2035	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
10	1	9 - 10	2036	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
11	1	10 - 11	2037	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
12	1	11 - 12	2038	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
13	1	12 - 13	2039	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
14	1	13 - 14	2040	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
15	1	14 - 15	2041	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
16	1	15 - 16	2042	3	0.0080	0.2278	0.1954	0.207	0.034	0.0017	0.24
17	1	16-17	2043	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
18	1	17-18	2044	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
19	1	18-19	2045	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
20	1	19-20	2046	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
21	1	20-21	2047	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
22	1	21-22	2048	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
23	1	22-23	2049	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
24	1	23-24	2050	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
25	1	24-25	2051	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
26	1	25-26	2052	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
27	1	26-27	2053	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
28	1	27-28	2054	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
29	1	28-29	2055	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
30	1	29-30	2056	1	0.0080	0.2278	0.1954	0.023	0.004	0.0002	0.03
Total Increased Cancer Risk								5.95	0.968	0.049	**6.97**

* Third trimester of pregnancy

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00160	0.15	0.17

Terraine Site, San Jose, CA - W St James St Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Onsite MEI Receptor (7.0 & 10.1 meter receptor height)

Emission Year	2027
Receptor Information	Construction MEI receptor
Number of Receptors	
Receptor Height	7.0 & 10.1 meters
Receptor Distances	At Onsite MEI location

Meteorological Conditions	
BAAQMD San Jose International Airport Me	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (μg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0004	0.0172	0.0242
2013-2017	0.0004	0.0164	0.0230

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (μg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0156	0.0144	0.0012

Terraine Site, San Jose, CA - W St James St Traffic Cancer Risk
Impacts at Onsite Residential MEI - 7.0 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-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 (μg/m³)
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-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*	2027	10	0.0004	0.0172	0.0242	0.005	0.001	0.0001	0.01
1	1	0 - 1	2027	10	0.0004	0.0172	0.0242	0.061	0.016	0.0013	0.08
2	1	1 - 2	2028	10	0.0004	0.0172	0.0242	0.061	0.016	0.0013	0.08
3	1	2 - 3	2029	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
4	1	3 - 4	2030	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
5	1	4 - 5	2031	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
6	1	5 - 6	2032	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
7	1	6 - 7	2033	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
8	1	7 - 8	2034	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
9	1	8 - 9	2035	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
10	1	9 - 10	2036	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
11	1	10 - 11	2037	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
12	1	11 - 12	2038	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
13	1	12 - 13	2039	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
14	1	13 - 14	2040	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
15	1	14 - 15	2041	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
16	1	15 - 16	2042	3	0.0004	0.0172	0.0242	0.010	0.003	0.0002	0.01
17	1	16-17	2043	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0004	0.0172	0.0242	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.28	0.073	0.006	**0.35**

* Third trimester of pregnancy

Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00007	0.01	0.02

Terraine Site, San Jose, CA - W St James St Traffic Cancer Risk
Impacts at Onsite Residential MEI - 10.1 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-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 (μg/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-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*	2027	10	0.0004	0.0164	0.0230	0.005	0.001	0.0001	0.01
1	1	0 - 1	2027	10	0.0004	0.0164	0.0230	0.057	0.015	0.0013	0.07
2	1	1 - 2	2028	10	0.0004	0.0164	0.0230	0.057	0.015	0.0013	0.07
3	1	2 - 3	2029	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
4	1	3 - 4	2030	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
5	1	4 - 5	2031	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
6	1	5 - 6	2032	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
7	1	6 - 7	2033	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
8	1	7 - 8	2034	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
9	1	8 - 9	2035	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
10	1	9 - 10	2036	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
11	1	10 - 11	2037	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
12	1	11 - 12	2038	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
13	1	12 - 13	2039	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
14	1	13 - 14	2040	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
15	1	14 - 15	2041	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
16	1	15 - 16	2042	3	0.0004	0.0164	0.0230	0.009	0.002	0.0002	0.01
17	1	16-17	2043	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0004	0.0164	0.0230	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.26	0.070	0.006	**0.34**

* Third trimester of pregnancy

Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00007	0.01	0.01

Terraine Site, San Jose, CA - Market St Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Onsite MEI Receptor (7.0 & 10.1 meter receptor height)

Emission Year	2027
Receptor Information	Construction MEI receptor
Number of Receptors	
Receptor Height	7.0 & 10.1 meters
Receptor Distances	At Onsite MEI location
Meteorological Conditions	
BAAQMD San Jose International Airport Me	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological	Concentration (µg/m3)*		
Data Years	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0001	0.0057	0.0080
2013-2017	0.0001	0.0051	0.0072

Construction MEI PM2.5 Maximum Concentrations

Meteorological	PM2.5 Concentration (µg/m3)*		
Data Years	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0051	0.0047	0.0004

Terraine Site, San Jose, CA - Market St Traffic Cancer Risk
Impacts at Onsite Residential MEI - 7.0 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-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 (μg/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-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*	2027	10	0.0001	0.0057	0.0080	0.002	0.000	0.0000	0.00
1	1	0 - 1	2027	10	0.0001	0.0057	0.0080	0.021	0.005	0.0004	0.03
2	1	1 - 2	2028	10	0.0001	0.0057	0.0080	0.021	0.005	0.0004	0.03
3	1	2 - 3	2029	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
4	1	3 - 4	2030	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
5	1	4 - 5	2031	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
6	1	5 - 6	2032	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
7	1	6 - 7	2033	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
8	1	7 - 8	2034	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
9	1	8 - 9	2035	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
10	1	9 - 10	2036	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
11	1	10 - 11	2037	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
12	1	11 - 12	2038	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
13	1	12 - 13	2039	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
14	1	13 - 14	2040	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
15	1	14 - 15	2041	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
16	1	15 - 16	2042	3	0.0001	0.0057	0.0080	0.003	0.001	0.0001	0.00
17	1	16-17	2043	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0001	0.0057	0.0080	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.10	0.024	0.002	**0.12**

* Third trimester of pregnancy

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00003	0.00	0.01

Terraine Site, San Jose, CA - Market St Traffic Cancer Risk
Impacts at Onsite Residential MEI - 10.1 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-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-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*	2027	10	0.0001	0.0051	0.0072	0.002	0.000	0.0000	0.00
1	1	0 - 1	2027	10	0.0001	0.0051	0.0072	0.020	0.005	0.0004	0.02
2	1	1 - 2	2028	10	0.0001	0.0051	0.0072	0.020	0.005	0.0004	0.02
3	1	2 - 3	2029	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
4	1	3 - 4	2030	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
5	1	4 - 5	2031	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
6	1	5 - 6	2032	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
7	1	6 - 7	2033	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
8	1	7 - 8	2034	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
9	1	8 - 9	2035	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
10	1	9 - 10	2036	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
11	1	10 - 11	2037	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
12	1	11 - 12	2038	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
13	1	12 - 13	2039	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
14	1	13 - 14	2040	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
15	1	14 - 15	2041	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
16	1	15 - 16	2042	3	0.0001	0.0051	0.0072	0.003	0.001	0.0001	0.00
17	1	16-17	2043	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0001	0.0051	0.0072	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.09	0.022	0.002	**0.11**

* Third trimester of pregnancy

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00002	0.00	0.00

Terraine Site, San Jose, CA - Coleman Avenue Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Onsite MEI Receptor (7.0 & 10.1 meter receptor height)

Emission Year	2027
Receptor Information	Construction MEI receptor
Number of Receptors	
Receptor Height	7.0 & 10.1 meters
Receptor Distances	At Onsite MEI location
Meteorological Conditions	
BAAQMD San Jose International Airport Me	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0002	0.0064	0.0103
2013-2017	0.0001	0.0055	0.0090

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0094	0.0090	0.0005

Terraine Site, San Jose, CA - Market St Traffic Cancer Risk
Impacts at Onsite Residential MEI - 7.0 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-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 (μg/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-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*	2027	10	0.0002	0.0064	0.0103	0.002	0.000	0.0000	0.00
1	1	0 - 1	2027	10	0.0002	0.0064	0.0103	0.025	0.006	0.0006	0.03
2	1	1 - 2	2028	10	0.0002	0.0064	0.0103	0.025	0.006	0.0006	0.03
3	1	2 - 3	2029	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
4	1	3 - 4	2030	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
5	1	4 - 5	2031	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
6	1	5 - 6	2032	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
7	1	6 - 7	2033	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
8	1	7 - 8	2034	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
9	1	8 - 9	2035	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
10	1	9 - 10	2036	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
11	1	10 - 11	2037	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
12	1	11 - 12	2038	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
13	1	12 - 13	2039	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
14	1	13 - 14	2040	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
15	1	14 - 15	2041	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
16	1	15 - 16	2042	3	0.0002	0.0064	0.0103	0.004	0.001	0.0001	0.00
17	1	16-17	2043	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0002	0.0064	0.0103	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.11	0.027	0.003	**0.14**

* Third trimester of pregnancy

Maximum		
Hazard Index	**Fugitive PM2.5**	**Total PM2.5**
0.00003	0.01	0.01

Terraine Site, San Jose, CA - Market St Traffic Cancer Risk
Impacts at Onsite Residential MEI - 10.1 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-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-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*	2027	10	0.0001	0.0055	0.0090	0.002	0.000	0.0000	0.00
1	1	0 - 1	2027	10	0.0001	0.0055	0.0090	0.021	0.005	0.0005	0.03
2	1	1 - 2	2028	10	0.0001	0.0055	0.0090	0.021	0.005	0.0005	0.03
3	1	2 - 3	2029	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
4	1	3 - 4	2030	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
5	1	4 - 5	2031	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
6	1	5 - 6	2032	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
7	1	6 - 7	2033	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
8	1	7 - 8	2034	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
9	1	8 - 9	2035	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
10	1	9 - 10	2036	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
11	1	10 - 11	2037	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
12	1	11 - 12	2038	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
13	1	12 - 13	2039	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
14	1	13 - 14	2040	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
15	1	14 - 15	2041	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
16	1	15 - 16	2042	3	0.0001	0.0055	0.0090	0.003	0.001	0.0001	0.00
17	1	16-17	2043	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0001	0.0055	0.0090	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.10	0.023	0.002	**0.12**

* Third trimester of pregnancy

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00003	0.01	0.01

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman 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	Line Area: Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	55.7	3.4	40	10,327	8,760	94,288	1.737E-09	1.281E-09	6.8	3.16
DPM_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	55.7	3.4	40	10,327	10,163	109,397	1.737E-09	1.281E-09	6.8	3.16
									Total	20,654						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.00040			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and DPM Emissions - DPM_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.90%	402	1.42E-05	9	6.42%	663	2.34E-05	17	5.62%	580	2.05E-05
2	2.58%	266	9.42E-06	10	7.34%	758	2.68E-05	18	3.27%	337	1.19E-05
3	2.87%	296	1.05E-05	11	6.42%	663	2.34E-05	19	2.35%	243	8.58E-06
4	3.32%	343	1.21E-05	12	6.88%	710	2.51E-05	20	0.86%	89	3.14E-06
5	2.18%	225	7.95E-06	13	6.25%	645	2.28E-05	21	3.09%	320	1.13E-05
6	3.38%	349	1.23E-05	14	6.19%	639	2.26E-05	22	4.13%	426	1.51E-05
7	6.02%	621	2.20E-05	15	5.10%	527	1.86E-05	23	2.52%	260	9.21E-06
8	4.64%	479	1.70E-05	16	3.78%	391	1.38E-05	24	0.92%	95	3.35E-06
								Total		10,327	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.90%	402	1.65E-05	9	6.42%	663	2.72E-05	17	5.62%	580	2.38E-05
2	2.58%	266	1.09E-05	10	7.34%	758	3.11E-05	18	3.27%	337	1.38E-05
3	2.87%	296	1.21E-05	11	6.42%	663	2.72E-05	19	2.35%	243	9.96E-06
4	3.32%	343	1.41E-05	12	6.88%	710	2.91E-05	20	0.86%	89	3.64E-06
5	2.18%	225	9.23E-06	13	6.25%	645	2.65E-05	21	3.09%	320	1.31E-05
6	3.38%	349	1.43E-05	14	6.19%	639	2.62E-05	22	4.13%	426	1.75E-05
7	6.02%	621	2.55E-05	15	5.10%	527	2.16E-05	23	2.52%	260	1.07E-05
8	4.64%	479	1.97E-05	16	3.78%	391	1.60E-05	24	0.92%	95	3.89E-06
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman 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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	56	1.3	40	10,327	8,760	94,288	5.86E-09	4.32E-09	2.6	1.21
PM2.5_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	56	1.3	40	10,327	10,163	109,397	5.86E-09	4.32E-09	2.6	1.21
									Total	20,654						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.001340			

