

LILLIAN COMMONS/MORGAN HILL MEDICAL CAMPUS AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

Morgan Hill, California

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Introduction

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with the proposed commercial, residential, and medical office project located at the southeast corner of the intersection of Barrett Avenue and Juan Hernandez Drive in Morgan Hill, California. The air quality impacts from this project would be associated with construction of the new buildings and infrastructure, and operation of the project. Air pollutants and GHG emissions associated with construction and operation of the project were predicted using models. In addition, the potential project health risk impacts (includes construction and operation) and the impact of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).¹

Project Description

The project site consists of 19.67 acres located at the southeast corner of the Barrett Avenue and Juan Hernandez Drive intersection, with U.S. 101 bordering the eastern boundary of the site. The Project proposes a General Plan Amendment, Zoning Amendment, Planned Development Master Plan, Tentative Parcel Map, and development of the project site.

The General Plan Amendment requests a General Plan Land Use designation change from Commercial to Mixed-Use Flex; the Zoning Amendment requests to amend the zoning district from Service Commercial and Planned Development to Mixed-Use Flex and Planned Development. The Tentative Parcel Map proposes to subdivide the project site into four parcels (A-D):

- Parcel A = 4.17 acres
- Parcel B = 1.78 acres
- Parcel C = 9.49 acres
- Parcel D = 4.13 acres

The proposed development would include a 4,500 square foot (sf) urgent care facility², a 10,000 square foot medical office building, a 100,000 square foot hospital with 55 beds, a three-story parking garage with 500 spaces, a 10,000 sf commercial retail/restaurant building, and a maximum 200-unit residential development. The project does not propose a helicopter pad for the hospital. The hospital would have an emergency backup generator. The residential development would include two three-story apartment buildings closest to Juan Hernandez Drive and three four-story apartment buildings in the northern area of the site.

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

² The 4,500 square foot urgent care facility would be constructed on a portion of the existing parking lot. A portion of the parking lot would be demolished as part of the project.

Recommended Conditions of Approval

This analysis demonstrates the following conditions of approval would be required to meet the City's General Plan requirements:

Policy NRE-11.2 TACs and Existing Sensitive Uses. Encourage the installation of appropriate air filtration mechanisms at existing schools, residences, and other sensitive receptors adversely affected by existing or proposed pollution sources.

Condition of Approval AQ-3: Include high-efficiency particulate filtration systems in residential ventilation systems.

Conditions of Approval AQ-4: Provide electrical power at truck loading docks to avoid use of truck refrigeration units.

Conditions of Approval AQ-5: Designate truck circulation routes that avoid residential areas to the greatest extent reasonable.

Policy NRE-12.1: Best Practices. Requirement that development projects implement best management practices to reduce air pollutant emissions associated with construction and operation of the project.

Condition of Approval AQ-1: Implement BAAQMD-recommended best management practices to control

Policy NRE-12.2: Conditions of Approvals. 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 a minimum, conditions shall conform to construction mitigation measures recommended in the current Bay Area Air Quality Management District CEQA Guidelines.

Condition of Approval AQ-1: Implement BAAQMD-recommended best management practices to control

Condition of Approval AQ-2: Selection of equipment during construction to minimize emissions.

Details of these conditions of approval and their effectiveness in reducing community risk air quality impacts are described in his report.

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 (PM₁₀), and fine particulate matter (PM_{2.5}).

Air Pollutants of Concern

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

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

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

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

Regulatory Setting

Federal Regulations

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

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 (PM₁₀ and PM_{2.5}) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_x emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.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 substantial contributor to the formation of particulate matter in diesel-fueled engine exhaust. The current standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

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

State Regulations

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

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

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

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

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

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

Bay Area Air Quality Management District (BAAQMD)

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

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

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

⁵ Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

City of Morgan Hill 2035 General Plan

Adopted July 27, 2016, the Morgan Hill 2035 General Plan includes goals, policies, and actions to improve air quality issues facing the City of Morgan Hill.⁶ The following goals, policies, and actions are applicable to the proposed project:

Goal NRE-10: Reduced air pollution emissions.

- Policy NRE-10.1 **Regional and Subregional Cooperation.** Cooperate with regional agencies in developing and implementing air quality management plans. Support subregional coordination with other cities, counties, and agencies in the Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality.
- Policy NRE-10.2 **State and Federal Regulation.** Encourage effective regulation of mobile and stationary sources of air pollution and support State and federal regulations to improve automobile emission controls.