Emisson Factors from CT-EMFAC2021

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

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	1.42E-05	9	7.11%	734	8.77E-05	17	7.39%	763	9.10E-05
2	0.42%	43	5.15E-06	10	4.39%	453	5.41E-05	18	8.18%	844	1.01E-04
3	0.41%	42	5.00E-06	11	4.66%	482	5.75E-05	19	5.70%	588	7.02E-05
4	0.26%	27	3.22E-06	12	5.89%	608	7.26E-05	20	4.27%	441	5.27E-05
5	0.50%	52	6.16E-06	13	6.15%	635	7.58E-05	21	3.26%	336	4.02E-05
6	0.90%	93	1.11E-05	14	6.04%	623	7.44E-05	22	3.30%	340	4.06E-05
7	3.79%	391	4.67E-05	15	7.01%	724	8.65E-05	23	2.46%	254	3.03E-05
8	7.76%	802	9.57E-05	16	7.14%	737	8.80E-05	24	1.87%	193	2.30E-05
								Total		10,327	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	1.65E-05	9	7.11%	734	1.02E-04	17	7.39%	763	1.06E-04
2	0.42%	43	5.97E-06	10	4.39%	453	6.27E-05	18	8.18%	844	1.17E-04
3	0.41%	42	5.81E-06	11	4.66%	482	6.67E-05	19	5.70%	588	8.15E-05
4	0.26%	27	3.74E-06	12	5.89%	608	8.42E-05	20	4.27%	441	6.11E-05
5	0.50%	52	7.15E-06	13	6.15%	635	8.80E-05	21	3.26%	336	4.66E-05
6	0.90%	93	1.29E-05	14	6.04%	623	8.63E-05	22	3.30%	340	4.71E-05
7	3.79%	391	5.42E-05	15	7.01%	724	1.00E-04	23	2.46%	254	3.52E-05
8	7.76%	802	1.11E-04	16	7.14%	737	1.02E-04	24	1.87%	193	2.67E-05
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman 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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	56	1.3	40	10,327	8,760	94,288	8.80E-08	6.49E-08	2.6	1.21
TEXH_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	56	1.3	40	10,327	10,163	109,397	8.80E-08	6.49E-08	2.6	1.21
									Total	20,654						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.02012			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	2.13E-04	9	7.11%	734	1.32E-03	17	7.39%	763	1.37E-03
2	0.42%	43	7.73E-05	10	4.39%	453	8.12E-04	18	8.18%	844	1.51E-03
3	0.41%	42	7.51E-05	11	4.66%	482	8.63E-04	19	5.70%	588	1.05E-03
4	0.26%	27	4.84E-05	12	5.89%	608	1.09E-03	20	4.27%	441	7.91E-04
5	0.50%	52	9.25E-05	13	6.15%	635	1.14E-03	21	3.26%	336	6.03E-04
6	0.90%	93	1.67E-04	14	6.04%	623	1.12E-03	22	3.30%	340	6.10E-04
7	3.79%	391	7.01E-04	15	7.01%	724	1.30E-03	23	2.46%	254	4.55E-04
8	7.76%	802	1.44E-03	16	7.14%	737	1.32E-03	24	1.87%	193	3.45E-04
								Total		10,327	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	2.47E-04	9	7.11%	734	1.53E-03	17	7.39%	763	1.59E-03
2	0.42%	43	8.97E-05	10	4.39%	453	9.42E-04	18	8.18%	844	1.76E-03
3	0.41%	42	8.72E-05	11	4.66%	482	1.00E-03	19	5.70%	588	1.22E-03
4	0.26%	27	5.62E-05	12	5.89%	608	1.26E-03	20	4.27%	441	9.18E-04
5	0.50%	52	1.07E-04	13	6.15%	635	1.32E-03	21	3.26%	336	6.99E-04
6	0.90%	93	1.94E-04	14	6.04%	623	1.30E-03	22	3.30%	340	7.08E-04
7	3.79%	391	8.14E-04	15	7.01%	724	1.51E-03	23	2.46%	254	5.28E-04
8	7.76%	802	1.67E-03	16	7.14%	737	1.53E-03	24	1.87%	193	4.01E-04
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman 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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	56	1.3	40	10,327	8,760	94,288	1.13E-07	8.30E-08	2.6	1.21
TEVAP_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	56	1.3	40	10,327	10,163	109,397	1.13E-07	8.30E-08	2.6	1.21
									Total	20,654						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle per Hour (g/hour)	1.02854			
Emissions per Vehicle per Mile (g/VMT)	0.02571			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	2.72E-04	9	7.11%	734	1.68E-03	17	7.39%	763	1.75E-03
2	0.42%	43	9.88E-05	10	4.39%	453	1.04E-03	18	8.18%	844	1.93E-03
3	0.41%	42	9.60E-05	11	4.66%	482	1.10E-03	19	5.70%	588	1.35E-03
4	0.26%	27	6.19E-05	12	5.89%	608	1.39E-03	20	4.27%	441	1.01E-03
5	0.50%	52	1.18E-04	13	6.15%	635	1.46E-03	21	3.26%	336	7.71E-04
6	0.90%	93	2.14E-04	14	6.04%	623	1.43E-03	22	3.30%	340	7.80E-04
7	3.79%	391	8.97E-04	15	7.01%	724	1.66E-03	23	2.46%	254	5.82E-04
8	7.76%	802	1.84E-03	16	7.14%	737	1.69E-03	24	1.87%	193	4.41E-04
								Total		10,327	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	3.16E-04	9	7.11%	734	1.95E-03	17	7.39%	763	2.03E-03
2	0.42%	43	1.15E-04	10	4.39%	453	1.20E-03	18	8.18%	844	2.24E-03
3	0.41%	42	1.11E-04	11	4.66%	482	1.28E-03	19	5.70%	588	1.56E-03
4	0.26%	27	7.18E-05	12	5.89%	608	1.62E-03	20	4.27%	441	1.17E-03
5	0.50%	52	1.37E-04	13	6.15%	635	1.69E-03	21	3.26%	336	8.94E-04
6	0.90%	93	2.48E-04	14	6.04%	623	1.66E-03	22	3.30%	340	9.05E-04
7	3.79%	391	1.04E-03	15	7.01%	724	1.93E-03	23	2.46%	254	6.75E-04
8	7.76%	802	2.13E-03	16	7.14%	737	1.96E-03	24	1.87%	193	5.12E-04
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman 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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	56	1.3	40	10,327	8,760	94,288	9.81E-08	7.23E-08	2.6	1.21
FUG_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	56	1.3	40	10,327	10,163	109,397	9.81E-08	7.23E-08	2.6	1.21
									Total	20,654						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00502			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02241			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions -

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	2.37E-04	9	7.11%	734	1.47E-03	17	7.39%	763	1.52E-03
2	0.42%	43	8.61E-05	10	4.39%	453	9.04E-04	18	8.18%	844	1.69E-03
3	0.41%	42	8.37E-05	11	4.66%	482	9.62E-04	19	5.70%	588	1.17E-03
4	0.26%	27	5.39E-05	12	5.89%	608	1.21E-03	20	4.27%	441	8.81E-04
5	0.50%	52	1.03E-04	13	6.15%	635	1.27E-03	21	3.26%	336	6.72E-04
6	0.90%	93	1.86E-04	14	6.04%	623	1.24E-03	22	3.30%	340	6.80E-04
7	3.79%	391	7.81E-04	15	7.01%	724	1.45E-03	23	2.46%	254	5.07E-04
8	7.76%	802	1.60E-03	16	7.14%	737	1.47E-03	24	1.87%	193	3.85E-04
								Total		10,327	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	2.75E-04	9	7.11%	734	1.70E-03	17	7.39%	763	1.77E-03
2	0.42%	43	9.99E-05	10	4.39%	453	1.05E-03	18	8.18%	844	1.96E-03
3	0.41%	42	9.71E-05	11	4.66%	482	1.12E-03	19	5.70%	588	1.36E-03
4	0.26%	27	6.26E-05	12	5.89%	608	1.41E-03	20	4.27%	441	1.02E-03
5	0.50%	52	1.20E-04	13	6.15%	635	1.47E-03	21	3.26%	336	7.79E-04
6	0.90%	93	2.16E-04	14	6.04%	623	1.44E-03	22	3.30%	340	7.88E-04
7	3.79%	391	9.07E-04	15	7.01%	724	1.68E-03	23	2.46%	254	5.89E-04
8	7.76%	802	1.86E-03	16	7.14%	737	1.71E-03	24	1.87%	193	4.46E-04
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
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	Line Area Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	67.7	3.4	69	49,440	15,027	161,751	9.858E-09	7.269E-09	6.8	3.16
DPM_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	67.7	3.4	64	49,440	14,831	159,642	9.858E-09	7.269E-09	6.8	3.16
									Total	98,880						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Emissions per Vehicle (g/VMT)	0.00057	0.000576	0.000513	

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and DPM Emissions - DPM_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	404	2.93E-05	9	8.06%	3984	2.87E-04	17	5.08%	2510	1.82E-04
2	0.52%	255	1.85E-05	10	6.91%	3418	2.46E-04	18	5.09%	2518	1.82E-04
3	0.49%	242	1.75E-05	11	5.87%	2902	2.09E-04	19	4.33%	2139	1.55E-04
4	0.75%	373	2.70E-05	12	5.49%	2712	1.96E-04	20	3.60%	1782	1.29E-04
5	1.98%	978	7.08E-05	13	5.47%	2703	1.96E-04	21	3.15%	1560	1.13E-04
6	5.76%	2846	2.05E-04	14	5.46%	2698	1.95E-04	22	2.77%	1368	9.91E-05
7	7.00%	3461	2.49E-04	15	5.25%	2595	1.88E-04	23	2.10%	1039	7.53E-05
8	7.69%	3801	2.73E-04	16	5.07%	2506	1.81E-04	24	1.30%	645	4.67E-05
								Total		49,440	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.94%	961	6.82E-05	9	4.61%	2282	1.62E-04	17	7.46%	3687	2.35E-04
2	1.56%	770	5.47E-05	10	4.26%	2106	1.49E-04	18	7.07%	3493	2.22E-04
3	1.44%	712	5.06E-05	11	4.56%	2256	1.60E-04	19	6.48%	3205	2.27E-04
4	1.26%	623	4.42E-05	12	5.00%	2471	1.75E-04	20	4.90%	2424	1.72E-04
5	1.41%	697	4.95E-05	13	5.45%	2693	1.91E-04	21	4.13%	2041	1.45E-04
6	1.98%	980	6.95E-05	14	5.73%	2835	1.80E-04	22	3.75%	1854	1.32E-04
7	2.79%	1380	9.80E-05	15	6.66%	3291	2.09E-04	23	3.34%	1651	1.17E-04
8	3.97%	1962	1.39E-04	16	7.62%	3767	2.40E-04	24	2.62%	1298	9.21E-05
								Total		49,440	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	68	1.3	68.75	49,440	15,027	161,751	2.80E-08	2.07E-08	2.6	1.21
PM2.5_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	68	1.3	63.958333	49,440	14,831	159,642	2.80E-08	2.07E-08	2.6	1.21
									Total	98,880						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Emissions per Vehicle (g/VMT)	0.001626	0.00175	0.001428	

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	404	8.88E-05	9	8.06%	3984	8.14E-04	17	5.08%	2510	5.52E-04
2	0.52%	255	5.62E-05	10	6.91%	3418	6.99E-04	18	5.09%	2518	5.54E-04
3	0.49%	242	5.32E-05	11	5.87%	2902	5.93E-04	19	4.33%	2139	4.70E-04
4	0.75%	373	8.20E-05	12	5.49%	2712	5.96E-04	20	3.60%	1782	3.92E-04
5	1.98%	978	2.15E-04	13	5.47%	2703	5.94E-04	21	3.15%	1560	3.43E-04
6	5.76%	2846	5.82E-04	14	5.46%	2698	5.93E-04	22	2.77%	1368	3.01E-04
7	7.00%	3461	7.07E-04	15	5.25%	2595	5.71E-04	23	2.10%	1039	2.29E-04
8	7.69%	3801	7.77E-04	16	5.07%	2506	5.51E-04	24	1.30%	645	1.42E-04
								Total		49,440	

2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.94%	961	1.94E-04	9	4.61%	2282	4.60E-04	17	7.46%	3687	6.53E-04
2	1.56%	770	1.55E-04	10	4.26%	2106	4.25E-04	18	7.07%	3493	6.19E-04
3	1.44%	712	1.44E-04	11	4.56%	2256	4.55E-04	19	6.48%	3205	6.47E-04
4	1.26%	623	1.26E-04	12	5.00%	2471	4.98E-04	20	4.90%	2424	4.89E-04
5	1.41%	697	1.41E-04	13	5.45%	2693	5.43E-04	21	4.13%	2041	4.12E-04
6	1.98%	980	1.98E-04	14	5.73%	2835	5.02E-04	22	3.75%	1854	3.74E-04
7	2.79%	1380	2.78E-04	15	6.66%	3291	5.83E-04	23	3.34%	1651	3.33E-04
8	3.97%	1962	3.96E-04	16	7.62%	3767	6.67E-04	24	2.62%	1298	2.62E-04
								Total		49,440	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	68	1.3	68.75	49,440	15,027	161,751	3.63E-07	2.68E-07	2.6	1.21
TEXH_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	68	1.3	63.958333	49,440	14,831	159,642	3.63E-07	2.68E-07	2.6	1.21
									Total	98,880						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Emissions per Vehicle (g/VMT)	0.02109	0.02270	0.01890	

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	404	1.15E-03	9	8.06%	3984	1.06E-02	17	5.08%	2510	7.16E-03
2	0.52%	255	7.29E-04	10	6.91%	3418	9.06E-03	18	5.09%	2518	7.19E-03
3	0.49%	242	6.90E-04	11	5.87%	2902	7.69E-03	19	4.33%	2139	6.10E-03
4	0.75%	373	1.06E-03	12	5.49%	2712	7.74E-03	20	3.60%	1782	5.09E-03
5	1.98%	978	2.79E-03	13	5.47%	2703	7.71E-03	21	3.15%	1560	4.45E-03
6	5.76%	2846	7.55E-03	14	5.46%	2698	7.70E-03	22	2.77%	1368	3.90E-03
7	7.00%	3461	9.17E-03	15	5.25%	2595	7.41E-03	23	2.10%	1039	2.97E-03
8	7.69%	3801	1.01E-02	16	5.07%	2506	7.15E-03	24	1.30%	645	1.84E-03
								Total		49,440	

2024 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.82%	404	1.06E-03	9	8.06%	3984	1.04E-02	17	5.08%	2510	5.89E-03
2	0.52%	255	6.68E-04	10	6.91%	3418	8.94E-03	18	5.09%	2518	5.91E-03
3	0.49%	242	6.32E-04	11	5.87%	2902	7.59E-03	19	4.33%	2139	5.60E-03
4	0.75%	373	9.75E-04	12	5.49%	2712	7.10E-03	20	3.60%	1782	4.66E-03
5	1.98%	978	2.56E-03	13	5.47%	2703	7.07E-03	21	3.15%	1560	4.08E-03
6	5.76%	2846	7.45E-03	14	5.46%	2698	6.33E-03	22	2.77%	1368	3.58E-03
7	7.00%	3461	9.05E-03	15	5.25%	2595	6.09E-03	23	2.10%	1039	2.72E-03
8	7.69%	3801	9.94E-03	16	5.07%	2506	5.88E-03	24	1.30%	645	1.69E-03
								Total		49,440	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	68	1.3	68.75	49,440	15,027	161,751	2.76E-07	2.04E-07	2.6	1.21
TEVAP_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	68	1.3	63.958333	49,440	14,831	159,642	2.76E-07	2.04E-07	2.6	1.21
									Total	98,880						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Emissions per Vehicle per Hour (g/hour)	1.04169	1.04169	1.04169	
Emissions per Vehicle per Mile (g/VMT)	0.01603	0.01488	0.01736	

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	404	7.56E-04	9	8.06%	3984	8.03E-03	17	5.08%	2510	4.70E-03
2	0.52%	255	4.78E-04	10	6.91%	3418	6.89E-03	18	5.09%	2518	4.71E-03
3	0.49%	242	4.52E-04	11	5.87%	2902	5.85E-03	19	4.33%	2139	4.00E-03
4	0.75%	373	6.97E-04	12	5.49%	2712	5.07E-03	20	3.60%	1782	3.33E-03
5	1.98%	978	1.83E-03	13	5.47%	2703	5.06E-03	21	3.15%	1560	2.92E-03
6	5.76%	2846	5.73E-03	14	5.46%	2698	5.05E-03	22	2.77%	1368	2.56E-03
7	7.00%	3461	6.97E-03	15	5.25%	2595	4.86E-03	23	2.10%	1039	1.94E-03
8	7.69%	3801	7.66E-03	16	5.07%	2506	4.69E-03	24	1.30%	645	1.21E-03
								Total		49,440	

2024 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.82%	404	8.03E-04	9	8.06%	3984	7.92E-03	17	5.08%	2510	5.41E-03
2	0.52%	255	5.08E-04	10	6.91%	3418	6.80E-03	18	5.09%	2518	5.43E-03
3	0.49%	242	4.81E-04	11	5.87%	2902	5.77E-03	19	4.33%	2139	4.25E-03
4	0.75%	373	7.41E-04	12	5.49%	2712	5.39E-03	20	3.60%	1782	3.54E-03
5	1.98%	978	1.94E-03	13	5.47%	2703	5.38E-03	21	3.15%	1560	3.10E-03
6	5.76%	2846	5.66E-03	14	5.46%	2698	5.81E-03	22	2.77%	1368	2.72E-03
7	7.00%	3461	6.88E-03	15	5.25%	2595	5.59E-03	23	2.10%	1039	2.07E-03
8	7.69%	3801	7.56E-03	16	5.07%	2506	5.40E-03	24	1.30%	645	1.28E-03
								Total		49,440	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	68	1.3	68.75	49,440	15,027	161,751	1.92E-07	1.41E-07	2.6	1.21
FUG_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	68	1.3	63.958333	49,440	14,831	159,642	1.92E-07	1.41E-07	2.6	1.21
									Total	98,880						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Tire Wear - Emissions per Vehicle (g/VMT)	0.00207	0.00207	0.00207	
Brake Wear - Emissions per Vehicle (g/VMT)	0.00180	0.00180	0.0021	
Road Dust - Emissions per Vehicle (g/VMT)	0.00726	0.00726	0.00726	
tal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.01113	0.01113	0.01143	

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	404	5.65E-04	9	8.06%	3984	5.57E-03	17	5.08%	2510	3.51E-03
2	0.52%	255	3.57E-04	10	6.91%	3418	4.78E-03	18	5.09%	2518	3.52E-03
3	0.49%	242	3.38E-04	11	5.87%	2902	4.06E-03	19	4.33%	2139	2.99E-03
4	0.75%	373	5.21E-04	12	5.49%	2712	3.79E-03	20	3.60%	1782	2.49E-03
5	1.98%	978	1.37E-03	13	5.47%	2703	3.78E-03	21	3.15%	1560	2.18E-03
6	5.76%	2846	3.98E-03	14	5.46%	2698	3.77E-03	22	2.77%	1368	1.91E-03
7	7.00%	3461	4.84E-03	15	5.25%	2595	3.63E-03	23	2.10%	1039	1.45E-03
8	7.69%	3801	5.32E-03	16	5.07%	2506	3.51E-03	24	1.30%	645	9.02E-04
								Total		49,440	

2024 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.82%	404	5.58E-04	9	8.06%	3984	5.50E-03	17	5.08%	2510	3.56E-03
2	0.52%	255	3.53E-04	10	6.91%	3418	4.72E-03	18	5.09%	2518	3.57E-03
3	0.49%	242	3.34E-04	11	5.87%	2902	4.01E-03	19	4.33%	2139	2.95E-03
4	0.75%	373	5.15E-04	12	5.49%	2712	3.74E-03	20	3.60%	1782	2.46E-03
5	1.98%	978	1.35E-03	13	5.47%	2703	3.73E-03	21	3.15%	1560	2.15E-03
6	5.76%	2846	3.93E-03	14	5.46%	2698	3.83E-03	22	2.77%	1368	1.89E-03
7	7.00%	3461	4.78E-03	15	5.25%	2595	3.68E-03	23	2.10%	1039	1.44E-03
8	7.69%	3801	5.25E-03	16	5.07%	2506	3.55E-03	24	1.30%	645	8.91E-04
								Total		49,440	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market 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	Line Area: Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	43.7	3.4	25	10,327	3,077	33,122	2.800E-09	2.065E-09	6.8	3.16
DPM_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	43.7	3.4	25	10,327	3,206	34,512	2.800E-09	2.065E-09	6.8	3.16
									Total	20,654						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00050			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and DPM Emissions - DPM_NB_MAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.90%	402	8.06E-06	9	6.42%	663	1.33E-05	17	5.62%	580	1.16E-05
2	2.58%	266	5.33E-06	10	7.34%	758	1.52E-05	18	3.27%	337	6.75E-06
3	2.87%	296	5.93E-06	11	6.42%	663	1.33E-05	19	2.35%	243	4.86E-06
4	3.32%	343	6.87E-06	12	6.88%	710	1.42E-05	20	0.86%	89	1.78E-06
5	2.18%	225	4.50E-06	13	6.25%	645	1.29E-05	21	3.09%	320	6.40E-06
6	3.38%	349	6.99E-06	14	6.19%	639	1.28E-05	22	4.13%	426	8.53E-06
7	6.02%	621	1.24E-05	15	5.10%	527	1.05E-05	23	2.52%	260	5.21E-06
8	4.64%	479	9.60E-06	16	3.78%	391	7.82E-06	24	0.92%	95	1.90E-06
								Total		10,327	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_MAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.90%	402	8.40E-06	9	6.42%	663	1.38E-05	17	5.62%	580	1.21E-05
2	2.58%	266	5.56E-06	10	7.34%	758	1.58E-05	18	3.27%	337	7.04E-06
3	2.87%	296	6.17E-06	11	6.42%	663	1.38E-05	19	2.35%	243	5.06E-06
4	3.32%	343	7.16E-06	12	6.88%	710	1.48E-05	20	0.86%	89	1.85E-06
5	2.18%	225	4.69E-06	13	6.25%	645	1.35E-05	21	3.09%	320	6.67E-06
6	3.38%	349	7.29E-06	14	6.19%	639	1.33E-05	22	4.13%	426	8.89E-06
7	6.02%	621	1.30E-05	15	5.10%	527	1.10E-05	23	2.52%	260	5.43E-06
8	4.64%	479	1.00E-05	16	3.78%	391	8.15E-06	24	0.92%	95	1.98E-06
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market 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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	44	1.3	25	10,327	3,077	33,122	1.23E-08	9.05E-09	2.6	1.21
PM2.5_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	44	1.3	25	10,327	3,206	34,512	1.23E-08	9.05E-09	2.6	1.21
									Total	20,654						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002200			

Emisson Factors from CT-EMFAC2021

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

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	1.04E-05	9	7.11%	734	6.45E-05	17	7.39%	763	6.69E-05
2	0.42%	43	3.79E-06	10	4.39%	453	3.97E-05	18	8.18%	844	7.41E-05
3	0.41%	42	3.68E-06	11	4.66%	482	4.23E-05	19	5.70%	588	5.16E-05
4	0.26%	27	2.37E-06	12	5.89%	608	5.34E-05	20	4.27%	441	3.87E-05
5	0.50%	52	4.53E-06	13	6.15%	635	5.58E-05	21	3.26%	336	2.95E-05
6	0.90%	93	8.19E-06	14	6.04%	623	5.47E-05	22	3.30%	340	2.99E-05
7	3.79%	391	3.44E-05	15	7.01%	724	6.36E-05	23	2.46%	254	2.23E-05
8	7.76%	802	7.04E-05	16	7.14%	737	6.47E-05	24	1.87%	193	1.69E-05
								Total		10,327	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	1.09E-05	9	7.11%	734	6.72E-05	17	7.39%	763	6.97E-05
2	0.42%	43	3.94E-06	10	4.39%	453	4.14E-05	18	8.18%	844	7.72E-05
3	0.41%	42	3.83E-06	11	4.66%	482	4.40E-05	19	5.70%	588	5.38E-05
4	0.26%	27	2.47E-06	12	5.89%	608	5.56E-05	20	4.27%	441	4.04E-05
5	0.50%	52	4.72E-06	13	6.15%	635	5.81E-05	21	3.26%	336	3.08E-05
6	0.90%	93	8.53E-06	14	6.04%	623	5.70E-05	22	3.30%	340	3.11E-05
7	3.79%	391	3.58E-05	15	7.01%	724	6.62E-05	23	2.46%	254	2.32E-05
8	7.76%	802	7.33E-05	16	7.14%	737	6.74E-05	24	1.87%	193	1.76E-05
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market 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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	44	1.3	25	10,327	3,077	33,122	1.94E-07	1.43E-07	2.6	1.21
TEXH_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	44	1.3	25	10,327	3,206	34,512	1.94E-07	1.43E-07	2.6	1.21
									Total	20,654						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.03475			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_MAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	1.65E-04	9	7.11%	734	1.02E-03	17	7.39%	763	1.06E-03
2	0.42%	43	5.98E-05	10	4.39%	453	6.28E-04	18	8.18%	844	1.17E-03
3	0.41%	42	5.81E-05	11	4.66%	482	6.68E-04	19	5.70%	588	8.15E-04
4	0.26%	27	3.74E-05	12	5.89%	608	8.43E-04	20	4.27%	441	6.12E-04
5	0.50%	52	7.15E-05	13	6.15%	635	8.81E-04	21	3.26%	336	4.66E-04
6	0.90%	93	1.29E-04	14	6.04%	623	8.64E-04	22	3.30%	340	4.72E-04
7	3.79%	391	5.43E-04	15	7.01%	724	1.00E-03	23	2.46%	254	3.52E-04
8	7.76%	802	1.11E-03	16	7.14%	737	1.02E-03	24	1.87%	193	2.67E-04
								Total		10,327	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	1.72E-04	9	7.11%	734	1.06E-03	17	7.39%	763	1.10E-03
2	0.42%	43	6.23E-05	10	4.39%	453	6.54E-04	18	8.18%	844	1.22E-03
3	0.41%	42	6.06E-05	11	4.66%	482	6.96E-04	19	5.70%	588	8.49E-04
4	0.26%	27	3.90E-05	12	5.89%	608	8.78E-04	20	4.27%	441	6.38E-04
5	0.50%	52	7.45E-05	13	6.15%	635	9.18E-04	21	3.26%	336	4.86E-04
6	0.90%	93	1.35E-04	14	6.04%	623	9.00E-04	22	3.30%	340	4.92E-04
7	3.79%	391	5.65E-04	15	7.01%	724	1.05E-03	23	2.46%	254	3.67E-04
8	7.76%	802	1.16E-03	16	7.14%	737	1.06E-03	24	1.87%	193	2.78E-04
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market 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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	44	1.3	25	10,327	3,077	33,122	2.29E-07	1.69E-07	2.6	1.21
TEVAP_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	44	1.3	25	10,327	3,206	34,512	2.29E-07	1.69E-07	2.6	1.21
									Total	20,654						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.02854			
Emissions per Vehicle per Mile (g/VMT)	0.04114			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_MAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	1.95E-04	9	7.11%	734	1.21E-03	17	7.39%	763	1.25E-03
2	0.42%	43	7.08E-05	10	4.39%	453	7.43E-04	18	8.18%	844	1.39E-03
3	0.41%	42	6.88E-05	11	4.66%	482	7.91E-04	19	5.70%	588	9.65E-04
4	0.26%	27	4.43E-05	12	5.89%	608	9.98E-04	20	4.27%	441	7.24E-04
5	0.50%	52	8.47E-05	13	6.15%	635	1.04E-03	21	3.26%	336	5.52E-04
6	0.90%	93	1.53E-04	14	6.04%	623	1.02E-03	22	3.30%	340	5.59E-04
7	3.79%	391	6.42E-04	15	7.01%	724	1.19E-03	23	2.46%	254	4.17E-04
8	7.76%	802	1.32E-03	16	7.14%	737	1.21E-03	24	1.87%	193	3.16E-04
								Total		10,327	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	2.03E-04	9	7.11%	734	1.26E-03	17	7.39%	763	1.30E-03
2	0.42%	43	7.38E-05	10	4.39%	453	7.74E-04	18	8.18%	844	1.44E-03
3	0.41%	42	7.17E-05	11	4.66%	482	8.24E-04	19	5.70%	588	1.01E-03
4	0.26%	27	4.62E-05	12	5.89%	608	1.04E-03	20	4.27%	441	7.55E-04
5	0.50%	52	8.82E-05	13	6.15%	635	1.09E-03	21	3.26%	336	5.75E-04
6	0.90%	93	1.60E-04	14	6.04%	623	1.07E-03	22	3.30%	340	5.82E-04
7	3.79%	391	6.69E-04	15	7.01%	724	1.24E-03	23	2.46%	254	4.35E-04
8	7.76%	802	1.37E-03	16	7.14%	737	1.26E-03	24	1.87%	193	3.29E-04
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market 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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	44	1.3	25	10,327	3,077	33,122	1.27E-07	9.37E-08	2.6	1.21
FUG_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	44	1.3	25	10,327	3,206	34,512	1.27E-07	9.37E-08	2.6	1.21
									Total	20,654						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00541			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
tal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02280			