Goal NRE-11: Minimized exposure of people to toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

- Policy NRE-11.1 **TACs and Proposed Sensitive Uses.** Require modeling for sensitive land uses, such as residential development, proposed near sources of pollution such as freeways and industrial uses. Require new residential development and projects categorized as sensitive receptors to incorporate effective mitigation measures into project designs or be located adequate distances from sources of toxic air contaminants (TACs) to avoid significant risk to health and safety.
- Policy NRE-11.2 **TACs and Existing Sensitive Uses.** Encourage the installation of appropriate air filtration mechanisms at existing schools, residences, and other sensitive receptors adversely affected by existing or proposed pollution sources.
- Policy NRE-11.3 **Health Risk Assessments.** For proposed development that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with Bay Area Air Quality Management District procedures as part of environmental review and implement effective mitigation measures to reduce potential health risks to less-than-significant levels. Alternatively, require these projects to be located an adequate distance from residences and other sensitive receptors to avoid

⁶ City of Morgan Hill, California (2016). "Chapter 8 Natural Resources and Environment". *City of Morgan Hill General Plan 2035*. <https://www.morgan-hill.ca.gov/DocumentCenter/View/22839/MH2035-General-Plan---December-2017?bidId=>

health risks. Consult with the Bay Area Air Quality Management District to identify stationary and mobile toxic air contaminant sources and determine the need for and requirements of a health risk assessment for proposed developments

Policy NRE-11.4 **Truck Routes.** For development projects generating significant heavy-duty truck traffic, designate truck routes that minimize exposure of sensitive receptors to toxic air contaminants and particulate matter.

Policy NRE-11.5 **Truck Idling.** For development projects generating significant truck traffic, require signage to remind drivers that the State truck idling law limits truck idling to five (5) minutes.

Goal NRE-12: Minimized air pollutant emissions from demolition and construction activities

Policy NRE-12.1: **Best Practices.** Requirement that development projects implement best management practices to reduce air pollutant emissions associated with construction and operation of the project.

Policy NRE-12.2 **Conditions of Approvals.** 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 a minimum, conditions shall conform to construction mitigation measures recommended in the current Bay Area Air Quality Management District CEQA Guidelines.

Policy NRE-12.3 **Control Measures.** Require construction and demolition projects that have the potential to disturb asbestos (from soil or building material) to comply with all the requirements of the California Air Resource Board's air toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are single-family homes adjacent to the western and northern project site boundaries. There are additional residences at further distances. There is also an elementary school (Barrett Elementary School) north of the project site across from Barrett Avenue.

New project residences are also considered sensitive receptors that would be exposed to existing and project sources of air pollution. Other project uses that include a hospital and medical buildings, offices and retail uses may include sensitive receptors; however, they would not be expected to reside at these locations for extended periods. Therefore, these uses were not considered sensitive receptors in terms of being chronically exposed.

Significance Thresholds

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

Table 1. BAAQMD Community Risk Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)	
Excess Cancer Risk	>10 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual PM _{2.5}	>0.3 µg/m ³	>0.8 µg/m ³	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions		Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) and adjusted to 2.8 metric tons per capita (for 2030)*	
Note: ROG = reactive organic gases, NO _x = nitrogen oxides, PM ₁₀ = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM _{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.			
*BAAQMD does not have a recommended post-2020 GHG threshold. The adjusted thresholds are explained in more detail in the GHG discussion.			

AIR QUALITY IMPACTS AND MITIGATION MEASURES

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

The Bay Area is considered a non-attainment area for ground-level ozone and PM_{2.5} under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM₁₀ under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM₁₀, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO_x), PM₁₀, and PM_{2.5} and apply to both construction period and operational period impacts.

Construction Period Emissions

CalEEMod Modeling

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction of the site assuming full build-out of the project. CalEEMod provided annual emissions for both on- 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 proposed project is anticipated to be constructed in phases starting with the development of parcels B and D, followed by development of parcel C, and closing with the development of parcel A. Full buildout of the project site is expected in 2025. A construction build-out scenario, including equipment list and schedule, was based on CalEEMod defaults with the assumption that construction would be phased. CalEEMod predicted the amount of worker traffic, vendor trips and haul trips. Haul trips were computed by CalEEMod based on the amount of demolition material and excavated dirt that would be hauled from the site. CalEEMod assumes haul trip lengths of 20 miles

Construction of the project was predicted to begin January 2021 and last approximately 48 months. There were an estimated 979 workdays. Table 2 lists the proposed project land uses per phase. The provided model output from CalEEMod is included as *Attachment 2*.