Emisson Factors from CT-EMFAC2021

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

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	1.08E-04	9	7.11%	734	6.68E-04	17	7.39%	763	6.94E-04
2	0.42%	43	3.92E-05	10	4.39%	453	4.12E-04	18	8.18%	844	7.68E-04
3	0.41%	42	3.81E-05	11	4.66%	482	4.38E-04	19	5.70%	588	5.35E-04
4	0.26%	27	2.46E-05	12	5.89%	608	5.53E-04	20	4.27%	441	4.01E-04
5	0.50%	52	4.69E-05	13	6.15%	635	5.78E-04	21	3.26%	336	3.06E-04
6	0.90%	93	8.49E-05	14	6.04%	623	5.67E-04	22	3.30%	340	3.10E-04
7	3.79%	391	3.56E-04	15	7.01%	724	6.59E-04	23	2.46%	254	2.31E-04
8	7.76%	802	7.29E-04	16	7.14%	737	6.70E-04	24	1.87%	193	1.75E-04
								Total		10,327	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	1.13E-04	9	7.11%	734	6.96E-04	17	7.39%	763	7.23E-04
2	0.42%	43	4.09E-05	10	4.39%	453	4.29E-04	18	8.18%	844	8.00E-04
3	0.41%	42	3.97E-05	11	4.66%	482	4.56E-04	19	5.70%	588	5.57E-04
4	0.26%	27	2.56E-05	12	5.89%	608	5.76E-04	20	4.27%	441	4.18E-04
5	0.50%	52	4.89E-05	13	6.15%	635	6.02E-04	21	3.26%	336	3.19E-04
6	0.90%	93	8.84E-05	14	6.04%	623	5.91E-04	22	3.30%	340	3.23E-04
7	3.79%	391	3.71E-04	15	7.01%	724	6.86E-04	23	2.46%	254	2.41E-04
8	7.76%	802	7.60E-04	16	7.14%	737	6.98E-04	24	1.87%	193	1.83E-04
								Total		10,327	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
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	Line Area: Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	43.7	3.4	25	11,656	7,382	79,459	3.160E-09	2.330E-09	6.8	3.16
DPM_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	43.7	3.4	25	11,656	6,829	73,511	3.160E-09	2.330E-09	6.8	3.16
									Total	23,311						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00050			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and DPM Emissions - DPM_EB_JAM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.90%	454	2.18E-05	9	6.42%	748	3.59E-05	17	5.62%	655	3.14E-05
2	2.58%	301	1.44E-05	10	7.34%	855	4.11E-05	18	3.27%	381	1.83E-05
3	2.87%	334	1.60E-05	11	6.42%	748	3.59E-05	19	2.35%	274	1.32E-05
4	3.32%	387	1.86E-05	12	6.88%	802	3.85E-05	20	0.86%	100	4.81E-06
5	2.18%	254	1.22E-05	13	6.25%	728	3.50E-05	21	3.09%	361	1.73E-05
6	3.38%	394	1.89E-05	14	6.19%	721	3.47E-05	22	4.13%	481	2.31E-05
7	6.02%	701	3.37E-05	15	5.10%	594	2.86E-05	23	2.52%	294	1.41E-05
8	4.64%	541	2.60E-05	16	3.78%	441	2.12E-05	24	0.92%	107	5.13E-06
								Total		11,656	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_JAM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.90%	454	2.02E-05	9	6.42%	748	3.32E-05	17	5.62%	655	2.91E-05
2	2.58%	301	1.34E-05	10	7.34%	855	3.80E-05	18	3.27%	381	1.69E-05
3	2.87%	334	1.48E-05	11	6.42%	748	3.32E-05	19	2.35%	274	1.22E-05
4	3.32%	387	1.72E-05	12	6.88%	802	3.56E-05	20	0.86%	100	4.45E-06
5	2.18%	254	1.13E-05	13	6.25%	728	3.24E-05	21	3.09%	361	1.60E-05
6	3.38%	394	1.75E-05	14	6.19%	721	3.21E-05	22	4.13%	481	2.14E-05
7	6.02%	701	3.12E-05	15	5.10%	594	2.64E-05	23	2.52%	294	1.31E-05
8	4.64%	541	2.40E-05	16	3.78%	441	1.96E-05	24	0.92%	107	4.75E-06
								Total		11,656	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	44	1.3	25	11,656	7,382	79,459	1.38E-08	1.02E-08	2.6	1.21
PM2.5_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	44	1.3	25	11,656	6,829	73,511	1.38E-08	1.02E-08	2.6	1.21
									Total	23,311						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002200			

Emisson Factors from CT-EMFAC2021

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

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	134	2.83E-05	9	7.11%	829	1.75E-04	17	7.39%	861	1.81E-04
2	0.42%	49	1.02E-05	10	4.39%	511	1.08E-04	18	8.18%	953	2.01E-04
3	0.41%	47	9.96E-06	11	4.66%	544	1.14E-04	19	5.70%	664	1.40E-04
4	0.26%	30	6.42E-06	12	5.89%	686	1.44E-04	20	4.27%	498	1.05E-04
5	0.50%	58	1.23E-05	13	6.15%	717	1.51E-04	21	3.26%	380	7.99E-05
6	0.90%	105	2.22E-05	14	6.04%	704	1.48E-04	22	3.30%	384	8.09E-05
7	3.79%	442	9.30E-05	15	7.01%	818	1.72E-04	23	2.46%	287	6.04E-05
8	7.76%	905	1.91E-04	16	7.14%	832	1.75E-04	24	1.87%	217	4.58E-05
								Total		11,656	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	134	2.61E-05	9	7.11%	829	1.61E-04	17	7.39%	861	1.68E-04
2	0.42%	49	9.48E-06	10	4.39%	511	9.96E-05	18	8.18%	953	1.86E-04
3	0.41%	47	9.22E-06	11	4.66%	544	1.06E-04	19	5.70%	664	1.29E-04
4	0.26%	30	5.94E-06	12	5.89%	686	1.34E-04	20	4.27%	498	9.70E-05
5	0.50%	58	1.13E-05	13	6.15%	717	1.40E-04	21	3.26%	380	7.39E-05
6	0.90%	105	2.05E-05	14	6.04%	704	1.37E-04	22	3.30%	384	7.48E-05
7	3.79%	442	8.60E-05	15	7.01%	818	1.59E-04	23	2.46%	287	5.59E-05
8	7.76%	905	1.76E-04	16	7.14%	832	1.62E-04	24	1.87%	217	4.24E-05
								Total		11,656	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	44	1.3	25	11,656	7,382	79,459	2.19E-07	1.61E-07	2.6	1.21
TEXH_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	44	1.3	25	11,656	6,829	73,511	2.19E-07	1.61E-07	2.6	1.21
									Total	23,311						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.03475			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_EB_JAM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	134	4.46E-04	9	7.11%	829	2.76E-03	17	7.39%	861	2.86E-03
2	0.42%	49	1.62E-04	10	4.39%	511	1.70E-03	18	8.18%	953	3.17E-03
3	0.41%	47	1.57E-04	11	4.66%	544	1.81E-03	19	5.70%	664	2.21E-03
4	0.26%	30	1.01E-04	12	5.89%	686	2.28E-03	20	4.27%	498	1.66E-03
5	0.50%	58	1.94E-04	13	6.15%	717	2.38E-03	21	3.26%	380	1.26E-03
6	0.90%	105	3.50E-04	14	6.04%	704	2.34E-03	22	3.30%	384	1.28E-03
7	3.79%	442	1.47E-03	15	7.01%	818	2.72E-03	23	2.46%	287	9.54E-04
8	7.76%	905	3.01E-03	16	7.14%	832	2.77E-03	24	1.87%	217	7.23E-04
								Total		11,656	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	134	4.13E-04	9	7.11%	829	2.55E-03	17	7.39%	861	2.65E-03
2	0.42%	49	1.50E-04	10	4.39%	511	1.57E-03	18	8.18%	953	2.93E-03
3	0.41%	47	1.46E-04	11	4.66%	544	1.67E-03	19	5.70%	664	2.04E-03
4	0.26%	30	9.38E-05	12	5.89%	686	2.11E-03	20	4.27%	498	1.53E-03
5	0.50%	58	1.79E-04	13	6.15%	717	2.21E-03	21	3.26%	380	1.17E-03
6	0.90%	105	3.24E-04	14	6.04%	704	2.16E-03	22	3.30%	384	1.18E-03
7	3.79%	442	1.36E-03	15	7.01%	818	2.52E-03	23	2.46%	287	8.82E-04
8	7.76%	905	2.78E-03	16	7.14%	832	2.56E-03	24	1.87%	217	6.69E-04
								Total		11,656	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	44	1.3	25	11,656	7,382	79,459	2.59E-07	1.91E-07	2.6	1.21
TEVAP_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	44	1.3	25	11,656	6,829	73,511	2.59E-07	1.91E-07	2.6	1.21
									Total	23,311						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.02854			
Emissions per Vehicle per Mile (g/VMT)	0.04114			

Emisson Factors from CT-EMFAC2021

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_EB_JAM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	134	5.28E-04	9	7.11%	829	3.26E-03	17	7.39%	861	3.39E-03
2	0.42%	49	1.92E-04	10	4.39%	511	2.01E-03	18	8.18%	953	3.75E-03
3	0.41%	47	1.86E-04	11	4.66%	544	2.14E-03	19	5.70%	664	2.61E-03
4	0.26%	30	1.20E-04	12	5.89%	686	2.70E-03	20	4.27%	498	1.96E-03
5	0.50%	58	2.29E-04	13	6.15%	717	2.82E-03	21	3.26%	380	1.49E-03
6	0.90%	105	4.15E-04	14	6.04%	704	2.77E-03	22	3.30%	384	1.51E-03
7	3.79%	442	1.74E-03	15	7.01%	818	3.22E-03	23	2.46%	287	1.13E-03
8	7.76%	905	3.56E-03	16	7.14%	832	3.28E-03	24	1.87%	217	8.56E-04
								Total		11,656	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	134	4.89E-04	9	7.11%	829	3.02E-03	17	7.39%	861	3.14E-03
2	0.42%	49	1.77E-04	10	4.39%	511	1.86E-03	18	8.18%	953	3.47E-03
3	0.41%	47	1.72E-04	11	4.66%	544	1.98E-03	19	5.70%	664	2.42E-03
4	0.26%	30	1.11E-04	12	5.89%	686	2.50E-03	20	4.27%	498	1.81E-03
5	0.50%	58	2.12E-04	13	6.15%	717	2.61E-03	21	3.26%	380	1.38E-03
6	0.90%	105	3.84E-04	14	6.04%	704	2.56E-03	22	3.30%	384	1.40E-03
7	3.79%	442	1.61E-03	15	7.01%	818	2.98E-03	23	2.46%	287	1.04E-03
8	7.76%	905	3.30E-03	16	7.14%	832	3.03E-03	24	1.87%	217	7.92E-04
								Total		11,656	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	44	1.3	25	11,656	7,382	79,459	1.44E-07	1.06E-07	2.6	1.21
FUG_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	44	1.3	25	11,656	6,829	73,511	1.44E-07	1.06E-07	2.6	1.21
									Total	23,311						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00541			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
tal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02280			

Emisson Factors from CT-EMFAC2021

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

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	134	2.93E-04	9	7.11%	829	1.81E-03	17	7.39%	861	1.88E-03
2	0.42%	49	1.06E-04	10	4.39%	511	1.12E-03	18	8.18%	953	2.08E-03
3	0.41%	47	1.03E-04	11	4.66%	544	1.19E-03	19	5.70%	664	1.45E-03
4	0.26%	30	6.65E-05	12	5.89%	686	1.50E-03	20	4.27%	498	1.09E-03
5	0.50%	58	1.27E-04	13	6.15%	717	1.56E-03	21	3.26%	380	8.28E-04
6	0.90%	105	2.30E-04	14	6.04%	704	1.53E-03	22	3.30%	384	8.38E-04
7	3.79%	442	9.64E-04	15	7.01%	818	1.78E-03	23	2.46%	287	6.26E-04
8	7.76%	905	1.97E-03	16	7.14%	832	1.81E-03	24	1.87%	217	4.74E-04
								Total		11,656	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	134	2.71E-04	9	7.11%	829	1.67E-03	17	7.39%	861	1.74E-03
2	0.42%	49	9.82E-05	10	4.39%	511	1.03E-03	18	8.18%	953	1.92E-03
3	0.41%	47	9.55E-05	11	4.66%	544	1.10E-03	19	5.70%	664	1.34E-03
4	0.26%	30	6.15E-05	12	5.89%	686	1.39E-03	20	4.27%	498	1.01E-03
5	0.50%	58	1.18E-04	13	6.15%	717	1.45E-03	21	3.26%	380	7.66E-04
6	0.90%	105	2.13E-04	14	6.04%	704	1.42E-03	22	3.30%	384	7.75E-04
7	3.79%	442	8.92E-04	15	7.01%	818	1.65E-03	23	2.46%	287	5.79E-04
8	7.76%	905	1.83E-03	16	7.14%	832	1.68E-03	24	1.87%	217	4.39E-04
								Total		11,656	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman Avenue
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Line Area Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	55.7	3.4	40	10,614	8,760	94,288	1.457E-09	1.074E-09	6.8	3.16
DPM_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	55.7	3.4	40	10,614	10,163	109,397	1.457E-09	1.074E-09	6.8	3.16
									Total	21,228						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.00032			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and DPM Emissions - DPM_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.95%	420	1.21E-05	9	6.40%	680	1.96E-05	17	5.61%	596	1.72E-05
2	2.66%	282	8.13E-06	10	7.41%	787	2.27E-05	18	3.24%	344	9.93E-06
3	2.88%	306	8.83E-06	11	6.34%	673	1.94E-05	19	2.21%	235	6.78E-06
4	3.28%	348	1.00E-05	12	6.96%	739	2.13E-05	20	0.86%	91	2.63E-06
5	2.15%	228	6.58E-06	13	6.22%	661	1.91E-05	21	3.06%	325	9.38E-06
6	3.28%	348	1.00E-05	14	6.17%	655	1.89E-05	22	4.19%	445	1.28E-05
7	6.06%	643	1.85E-05	15	5.16%	548	1.58E-05	23	2.61%	277	7.99E-06
8	4.54%	482	1.39E-05	16	3.92%	416	1.20E-05	24	0.85%	90	2.60E-06
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.95%	420	1.41E-05	9	6.40%	680	2.28E-05	17	5.61%	596	1.99E-05
2	2.66%	282	9.44E-06	10	7.41%	787	2.63E-05	18	3.24%	344	1.15E-05
3	2.88%	306	1.02E-05	11	6.34%	673	2.25E-05	19	2.21%	235	7.87E-06
4	3.28%	348	1.16E-05	12	6.96%	739	2.47E-05	20	0.86%	91	3.05E-06
5	2.15%	228	7.63E-06	13	6.22%	661	2.21E-05	21	3.06%	325	1.09E-05
6	3.28%	348	1.16E-05	14	6.17%	655	2.19E-05	22	4.19%	445	1.49E-05
7	6.06%	643	2.15E-05	15	5.16%	548	1.83E-05	23	2.61%	277	9.27E-06
8	4.54%	482	1.61E-05	16	3.92%	416	1.39E-05	24	0.85%	90	3.01E-06
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman Avenue
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	56	1.3	40	10,614	8,760	94,288	5.18E-09	3.82E-09	2.6	1.21
PM2.5_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	56	1.3	40	10,614	10,163	109,397	5.18E-09	3.82E-09	2.6	1.21
									Total	21,228						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.001152			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	1.26E-05	9	7.11%	755	7.74E-05	17	7.39%	784	8.05E-05
2	0.42%	45	4.57E-06	10	4.39%	466	4.78E-05	18	8.18%	868	8.91E-05
3	0.40%	43	4.40E-06	11	4.66%	495	5.08E-05	19	5.69%	604	6.20E-05
4	0.26%	28	2.85E-06	12	5.89%	625	6.41E-05	20	4.27%	454	4.65E-05
5	0.49%	52	5.39E-06	13	6.15%	653	6.70E-05	21	3.26%	346	3.55E-05
6	0.90%	96	9.85E-06	14	6.04%	641	6.58E-05	22	3.30%	350	3.59E-05
7	3.79%	402	4.12E-05	15	7.01%	744	7.64E-05	23	2.46%	262	2.68E-05
8	7.76%	824	8.46E-05	16	7.14%	758	7.78E-05	24	1.87%	198	2.03E-05
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	1.46E-05	9	7.11%	755	8.99E-05	17	7.39%	784	9.34E-05
2	0.42%	45	5.30E-06	10	4.39%	466	5.55E-05	18	8.18%	868	1.03E-04
3	0.40%	43	5.11E-06	11	4.66%	495	5.89E-05	19	5.69%	604	7.20E-05
4	0.26%	28	3.30E-06	12	5.89%	625	7.44E-05	20	4.27%	454	5.40E-05
5	0.49%	52	6.25E-06	13	6.15%	653	7.78E-05	21	3.26%	346	4.12E-05
6	0.90%	96	1.14E-05	14	6.04%	641	7.63E-05	22	3.30%	350	4.17E-05
7	3.79%	402	4.79E-05	15	7.01%	744	8.86E-05	23	2.46%	262	3.11E-05
8	7.76%	824	9.81E-05	16	7.14%	758	9.02E-05	24	1.87%	198	2.36E-05
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman Avenue
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	56	1.3	40	10,614	8,760	94,288	7.14E-08	5.27E-08	2.6	1.21
TEXH_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	56	1.3	40	10,614	10,163	109,397	7.14E-08	5.27E-08	2.6	1.21
									Total	21,228						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.01588			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	1.73E-04	9	7.11%	755	1.07E-03	17	7.39%	784	1.11E-03
2	0.42%	45	6.30E-05	10	4.39%	466	6.59E-04	18	8.18%	868	1.23E-03
3	0.40%	43	6.07E-05	11	4.66%	495	7.00E-04	19	5.69%	604	8.55E-04
4	0.26%	28	3.92E-05	12	5.89%	625	8.84E-04	20	4.27%	454	6.42E-04
5	0.49%	52	7.42E-05	13	6.15%	653	9.24E-04	21	3.26%	346	4.89E-04
6	0.90%	96	1.36E-04	14	6.04%	641	9.06E-04	22	3.30%	350	4.95E-04
7	3.79%	402	5.69E-04	15	7.01%	744	1.05E-03	23	2.46%	262	3.70E-04
8	7.76%	824	1.17E-03	16	7.14%	758	1.07E-03	24	1.87%	198	2.80E-04
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	2.01E-04	9	7.11%	755	1.24E-03	17	7.39%	784	1.29E-03
2	0.42%	45	7.30E-05	10	4.39%	466	7.65E-04	18	8.18%	868	1.42E-03
3	0.40%	43	7.04E-05	11	4.66%	495	8.12E-04	19	5.69%	604	9.92E-04
4	0.26%	28	4.55E-05	12	5.89%	625	1.03E-03	20	4.27%	454	7.45E-04
5	0.49%	52	8.61E-05	13	6.15%	653	1.07E-03	21	3.26%	346	5.67E-04
6	0.90%	96	1.58E-04	14	6.04%	641	1.05E-03	22	3.30%	350	5.75E-04
7	3.79%	402	6.60E-04	15	7.01%	744	1.22E-03	23	2.46%	262	4.29E-04
8	7.76%	824	1.35E-03	16	7.14%	758	1.24E-03	24	1.87%	198	3.25E-04
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman Avenue
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	56	1.3	40	10,614	8,760	94,288	1.16E-07	8.53E-08	2.6	1.21
TEVAP_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	56	1.3	40	10,614	10,163	109,397	1.16E-07	8.53E-08	2.6	1.21
									Total	21,228						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle per Hour (g/hour)	1.02854			
Emissions per Vehicle per Mile (g/VMT)	0.02571			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	2.80E-04	9	7.11%	755	1.73E-03	17	7.39%	784	1.80E-03
2	0.42%	45	1.02E-04	10	4.39%	466	1.07E-03	18	8.18%	868	1.99E-03
3	0.40%	43	9.83E-05	11	4.66%	495	1.13E-03	19	5.69%	604	1.38E-03
4	0.26%	28	6.35E-05	12	5.89%	625	1.43E-03	20	4.27%	454	1.04E-03
5	0.49%	52	1.20E-04	13	6.15%	653	1.50E-03	21	3.26%	346	7.92E-04
6	0.90%	96	2.20E-04	14	6.04%	641	1.47E-03	22	3.30%	350	8.02E-04
7	3.79%	402	9.21E-04	15	7.01%	744	1.70E-03	23	2.46%	262	5.99E-04
8	7.76%	824	1.89E-03	16	7.14%	758	1.74E-03	24	1.87%	198	4.53E-04
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	3.25E-04	9	7.11%	755	2.01E-03	17	7.39%	784	2.08E-03
2	0.42%	45	1.18E-04	10	4.39%	466	1.24E-03	18	8.18%	868	2.31E-03
3	0.40%	43	1.14E-04	11	4.66%	495	1.32E-03	19	5.69%	604	1.61E-03
4	0.26%	28	7.37E-05	12	5.89%	625	1.66E-03	20	4.27%	454	1.21E-03
5	0.49%	52	1.39E-04	13	6.15%	653	1.74E-03	21	3.26%	346	9.19E-04
6	0.90%	96	2.55E-04	14	6.04%	641	1.70E-03	22	3.30%	350	9.30E-04
7	3.79%	402	1.07E-03	15	7.01%	744	1.98E-03	23	2.46%	262	6.95E-04
8	7.76%	824	2.19E-03	16	7.14%	758	2.01E-03	24	1.87%	198	5.26E-04
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Coleman Avenue
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_NB_COL	Coleman Avenue Northbound	NB	3	516.1	0.32	17.0	56	1.3	40	10,614	8,760	94,288	1.01E-07	7.42E-08	2.6	1.21
FUG_SB_COL	Coleman Avenue Southbound	SB	3	598.8	0.37	17.0	56	1.3	40	10,614	10,163	109,397	1.01E-07	7.42E-08	2.6	1.21
									Total	21,228						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00499			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02237			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	2.44E-04	9	7.11%	755	1.50E-03	17	7.39%	784	1.56E-03
2	0.42%	45	8.87E-05	10	4.39%	466	9.29E-04	18	8.18%	868	1.73E-03
3	0.40%	43	8.55E-05	11	4.66%	495	9.86E-04	19	5.69%	604	1.20E-03
4	0.26%	28	5.53E-05	12	5.89%	625	1.25E-03	20	4.27%	454	9.04E-04
5	0.49%	52	1.05E-04	13	6.15%	653	1.30E-03	21	3.26%	346	6.89E-04
6	0.90%	96	1.91E-04	14	6.04%	641	1.28E-03	22	3.30%	350	6.98E-04
7	3.79%	402	8.01E-04	15	7.01%	744	1.48E-03	23	2.46%	262	5.21E-04
8	7.76%	824	1.64E-03	16	7.14%	758	1.51E-03	24	1.87%	198	3.95E-04
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	2.83E-04	9	7.11%	755	1.75E-03	17	7.39%	784	1.81E-03
2	0.42%	45	1.03E-04	10	4.39%	466	1.08E-03	18	8.18%	868	2.01E-03
3	0.40%	43	9.92E-05	11	4.66%	495	1.14E-03	19	5.69%	604	1.40E-03
4	0.26%	28	6.41E-05	12	5.89%	625	1.45E-03	20	4.27%	454	1.05E-03
5	0.49%	52	1.21E-04	13	6.15%	653	1.51E-03	21	3.26%	346	7.99E-04
6	0.90%	96	2.22E-04	14	6.04%	641	1.48E-03	22	3.30%	350	8.09E-04
7	3.79%	402	9.29E-04	15	7.01%	744	1.72E-03	23	2.46%	262	6.05E-04
8	7.76%	824	1.91E-03	16	7.14%	758	1.75E-03	24	1.87%	198	4.58E-04
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2027

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	Line Area: Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	67.7	3.4	69	50,880	15,027	161,751	8.780E-09	6.474E-09	6.8	3.16
DPM_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	67.7	3.4	64	50,880	14,831	159,642	8.780E-09	6.474E-09	6.8	3.16
									Total	101,760						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Emissions per Vehicle (g/VMT)	0.00050	0.000498	0.000438	

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and DPM Emissions - DPM_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	416	2.60E-05	9	8.06%	4100	2.55E-04	17	5.08%	2583	1.62E-04
2	0.52%	263	1.65E-05	10	6.91%	3517	2.19E-04	18	5.09%	2592	1.62E-04
3	0.49%	249	1.56E-05	11	5.87%	2987	1.86E-04	19	4.33%	2202	1.38E-04
4	0.75%	384	2.40E-05	12	5.49%	2791	1.75E-04	20	3.60%	1834	1.15E-04
5	1.98%	1006	6.30E-05	13	5.47%	2782	1.74E-04	21	3.15%	1605	1.00E-04
6	5.76%	2929	1.82E-04	14	5.46%	2777	1.74E-04	22	2.77%	1408	8.82E-05
7	7.00%	3562	2.22E-04	15	5.25%	2671	1.67E-04	23	2.10%	1070	6.70E-05
8	7.69%	3911	2.43E-04	16	5.07%	2579	1.61E-04	24	1.30%	664	4.16E-05
								Total		50,880	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.94%	989	6.07E-05	9	4.61%	2348	1.44E-04	17	7.46%	3794	2.06E-04
2	1.56%	792	4.87E-05	10	4.26%	2167	1.33E-04	18	7.07%	3595	1.95E-04
3	1.44%	733	4.50E-05	11	4.56%	2321	1.43E-04	19	6.48%	3298	2.03E-04
4	1.26%	641	3.94E-05	12	5.00%	2543	1.56E-04	20	4.90%	2495	1.53E-04
5	1.41%	717	4.41E-05	13	5.45%	2771	1.70E-04	21	4.13%	2101	1.29E-04
6	1.98%	1008	6.19E-05	14	5.73%	2918	1.59E-04	22	3.75%	1909	1.17E-04
7	2.79%	1420	8.72E-05	15	6.66%	3387	1.84E-04	23	3.34%	1700	1.04E-04
8	3.97%	2019	1.24E-04	16	7.62%	3876	2.11E-04	24	2.62%	1335	8.20E-05
								Total		50,880	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	68	1.3	68.75	50,880	15,027	161,751	2.51E-08	1.85E-08	2.6	1.21
PM2.5_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	68	1.3	63.958333	50,880	14,831	159,642	2.51E-08	1.85E-08	2.6	1.21
									Total	101,760						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Emissions per Vehicle (g/VMT)	0.001416	0.00152	0.001240	