Table 2. CalEEMod Construction Inputs Per Phase

Phase	Land Use
Phase 1	14,500 sf entered as “Medical Office Building” 151 parking spaces entered as “Parking Lot” 10,000 sf entered as “High Turnover (Sit Down Restaurant)”
Phase 2	200 dwelling units and 178,500 sf entered as “Apartments Mid Rise” 395 parking spaces entered as “Parking Lot” 2.42 acres entered as “City Park”
Phase 3	55 beds and 100,000 sf entered as “Hospital” 500 parking spaces entered as “Enclosed Parking Garage with Elevator” 0.44 acres entered as “City Park”

Summary of Computed Construction Period Emissions

Annual emissions were predicted using CalEEMod and the estimated 329 construction workdays are reported in Table 2. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Table 2 shows average daily construction emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust during construction of the project. As indicated in Table 2, predicted construction period emissions would not exceed the BAAQMD significance thresholds.

Table 2. Construction Period Emissions

Scenario	ROG	NO _x	PM ₁₀ Exhaust	PM _{2.5} Exhaust
Total construction emissions (tons)	3.0 tons	9.3 tons	0.62 tons	0.45 tons
Average daily emissions (pounds)¹	6.2 lbs./day	19.1 lbs./day	1.3 lbs./day	0.9 lbs./day
<i>BAAQMD Thresholds (pounds per day)</i>	54 lbs./day	54 lbs./day	82 lbs./day	54 lbs./day
Exceed Threshold?	No	No	No	No

¹Assumes 979 workdays

Proposed Project Operational Period Emissions

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

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. This analysis assumed that the project would be fully built out and operating in the year 2025.

Operational Traffic

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model. The daily trip rate accounted for the employment – retail internal reduction and the location-

based reduction.⁷ For each land use type, the forecasted daily trip rate with trip reductions applied was divided by the quantity of that land use to identify the weekday daily trip rate. The Saturday and Sunday trip rates were assumed to be the weekday rate adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate. The default trip lengths and trip types specified by CalEEMod were used.

EMFAC2017 Adjustment

The vehicle emission factors and fleet mix used in CalEEMod are based on EMFAC2014, which is an older CARB emission inventory for onroad and offroad mobile sources. Since the release of CalEEMod Version 2016.3.2, new emission factors have been produced by CARB. EMFAC2017 became available for use in March 2018 and approved by the EPA in August 2019. It includes the latest data on California's car and truck fleets and travel activity. Additionally, CARB has recently released EMFAC off-model adjustment factors to account for the Safer Affordable Efficient (SAFE) Vehicle Rule Part one.⁸ The SAFE vehicle Rule Part One revoked California's authority to set its own GHG emission standards and set zero emission vehicle mandates in California. As a result of this ruling, mobile criteria pollutant emissions would increase. Therefore, the CalEEMod vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2017, which were adjusted with the CARB EMFAC off-model adjustment factors. Onroad emission rates from 2025 in Santa Clara County were used. More details about the updates in emissions calculation methodologies and data are available in the EMFAC2017 Technical Support Document.⁹

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The electricity produced emission rate was modified in CalEEMod. CalEEMod has a default emission factor of 641.3 pounds of CO₂ per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. PG&E published in 2019 emissions rates for 2010 through 2017, which showed the emission rate for delivered electricity had been reduced to 210 pounds CO₂ per megawatt of electricity delivered in the year 2017.¹⁰

However, Silicon Valley Clean Energy (SVCE) is the default electricity provider for Morgan Hill. SVCE purchases carbon-free electricity and partners with PG&E to deliver this electricity over existing power lines that they maintain. SVCE provides 100-percent carbon-free energy. However, customers have the option to opt out of the program and purchase electricity from PG&E, which is not carbon free, as described above. This analysis assumes a 10-percent non-

⁷ Hexagon Transportation Consultants, Inc., 2019, *Fountain Alley Office Development VMT Trip Generation Estimates*. January.