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	416	7.94E-05	9	8.06%	4100	7.30E-04	17	5.08%	2583	4.93E-04
2	0.52%	263	5.02E-05	10	6.91%	3517	6.26E-04	18	5.09%	2592	4.95E-04
3	0.49%	249	4.75E-05	11	5.87%	2987	5.32E-04	19	4.33%	2202	4.20E-04
4	0.75%	384	7.33E-05	12	5.49%	2791	5.33E-04	20	3.60%	1834	3.50E-04
5	1.98%	1006	1.92E-04	13	5.47%	2782	5.31E-04	21	3.15%	1605	3.07E-04
6	5.76%	2929	5.21E-04	14	5.46%	2777	5.30E-04	22	2.77%	1408	2.69E-04
7	7.00%	3562	6.34E-04	15	5.25%	2671	5.10E-04	23	2.10%	1070	2.04E-04
8	7.69%	3911	6.96E-04	16	5.07%	2579	4.93E-04	24	1.30%	664	1.27E-04
								Total		50,880	

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.94%	989	1.74E-04	9	4.61%	2348	4.13E-04	17	7.46%	3794	5.84E-04
2	1.56%	792	1.39E-04	10	4.26%	2167	3.81E-04	18	7.07%	3595	5.53E-04
3	1.44%	733	1.29E-04	11	4.56%	2321	4.08E-04	19	6.48%	3298	5.80E-04
4	1.26%	641	1.13E-04	12	5.00%	2543	4.47E-04	20	4.90%	2495	4.38E-04
5	1.41%	717	1.26E-04	13	5.45%	2771	4.87E-04	21	4.13%	2101	3.69E-04
6	1.98%	1008	1.77E-04	14	5.73%	2918	4.49E-04	22	3.75%	1909	3.35E-04
7	2.79%	1420	2.50E-04	15	6.66%	3387	5.21E-04	23	3.34%	1700	2.99E-04
8	3.97%	2019	3.55E-04	16	7.62%	3876	5.96E-04	24	2.62%	1335	2.35E-04
								Total		50,880	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	68	1.3	68.75	50,880	15,027	161,751	2.91E-07	2.15E-07	2.6	1.21
TEXH_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	68	1.3	63.958333	50,880	14,831	159,642	2.91E-07	2.15E-07	2.6	1.21
									Total	101,760						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Emissions per Vehicle (g/VMT)	0.01642	0.01763	0.01479	

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	416	9.21E-04	9	8.06%	4100	8.47E-03	17	5.08%	2583	5.72E-03
2	0.52%	263	5.82E-04	10	6.91%	3517	7.26E-03	18	5.09%	2592	5.74E-03
3	0.49%	249	5.51E-04	11	5.87%	2987	6.17E-03	19	4.33%	2202	4.88E-03
4	0.75%	384	8.50E-04	12	5.49%	2791	6.19E-03	20	3.60%	1834	4.06E-03
5	1.98%	1006	2.23E-03	13	5.47%	2782	6.17E-03	21	3.15%	1605	3.56E-03
6	5.76%	2929	6.05E-03	14	5.46%	2777	6.15E-03	22	2.77%	1408	3.12E-03
7	7.00%	3562	7.35E-03	15	5.25%	2671	5.92E-03	23	2.10%	1070	2.37E-03
8	7.69%	3911	8.08E-03	16	5.07%	2579	5.72E-03	24	1.30%	664	1.47E-03
								Total		50,880	

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.82%	416	8.47E-04	9	8.06%	4100	8.36E-03	17	5.08%	2583	4.74E-03
2	0.52%	263	5.36E-04	10	6.91%	3517	7.17E-03	18	5.09%	2592	4.75E-03
3	0.49%	249	5.07E-04	11	5.87%	2987	6.09E-03	19	4.33%	2202	4.49E-03
4	0.75%	384	7.82E-04	12	5.49%	2791	5.69E-03	20	3.60%	1834	3.74E-03
5	1.98%	1006	2.05E-03	13	5.47%	2782	5.67E-03	21	3.15%	1605	3.27E-03
6	5.76%	2929	5.97E-03	14	5.46%	2777	5.09E-03	22	2.77%	1408	2.87E-03
7	7.00%	3562	7.26E-03	15	5.25%	2671	4.90E-03	23	2.10%	1070	2.18E-03
8	7.69%	3911	7.97E-03	16	5.07%	2579	4.73E-03	24	1.30%	664	1.35E-03
								Total		50,880	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	68	1.3	68.75	50,880	15,027	161,751	2.63E-07	1.94E-07	2.6	1.21
TEVAP_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	68	1.3	63.958333	50,880	14,831	159,642	2.63E-07	1.94E-07	2.6	1.21
									Total	101,760						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Emissions per Vehicle per Hour (g/hour)	0.96479	0.96479	0.96479	
Emissions per Vehicle per Mile (g/VMT)	0.01484	0.01378	0.01608	

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	416	7.20E-04	9	8.06%	4100	7.65E-03	17	5.08%	2583	4.48E-03
2	0.52%	263	4.55E-04	10	6.91%	3517	6.56E-03	18	5.09%	2592	4.49E-03
3	0.49%	249	4.31E-04	11	5.87%	2987	5.57E-03	19	4.33%	2202	3.81E-03
4	0.75%	384	6.65E-04	12	5.49%	2791	4.84E-03	20	3.60%	1834	3.18E-03
5	1.98%	1006	1.74E-03	13	5.47%	2782	4.82E-03	21	3.15%	1605	2.78E-03
6	5.76%	2929	5.47E-03	14	5.46%	2777	4.81E-03	22	2.77%	1408	2.44E-03
7	7.00%	3562	6.65E-03	15	5.25%	2671	4.63E-03	23	2.10%	1070	1.85E-03
8	7.69%	3911	7.30E-03	16	5.07%	2579	4.47E-03	24	1.30%	664	1.15E-03
								Total		50,880	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.82%	416	7.66E-04	9	8.06%	4100	7.55E-03	17	5.08%	2583	5.15E-03
2	0.52%	263	4.84E-04	10	6.91%	3517	6.48E-03	18	5.09%	2592	5.17E-03
3	0.49%	249	4.58E-04	11	5.87%	2987	5.50E-03	19	4.33%	2202	4.05E-03
4	0.75%	384	7.07E-04	12	5.49%	2791	5.14E-03	20	3.60%	1834	3.38E-03
5	1.98%	1006	1.85E-03	13	5.47%	2782	5.12E-03	21	3.15%	1605	2.96E-03
6	5.76%	2929	5.39E-03	14	5.46%	2777	5.54E-03	22	2.77%	1408	2.59E-03
7	7.00%	3562	6.56E-03	15	5.25%	2671	5.33E-03	23	2.10%	1070	1.97E-03
8	7.69%	3911	7.20E-03	16	5.07%	2579	5.15E-03	24	1.30%	664	1.22E-03
								Total		50,880	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Highway 87
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_NB_87	Highway 87 Northbound	NB	4	728.4	0.45	20.6	68	1.3	68.75	50,880	15,027	161,751	1.98E-07	1.46E-07	2.6	1.21
FUG_SB_87	Highway 87 Southbound	SB	4	718.9	0.45	20.6	68	1.3	63.958333	50,880	14,831	159,642	1.98E-07	1.46E-07	2.6	1.21
									Total	101,760						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	70	60	
Tire Wear - Emissions per Vehicle (g/VMT)	0.00207	0.00207	0.00207	
Brake Wear - Emissions per Vehicle (g/VMT)	0.00179	0.00179	0.00209	
Road Dust - Emissions per Vehicle (g/VMT)	0.00731	0.00731	0.00731	
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.01116	0.01116	0.01146	

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_87

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.82%	416	5.83E-04	9	8.06%	4100	5.75E-03	17	5.08%	2583	3.62E-03
2	0.52%	263	3.69E-04	10	6.91%	3517	4.93E-03	18	5.09%	2592	3.64E-03
3	0.49%	249	3.49E-04	11	5.87%	2987	4.19E-03	19	4.33%	2202	3.09E-03
4	0.75%	384	5.38E-04	12	5.49%	2791	3.92E-03	20	3.60%	1834	2.57E-03
5	1.98%	1006	1.41E-03	13	5.47%	2782	3.90E-03	21	3.15%	1605	2.25E-03
6	5.76%	2929	4.11E-03	14	5.46%	2777	3.89E-03	22	2.77%	1408	1.98E-03
7	7.00%	3562	5.00E-03	15	5.25%	2671	3.75E-03	23	2.10%	1070	1.50E-03
8	7.69%	3911	5.49E-03	16	5.07%	2579	3.62E-03	24	1.30%	664	9.31E-04
								Total		50,880	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_87

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.82%	416	5.76E-04	9	8.06%	4100	5.68E-03	17	5.08%	2583	3.67E-03
2	0.52%	263	3.64E-04	10	6.91%	3517	4.87E-03	18	5.09%	2592	3.69E-03
3	0.49%	249	3.44E-04	11	5.87%	2987	4.14E-03	19	4.33%	2202	3.05E-03
4	0.75%	384	5.31E-04	12	5.49%	2791	3.86E-03	20	3.60%	1834	2.54E-03
5	1.98%	1006	1.39E-03	13	5.47%	2782	3.85E-03	21	3.15%	1605	2.22E-03
6	5.76%	2929	4.06E-03	14	5.46%	2777	3.95E-03	22	2.77%	1408	1.95E-03
7	7.00%	3562	4.93E-03	15	5.25%	2671	3.80E-03	23	2.10%	1070	1.48E-03
8	7.69%	3911	5.41E-03	16	5.07%	2579	3.67E-03	24	1.30%	664	9.19E-04
								Total		50,880	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market Street
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2027