⁸ California Air Resource Board, 2019. *EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One*. November. Web: https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf

⁹ See CARB 2018: <https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac>

¹⁰ PG&E, 2019. *Corporate Responsibility and Sustainability Report*. Web: http://www.pgecorp.com/corp_responsibility/reports/2019/assets/PGE_CRSR_2019.pdf

participation rate with SVCE. Therefore, an electricity emission rate of 21 pounds per of CO₂ per megawatt of electricity delivered was used for this analysis.

Natural Gas

The City of Morgan Hill adopted a reach code (Chapter 15.63 of the Morgan Hill Municipal Code) in 2019 that prohibits natural gas in all new construction effective March 1, 2020.¹¹ This reach code would require all new building to be constructed without natural gas and be all-electric. The electricity procured by SVCE is 100% carbon free. This project will be built and operating post-2020. Therefore, it was assumed that the residential land use would not use natural gas and be 100% electrical. In the CalEEMod model, the natural gas intensity factors were zeroed-out to account for this reach code.

Project Generators

The project would include three generators on-site. The size of the generators would be approximately 100 kilowatts (kW), 150 kW, 1000 kW. The three diesel engines were estimated to be approximately 134 horsepower (HP), 201 HP, and 1,341 HP. The locations have not been determined. However, the likely locations and sizes of the diesel engines that would power the emergency backup generators were provided. For modeling purposes, it was assumed that the generator would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project. Water/wastewater use was changed to 100% aerobic conditions to represent wastewater treatment plant conditions. No hearths were assumed

Existing Uses

The existing land uses consists of the current medical offices, which will be re-used with the project, and undeveloped land. Therefore, no existing use model was computed.

¹¹ City of Morgan Hill City Council, 2019. *Regular Meeting Agenda*. November 6. Web: <http://morganhillca.igim2.com/Citizens/FileOpen.aspx?Type=1&ID=1872&Inline=True>

Summary of Computed Operational Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimating assuming 365 days of operation. Table 3 shows average daily construction emissions of ROG, NO_x, total PM₁₀, and total PM_{2.5} during operation of the project. As shown in Table 3, operational period emissions would not exceed the BAAQMD significance thresholds emissions for the project.

Table 3. Operational Period Emissions

Scenario	ROG	NO_x	PM₁₀	PM_{2.5}
Annual 2025 Project Operational Emissions	2.5 tons	2.2 tons	2.7 tons	0.8 tons
<i>BAAQMD Thresholds (tons /year)</i>	<i>10 tons</i>	<i>10 tons</i>	<i>15 tons</i>	<i>10 tons</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Daily 2025 Project Operational Emissions ¹	13.6 lbs.	11.9 lbs.	14.6 lbs.	4.1 lbs.
<i>BAAQMD Thresholds (pounds/day)</i>	<i>54 lbs.</i>	<i>54 lbs.</i>	<i>82 lbs.</i>	<i>54 lbs.</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹ Assumes 365-day operation.

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

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

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would generate some traffic, consisting of mostly light-duty vehicles that are not a source of substantial TACs or PM_{2.5}. In addition, the project would include the installation of emergency generators powered by diesel engines that would also have emissions of TACs and air pollutants.

Therefore, project impacts to existing sensitive receptors were addressed for temporary construction activities, and project operation. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TAC was also assessed in terms of the cumulative risk that includes the project contribution. Community risk impacts were addressed by predicting increased lifetime cancer risk, the increase in annual PM_{2.5} concentrations and computing the Hazard Index (HI) for non-cancer health risks. The methodology for computing community risks impacts is contained in *Attachment 1*. This involved the modeling of TAC and PM_{2.5} emissions, dispersion modeling and cancer risk computations.

Community Risks from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. Although it was concluded in the previous sections (see Table 2) that construction exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations, construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to PM_{2.5}. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and PM_{2.5}.¹² This assessment included dispersion modeling to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

CalEEMod Construction Emissions

The CalEEMod model provided total annual PM₁₀ exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles. The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent

¹² DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive PM_{2.5} dust emissions were also calculated by CalEEMod. Table 4 lists the DPM and Fugitive PM_{2.5} dust emissions annually by phase.