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	Line Area Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	43.7	3.4	25	10,614	3,077	33,122	2.282E-09	1.682E-09	6.8	3.16
DPM_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	43.7	3.4	25	10,614	3,206	34,512	2.282E-09	1.682E-09	6.8	3.16
									Total	21,228						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00040			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and DPM Emissions - DPM_NB_MAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.95%	420	6.66E-06	9	6.40%	680	1.08E-05	17	5.61%	596	9.46E-06
2	2.66%	282	4.47E-06	10	7.41%	787	1.25E-05	18	3.24%	344	5.46E-06
3	2.88%	306	4.86E-06	11	6.34%	673	1.07E-05	19	2.21%	235	3.73E-06
4	3.28%	348	5.52E-06	12	6.96%	739	1.17E-05	20	0.86%	91	1.44E-06
5	2.15%	228	3.62E-06	13	6.22%	661	1.05E-05	21	3.06%	325	5.16E-06
6	3.28%	348	5.52E-06	14	6.17%	655	1.04E-05	22	4.19%	445	7.06E-06
7	6.06%	643	1.02E-05	15	5.16%	548	8.70E-06	23	2.61%	277	4.40E-06
8	4.54%	482	7.65E-06	16	3.92%	416	6.60E-06	24	0.85%	90	1.43E-06
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_MAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.95%	420	6.94E-06	9	6.40%	680	1.12E-05	17	5.61%	596	9.85E-06
2	2.66%	282	4.66E-06	10	7.41%	787	1.30E-05	18	3.24%	344	5.69E-06
3	2.88%	306	5.06E-06	11	6.34%	673	1.11E-05	19	2.21%	235	3.89E-06
4	3.28%	348	5.75E-06	12	6.96%	739	1.22E-05	20	0.86%	91	1.51E-06
5	2.15%	228	3.77E-06	13	6.22%	661	1.09E-05	21	3.06%	325	5.37E-06
6	3.28%	348	5.75E-06	14	6.17%	655	1.08E-05	22	4.19%	445	7.36E-06
7	6.06%	643	1.06E-05	15	5.16%	548	9.06E-06	23	2.61%	277	4.58E-06
8	4.54%	482	7.97E-06	16	3.92%	416	6.88E-06	24	0.85%	90	1.49E-06
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market Street
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	44	1.3	25	10,614	3,077	33,122	1.08E-08	7.99E-09	2.6	1.21
PM2.5_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	44	1.3	25	10,614	3,206	34,512	1.08E-08	7.99E-09	2.6	1.21
									Total	21,228						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.001891			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_MAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	9.23E-06	9	7.11%	755	5.69E-05	17	7.39%	784	5.92E-05
2	0.42%	45	3.36E-06	10	4.39%	466	3.51E-05	18	8.18%	868	6.55E-05
3	0.40%	43	3.24E-06	11	4.66%	495	3.73E-05	19	5.69%	604	4.56E-05
4	0.26%	28	2.09E-06	12	5.89%	625	4.71E-05	20	4.27%	454	3.42E-05
5	0.49%	52	3.96E-06	13	6.15%	653	4.93E-05	21	3.26%	346	2.61E-05
6	0.90%	96	7.24E-06	14	6.04%	641	4.83E-05	22	3.30%	350	2.64E-05
7	3.79%	402	3.03E-05	15	7.01%	744	5.61E-05	23	2.46%	262	1.97E-05
8	7.76%	824	6.22E-05	16	7.14%	758	5.72E-05	24	1.87%	198	1.49E-05
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_MAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	9.61E-06	9	7.11%	755	5.93E-05	17	7.39%	784	6.16E-05
2	0.42%	45	3.50E-06	10	4.39%	466	3.66E-05	18	8.18%	868	6.82E-05
3	0.40%	43	3.37E-06	11	4.66%	495	3.89E-05	19	5.69%	604	4.75E-05
4	0.26%	28	2.18E-06	12	5.89%	625	4.91E-05	20	4.27%	454	3.57E-05
5	0.49%	52	4.12E-06	13	6.15%	653	5.13E-05	21	3.26%	346	2.72E-05
6	0.90%	96	7.54E-06	14	6.04%	641	5.04E-05	22	3.30%	350	2.75E-05
7	3.79%	402	3.16E-05	15	7.01%	744	5.85E-05	23	2.46%	262	2.06E-05
8	7.76%	824	6.48E-05	16	7.14%	758	5.96E-05	24	1.87%	198	1.56E-05
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market Street
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	44	1.3	25	10,614	3,077	33,122	1.56E-07	1.15E-07	2.6	1.21
TEXH_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	44	1.3	25	10,614	3,206	34,512	1.56E-07	1.15E-07	2.6	1.21
									Total	21,228						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.02725			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_MAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	1.33E-04	9	7.11%	755	8.20E-04	17	7.39%	784	8.52E-04
2	0.42%	45	4.84E-05	10	4.39%	466	5.06E-04	18	8.18%	868	9.43E-04
3	0.40%	43	4.66E-05	11	4.66%	495	5.38E-04	19	5.69%	604	6.57E-04
4	0.26%	28	3.01E-05	12	5.89%	625	6.79E-04	20	4.27%	454	4.93E-04
5	0.49%	52	5.70E-05	13	6.15%	653	7.10E-04	21	3.26%	346	3.76E-04
6	0.90%	96	1.04E-04	14	6.04%	641	6.96E-04	22	3.30%	350	3.80E-04
7	3.79%	402	4.37E-04	15	7.01%	744	8.09E-04	23	2.46%	262	2.84E-04
8	7.76%	824	8.96E-04	16	7.14%	758	8.24E-04	24	1.87%	198	2.15E-04
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_MAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	1.39E-04	9	7.11%	755	8.55E-04	17	7.39%	784	8.88E-04
2	0.42%	45	5.04E-05	10	4.39%	466	5.28E-04	18	8.18%	868	9.83E-04
3	0.40%	43	4.86E-05	11	4.66%	495	5.60E-04	19	5.69%	604	6.85E-04
4	0.26%	28	3.14E-05	12	5.89%	625	7.08E-04	20	4.27%	454	5.14E-04
5	0.49%	52	5.94E-05	13	6.15%	653	7.40E-04	21	3.26%	346	3.91E-04
6	0.90%	96	1.09E-04	14	6.04%	641	7.26E-04	22	3.30%	350	3.96E-04
7	3.79%	402	4.55E-04	15	7.01%	744	8.43E-04	23	2.46%	262	2.96E-04
8	7.76%	824	9.33E-04	16	7.14%	758	8.58E-04	24	1.87%	198	2.24E-04
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market Street
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	44	1.3	25	10,614	3,077	33,122	2.19E-07	1.61E-07	2.6	1.21
TEVAP_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	44	1.3	25	10,614	3,206	34,512	2.19E-07	1.61E-07	2.6	1.21
									Total	21,228						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	0.95466			
Emissions per Vehicle per Mile (g/VMT)	0.03819			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and TOG Evaporative Emissions -

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	1.86E-04	9	7.11%	755	1.15E-03	17	7.39%	784	1.19E-03
2	0.42%	45	6.78E-05	10	4.39%	466	7.10E-04	18	8.18%	868	1.32E-03
3	0.40%	43	6.54E-05	11	4.66%	495	7.54E-04	19	5.69%	604	9.21E-04
4	0.26%	28	4.23E-05	12	5.89%	625	9.52E-04	20	4.27%	454	6.91E-04
5	0.49%	52	7.99E-05	13	6.15%	653	9.95E-04	21	3.26%	346	5.26E-04
6	0.90%	96	1.46E-04	14	6.04%	641	9.76E-04	22	3.30%	350	5.33E-04
7	3.79%	402	6.12E-04	15	7.01%	744	1.13E-03	23	2.46%	262	3.98E-04
8	7.76%	824	1.26E-03	16	7.14%	758	1.15E-03	24	1.87%	198	3.02E-04
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_MAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	1.94E-04	9	7.11%	755	1.20E-03	17	7.39%	784	1.24E-03
2	0.42%	45	7.06E-05	10	4.39%	466	7.40E-04	18	8.18%	868	1.38E-03
3	0.40%	43	6.81E-05	11	4.66%	495	7.85E-04	19	5.69%	604	9.59E-04
4	0.26%	28	4.40E-05	12	5.89%	625	9.92E-04	20	4.27%	454	7.20E-04
5	0.49%	52	8.33E-05	13	6.15%	653	1.04E-03	21	3.26%	346	5.49E-04
6	0.90%	96	1.52E-04	14	6.04%	641	1.02E-03	22	3.30%	350	5.56E-04
7	3.79%	402	6.38E-04	15	7.01%	744	1.18E-03	23	2.46%	262	4.15E-04
8	7.76%	824	1.31E-03	16	7.14%	758	1.20E-03	24	1.87%	198	3.14E-04
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - Market Street
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_NB_MAR	Market Street Northbound	NB	2	231.1	0.14	13.3	44	1.3	25	10,614	3,077	33,122	1.30E-07	9.62E-08	2.6	1.21
FUG_SB_MAR	Market Street Southbound	SB	2	240.8	0.15	13.3	44	1.3	25	10,614	3,206	34,512	1.30E-07	9.62E-08	2.6	1.21
									Total	21,228						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00210			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00537			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
tal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02275			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_MAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	1.11E-04	9	7.11%	755	6.85E-04	17	7.39%	784	7.12E-04
2	0.42%	45	4.04E-05	10	4.39%	466	4.23E-04	18	8.18%	868	7.88E-04
3	0.40%	43	3.89E-05	11	4.66%	495	4.49E-04	19	5.69%	604	5.49E-04
4	0.26%	28	2.52E-05	12	5.89%	625	5.67E-04	20	4.27%	454	4.12E-04
5	0.49%	52	4.76E-05	13	6.15%	653	5.93E-04	21	3.26%	346	3.14E-04
6	0.90%	96	8.71E-05	14	6.04%	641	5.82E-04	22	3.30%	350	3.18E-04
7	3.79%	402	3.65E-04	15	7.01%	744	6.75E-04	23	2.46%	262	2.37E-04
8	7.76%	824	7.48E-04	16	7.14%	758	6.88E-04	24	1.87%	198	1.80E-04
								Total		10,614	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_MAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	1.16E-04	9	7.11%	755	7.14E-04	17	7.39%	784	7.42E-04
2	0.42%	45	4.21E-05	10	4.39%	466	4.41E-04	18	8.18%	868	8.21E-04
3	0.40%	43	4.06E-05	11	4.66%	495	4.68E-04	19	5.69%	604	5.72E-04
4	0.26%	28	2.62E-05	12	5.89%	625	5.91E-04	20	4.27%	454	4.29E-04
5	0.49%	52	4.96E-05	13	6.15%	653	6.18E-04	21	3.26%	346	3.27E-04
6	0.90%	96	9.08E-05	14	6.04%	641	6.06E-04	22	3.30%	350	3.31E-04
7	3.79%	402	3.80E-04	15	7.01%	744	7.04E-04	23	2.46%	262	2.47E-04
8	7.76%	824	7.79E-04	16	7.14%	758	7.17E-04	24	1.87%	198	1.87E-04
								Total		10,614	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2027

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	Line Area: Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	43.7	3.4	25	11,982	7,382	79,459	2.576E-09	1.899E-09	6.8	3.16
DPM_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	43.7	3.4	25	11,982	6,829	73,511	2.576E-09	1.899E-09	6.8	3.16
									Total	23,965						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00040			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and DPM Emissions - DPM_EB_JAM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.95%	474	1.80E-05	9	6.40%	767	2.92E-05	17	5.61%	673	2.56E-05
2	2.66%	318	1.21E-05	10	7.41%	888	3.38E-05	18	3.24%	388	1.48E-05
3	2.88%	345	1.31E-05	11	6.34%	759	2.89E-05	19	2.21%	265	1.01E-05
4	3.28%	393	1.50E-05	12	6.96%	834	3.18E-05	20	0.86%	103	3.91E-06
5	2.15%	257	9.80E-06	13	6.22%	746	2.84E-05	21	3.06%	367	1.40E-05
6	3.28%	393	1.50E-05	14	6.17%	739	2.81E-05	22	4.19%	502	1.91E-05
7	6.06%	726	2.76E-05	15	5.16%	618	2.36E-05	23	2.61%	313	1.19E-05
8	4.54%	544	2.07E-05	16	3.92%	469	1.79E-05	24	0.85%	102	3.87E-06
								Total		11,982	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_JAM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.95%	474	1.67E-05	9	6.40%	767	2.70E-05	17	5.61%	673	2.37E-05
2	2.66%	318	1.12E-05	10	7.41%	888	3.13E-05	18	3.24%	388	1.37E-05
3	2.88%	345	1.22E-05	11	6.34%	759	2.68E-05	19	2.21%	265	9.34E-06
4	3.28%	393	1.38E-05	12	6.96%	834	2.94E-05	20	0.86%	103	3.62E-06
5	2.15%	257	9.06E-06	13	6.22%	746	2.63E-05	21	3.06%	367	1.29E-05
6	3.28%	393	1.38E-05	14	6.17%	739	2.60E-05	22	4.19%	502	1.77E-05
7	6.06%	726	2.56E-05	15	5.16%	618	2.18E-05	23	2.61%	313	1.10E-05
8	4.54%	544	1.92E-05	16	3.92%	469	1.65E-05	24	0.85%	102	3.58E-06
								Total		11,982	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	44	1.3	25	11,982	7,382	79,459	1.22E-08	9.02E-09	2.6	1.21
PM2.5_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	44	1.3	25	11,982	6,829	73,511	1.22E-08	9.02E-09	2.6	1.21
									Total	23,965						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.001891			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_EB_JAM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	138	2.50E-05	9	7.11%	852	1.54E-04	17	7.39%	885	1.60E-04
2	0.42%	50	9.09E-06	10	4.39%	526	9.52E-05	18	8.18%	980	1.77E-04
3	0.40%	48	8.76E-06	11	4.66%	559	1.01E-04	19	5.69%	682	1.23E-04
4	0.26%	31	5.67E-06	12	5.89%	706	1.28E-04	20	4.27%	512	9.27E-05
5	0.49%	59	1.07E-05	13	6.15%	737	1.33E-04	21	3.26%	390	7.06E-05
6	0.90%	108	1.96E-05	14	6.04%	723	1.31E-04	22	3.30%	395	7.15E-05
7	3.79%	454	8.21E-05	15	7.01%	840	1.52E-04	23	2.46%	295	5.34E-05
8	7.76%	930	1.68E-04	16	7.14%	856	1.55E-04	24	1.87%	223	4.04E-05
								Total		11,982	

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_WB_JAM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	138	2.31E-05	9	7.11%	852	1.43E-04	17	7.39%	885	1.48E-04
2	0.42%	50	8.41E-06	10	4.39%	526	8.81E-05	18	8.18%	980	1.64E-04
3	0.40%	48	8.11E-06	11	4.66%	559	9.35E-05	19	5.69%	682	1.14E-04
4	0.26%	31	5.24E-06	12	5.89%	706	1.18E-04	20	4.27%	512	8.57E-05
5	0.49%	59	9.92E-06	13	6.15%	737	1.23E-04	21	3.26%	390	6.53E-05
6	0.90%	108	1.81E-05	14	6.04%	723	1.21E-04	22	3.30%	395	6.62E-05
7	3.79%	454	7.60E-05	15	7.01%	840	1.41E-04	23	2.46%	295	4.94E-05
8	7.76%	930	1.56E-04	16	7.14%	856	1.43E-04	24	1.87%	223	3.74E-05
								Total		11,982	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	44	1.3	25	11,982	7,382	79,459	1.76E-07	1.30E-07	2.6	1.21
TEXH_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	44	1.3	25	11,982	6,829	73,511	1.76E-07	1.30E-07	2.6	1.21
									Total	23,965						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.02725			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_EB_JAM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	138	3.60E-04	9	7.11%	852	2.22E-03	17	7.39%	885	2.31E-03
2	0.42%	50	1.31E-04	10	4.39%	526	1.37E-03	18	8.18%	980	2.55E-03
3	0.40%	48	1.26E-04	11	4.66%	559	1.46E-03	19	5.69%	682	1.78E-03
4	0.26%	31	8.17E-05	12	5.89%	706	1.84E-03	20	4.27%	512	1.34E-03
5	0.49%	59	1.54E-04	13	6.15%	737	1.92E-03	21	3.26%	390	1.02E-03
6	0.90%	108	2.83E-04	14	6.04%	723	1.89E-03	22	3.30%	395	1.03E-03
7	3.79%	454	1.18E-03	15	7.01%	840	2.19E-03	23	2.46%	295	7.70E-04
8	7.76%	930	2.43E-03	16	7.14%	856	2.23E-03	24	1.87%	223	5.83E-04
								Total		11,982	