Table 4. Localized Project Construction Emissions of DPM and PM_{2.5} (in tons)

Phase	Year	DPM Emissions	Fugitive PM _{2.5} Dust Emissions
Phase 1	2021	0.1386	0.0032
Phase 1	2022	0.0142	0.0032
Phase 2	2022	0.0982	0.0032
Phase 2	2023	0.0547	0.0032
Phase 3	2023	0.0301	0.0032
Phase 3	2024	0.0540	0.0032

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM_{2.5} at sensitive receptors (residences and students) 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.¹³ For the construction site modeled, the modeling utilized six area sources to represent the on-site construction emissions, three for exhaust emissions and three for fugitive dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 20 feet (6 meters) was used for the area sources. The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive PM_{2.5} emissions, a near-ground level release height of 7 feet (2 meters) was used for the area sources. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7 a.m. to 8 p.m., which are the City Morgan Hill's construction noise hours limits per Municipal Code Section 8.28.040.

The modeling used a 5-year meteorological data set (2013-2017) from the San Martin Airport prepared for use with the AERMOD model by BAAQMD. Annual DPM and PM_{2.5} concentrations from construction activities at the project site during the 2021-2024 period were calculated using the model. DPM and PM_{2.5} concentrations were calculated at nearby sensitive receptor locations. A receptor height of 5 feet (1.5 meters) was used to represent the breathing height of residences in nearby single-family homes.

The maximum-modeled annual DPM and PM_{2.5} concentrations, which includes both the DPM and fugitive PM_{2.5} concentrations, were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEIs)¹⁴. The maximum increased cancer risks were calculated using BAAQMD recommended methods and exposure parameters described in *Attachment 1*. Non-cancer health hazards and maximum PM_{2.5} concentrations were

¹³ Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May.

¹⁴ The MEI is the sensitive receptor that has the greatest modeled lifetime cancer risk or highest modeled PM_{2.5} concentration.

also calculated and identified. *Attachment 3* to this report includes a wind rose from the meteorological data set used, the emission calculations used for the construction area source modeling and the cancer risk calculations.