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB_JAM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	138	3.33E-04	9	7.11%	852	2.06E-03	17	7.39%	885	2.14E-03
2	0.42%	50	1.21E-04	10	4.39%	526	1.27E-03	18	8.18%	980	2.36E-03
3	0.40%	48	1.17E-04	11	4.66%	559	1.35E-03	19	5.69%	682	1.65E-03
4	0.26%	31	7.55E-05	12	5.89%	706	1.70E-03	20	4.27%	512	1.24E-03
5	0.49%	59	1.43E-04	13	6.15%	737	1.78E-03	21	3.26%	390	9.41E-04
6	0.90%	108	2.61E-04	14	6.04%	723	1.75E-03	22	3.30%	395	9.53E-04
7	3.79%	454	1.09E-03	15	7.01%	840	2.03E-03	23	2.46%	295	7.12E-04
8	7.76%	930	2.24E-03	16	7.14%	856	2.06E-03	24	1.87%	223	5.39E-04
								Total		11,982	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	44	1.3	25	11,982	7,382	79,459	2.47E-07	1.82E-07	2.6	1.21
TEVAP_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	44	1.3	25	11,982	6,829	73,511	2.47E-07	1.82E-07	2.6	1.21
									Total	23,965						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	0.95466			
Emissions per Vehicle per Mile (g/VMT)	0.03819			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_EB_JAM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	138	5.05E-04	9	7.11%	852	3.11E-03	17	7.39%	885	3.24E-03
2	0.42%	50	1.84E-04	10	4.39%	526	1.92E-03	18	8.18%	980	3.58E-03
3	0.40%	48	1.77E-04	11	4.66%	559	2.04E-03	19	5.69%	682	2.49E-03
4	0.26%	31	1.14E-04	12	5.89%	706	2.58E-03	20	4.27%	512	1.87E-03
5	0.49%	59	2.17E-04	13	6.15%	737	2.69E-03	21	3.26%	390	1.43E-03
6	0.90%	108	3.96E-04	14	6.04%	723	2.64E-03	22	3.30%	395	1.44E-03
7	3.79%	454	1.66E-03	15	7.01%	840	3.07E-03	23	2.46%	295	1.08E-03
8	7.76%	930	3.40E-03	16	7.14%	856	3.13E-03	24	1.87%	223	8.17E-04
								Total		11,982	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WB_JAM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	138	4.67E-04	9	7.11%	852	2.88E-03	17	7.39%	885	2.99E-03
2	0.42%	50	1.70E-04	10	4.39%	526	1.78E-03	18	8.18%	980	3.31E-03
3	0.40%	48	1.64E-04	11	4.66%	559	1.89E-03	19	5.69%	682	2.31E-03
4	0.26%	31	1.06E-04	12	5.89%	706	2.39E-03	20	4.27%	512	1.73E-03
5	0.49%	59	2.00E-04	13	6.15%	737	2.49E-03	21	3.26%	390	1.32E-03
6	0.90%	108	3.66E-04	14	6.04%	723	2.45E-03	22	3.30%	395	1.34E-03
7	3.79%	454	1.53E-03	15	7.01%	840	2.84E-03	23	2.46%	295	9.98E-04
8	7.76%	930	3.14E-03	16	7.14%	856	2.89E-03	24	1.87%	223	7.55E-04
								Total		11,982	

Terraine Site, San Jose, CA - Off-Site Residential
Cumulative Operation - W St James St
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2027

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	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_EB_JAM	W St James St Eastbound	EB	2	554.4	0.34	13.3	44	1.3	25	11,982	7,382	79,459	1.47E-07	1.09E-07	2.6	1.21
FUG_WB_JAM	W St James St Westbound	WB	2	512.9	0.32	13.3	44	1.3	25	11,982	6,829	73,511	1.47E-07	1.09E-07	2.6	1.21
									Total	23,965						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00210			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00537			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
tal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02275			

Emisson Factors from CT-EMFAC2021

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_EB_JAM

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	138	3.01E-04	9	7.11%	852	1.85E-03	17	7.39%	885	1.93E-03
2	0.42%	50	1.09E-04	10	4.39%	526	1.15E-03	18	8.18%	980	2.13E-03
3	0.40%	48	1.05E-04	11	4.66%	559	1.22E-03	19	5.69%	682	1.49E-03
4	0.26%	31	6.82E-05	12	5.89%	706	1.54E-03	20	4.27%	512	1.11E-03
5	0.49%	59	1.29E-04	13	6.15%	737	1.61E-03	21	3.26%	390	8.49E-04
6	0.90%	108	2.36E-04	14	6.04%	723	1.57E-03	22	3.30%	395	8.60E-04
7	3.79%	454	9.88E-04	15	7.01%	840	1.83E-03	23	2.46%	295	6.43E-04
8	7.76%	930	2.03E-03	16	7.14%	856	1.86E-03	24	1.87%	223	4.87E-04
								Total		11,982	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB_JAM

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	138	2.78E-04	9	7.11%	852	1.72E-03	17	7.39%	885	1.78E-03
2	0.42%	50	1.01E-04	10	4.39%	526	1.06E-03	18	8.18%	980	1.97E-03
3	0.40%	48	9.76E-05	11	4.66%	559	1.13E-03	19	5.69%	682	1.37E-03
4	0.26%	31	6.31E-05	12	5.89%	706	1.42E-03	20	4.27%	512	1.03E-03
5	0.49%	59	1.19E-04	13	6.15%	737	1.49E-03	21	3.26%	390	7.86E-04
6	0.90%	108	2.18E-04	14	6.04%	723	1.46E-03	22	3.30%	395	7.96E-04
7	3.79%	454	9.14E-04	15	7.01%	840	1.69E-03	23	2.46%	295	5.95E-04
8	7.76%	930	1.87E-03	16	7.14%	856	1.72E-03	24	1.87%	223	4.50E-04
								Total		11,982	

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	**6/13/2023**
Contact Name	Jordyn Bauer
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	jbauer@illingworthrodkin.com
Project Name	Terraine Site
Address	329-399 Terraine St
City	San Jose
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Mixed-Use
Project Size (# of units or building square feet)	346 Residential Units
Comments:	

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

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

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

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

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

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

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

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

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

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

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	Plant No.	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments
1000+	17784	Tuc's Auto Body & Paint	183 Ryland St Ste A	0	0	0		Automotive Body, Paint, and Interior Rep		2021 Dataset
415	17788	City Heights At Pellier Park	175 W Saint James St	5.251	0.001	0.007		Generator		2021 Dataset
535	21746	San Jose Fire Dept FS #1	225 N Market Street	0.105	0	0		Generator		2021 Dataset
1000+	24161	The Sobrato Organization	353 W Julian Street	0.722	0.002	0.001		Generator		2021 Dataset
830	24637	The Sobrato Organization	333rd & 373 West Julian S	1.094	0.002	0.001		Generator		2021 Dataset

Project MEI

Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
0.13	0.00	0.00000	0.0000
0.16	0.84	0.00016	0.0011
0.10	0.01	0.00000	0.0000
0.04	0.03	0.00008	0.0000
0.06	0.07	0.00012	0.0001

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
670	17784	0.25	0.00	0.0000	0.0000
470	17788	0.14	0.74	0.0001	0.0010
580	21746	0.10	0.01	0.0000	0.0000
700	24161	0.08	0.06	0.0002	0.0001
500	24637	0.12	0.13	0.0002	0.0001

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.

8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of 0.003 or
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010.
    Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should reflect
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

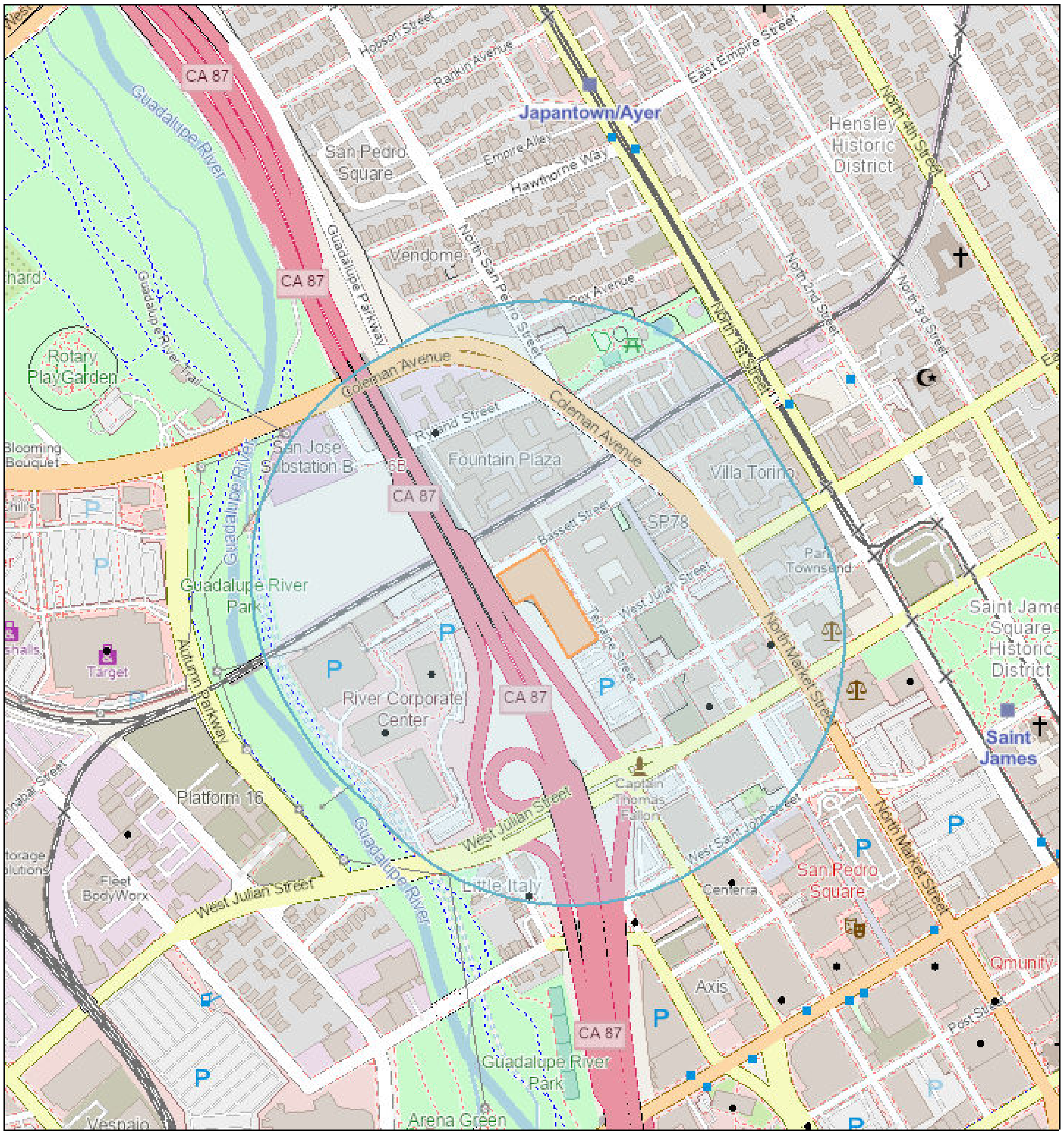
Date last updated:
03/13/2018

Screening Report

Area of Interest (AOI) Information

Area : 4,900,651.5 ft²

Jun 5 2023 14:44:25 Pacific Daylight Time



1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Permitted Stationary Sources

Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri

Summary

Name	Count	Area(ft^2)	Length(ft)
Permitted Stationary Sources	6	N/A	N/A

Permitted Stationary Sources

#	Facility_I	Facility_N	Address	City	State
1	17784	Tuc's Auto Body & Paint	183 Ryland St Ste A	San Jose	CA
2	17788	City Heights At Pellier Park	175 W Saint James St	San Jose	CA
3	20402	FreeSlate Inc	415 Oakmead Parkway	Sunnyvale	CA
4	21746	San Jose Fire Dept FS #1	225 N Market Street	San Jose	CA
5	24161	The Sobrato Organization	353 W Julian Street	San Jose	CA
6	24637	The Sobrato Organization	333rd & 373 West Julian St	San Jose	CA

#	Zip	County	Latitude	Longitude	Details
1	95110	Santa Clara	37.341247	-121.899632	*No Data*
2	95112	Santa Clara	37.338070	-121.895630	Generator
3	94085	Santa Clara	37.338438	-121.899697	Generator
4	95110	Santa Clara	37.338780	-121.894720	Generator
5	95110	Santa Clara	37.337760	-121.900370	Generator
6	95110	Santa Clara	37.335855	-121.898263	Generator

#	NAICS	NAICS_Sect	NAICS_Subs	NAICS_Indu	Cancer_Ris
1	811121	Other Services (except Public Administration)	Repair and Maintenance	Automotive Body, Paint, and Interior Repair and Maintenance	0.000000
2	531110	Real Estate and Rental and Leasing	Real Estate	Lessors of Residential Buildings and Dwellings	5.251000
3	541720	Professional, Scientific, and Technical Services	Professional, Scientific, and Technical Services	Research and Development in the Social Sciences and Humanities	1.394000
4	922160	Public Administration	Justice, Public Order, and Safety Activities	Fire Protection	0.105000
5	238210	Construction	Specialty Trade Contractors	Electrical Contractors and Other Wiring Installation Contractors	0.722000
6	921190	Public Administration	Executive, Legislative, and Other General Government Support	Other General Government Support	1.094000

#	Chronic_Ha	PM25	Count
1	0.000000	0.000000	1
2	0.001000	0.007000	1
3	0.002000	0.002000	1
4	0.000000	0.000000	1
5	0.002000	0.001000	1
6	0.002000	0.001000	1

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