Project Construction Community Risk Results

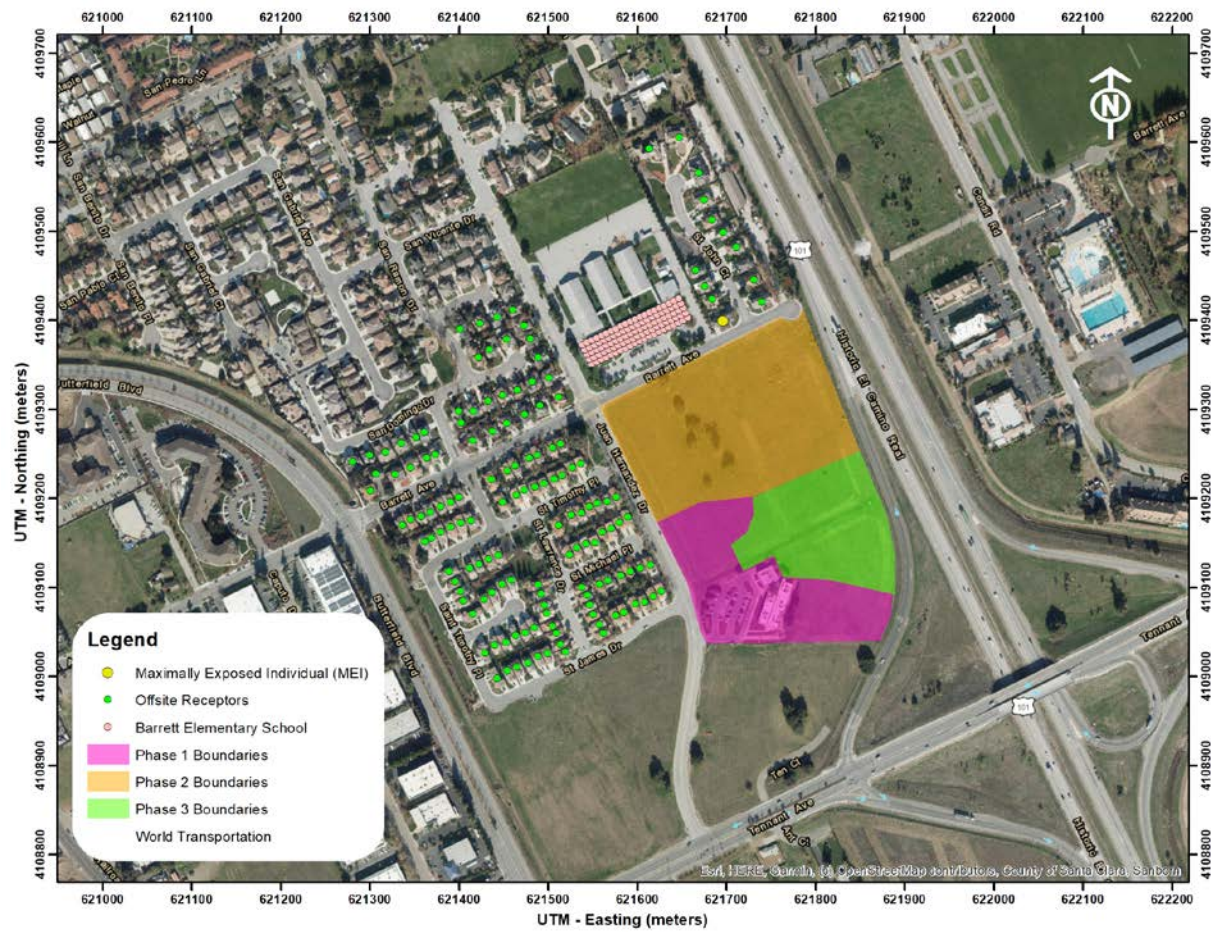
Results of this assessment indicated that the residential MEI most impacted by the construction PM_{2.5} concentrations was located at a single-family home north of the project site across Barrett Avenue as seen in Figure 1. At these locations, the maximum excess residential cancer risks would exceed the BAAQMD significance threshold of 10 in one million and the maximum PM_{2.5} concentrations would exceed the BAAQMD significance threshold of 0.3 µg/m³. Table 5 summarizes the maximum cancer risks, PM_{2.5} concentrations, and health hazard indexes for project related construction activities affecting the residential MEI. *Policy NRE-12.1 (i.e. BAAQMD Best Management Practices) and Condition of Approval AQ-1 would reduce these impacts to less-than-significant.*

Table 5. Construction Risk Impacts at the Offsite MEI

Source	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
Project Construction			
Unmitigated	34.2 (infant)	0.31	0.04
Mitigated	3.0 (infant)	0.19	<0.01
BAAQMD Single-Source Threshold	>10.0	>0.3	>1.0
Exceed Threshold?			
Unmitigated/Mitigated	Yes/No	Yes/No	No/No

Additionally, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum PM_{2.5} at Barrett Elementary School. This elementary school serves students in transitional kindergarten to fifth grade. Children attending this school would be between the ages of five-to-ten-years-old. The maximum increased cancer risks were adjusted using child exposure parameters. Results of this assessment indicated that the maximum cancer risks (without any mitigation or construction emission controls) would be 15.8 per million for child exposure. The maximum-modeled annual PM_{2.5} concentration, which is based on combined exhausted and fugitive dust emissions, would be 0.24 µg/m³ and the HI based on the DPM concentration would be 0.03. The increased cancer risk exceeds the BAAQMD single-source threshold. However, with *Policy NRE-12.1 and Conditions of Approval AQ-1*, these risk values would be reduced to 1.4 per million increased cancer risk, 0.1 µg/m³ for PM_{2.5} concentration, and <0.01 for the HI value. These reduced risk values do not exceed the BAAQMD single-source significance threshold for annual cancer risk, PM_{2.5} concentration, or HI.

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



Community Risks from Project Operation – Generators and Traffic on Juan Hernandez

Project Diesel Generators

Operation of a diesel generator would also be a source of TAC emissions that were assumed to operate during the lifetime of the project operation. As stated in the operational period emissions section, the project would include three generators with their sizes being approximately 100 kW (134 HP), 150 kW (201 HP), and 1,000 kW (1,341 HP). 100 kilowatts (kW), 150 kW, 1000 kW. To be conservative, the location was assumed to be located in the middle of the ground-level of the building.

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

Dispersion Modeling

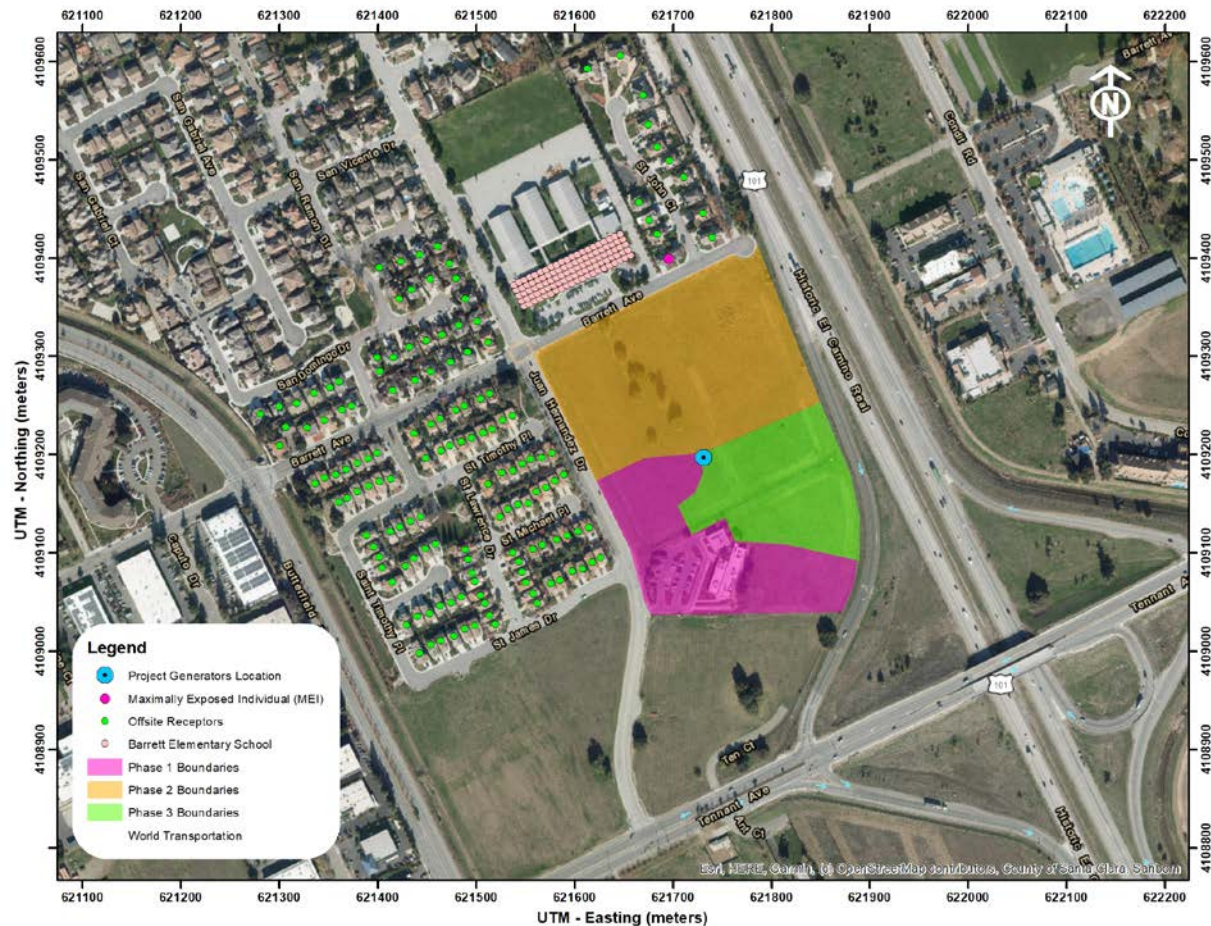
To obtain an estimate of potential cancer risks and PM_{2.5} impacts from operation of the emergency generators the U.S. EPA AERMOD dispersion model was used to calculate the maximum annual DPM concentration at off-site sensitive receptor locations (nearby residences). The same receptors and breathing heights used in the construction dispersion modeling were used for the generator discern model. Additionally, the same meteorological data was used. Stack parameters (stack height, exhaust flow rate, and exhaust gas temperature) for modeling the generators were based on BAAQMD default parameters for emergency generators.¹⁵ Annual average DPM and PM_{2.5} concentrations were modeled assuming that generator testing could occur at any time of the day.

To calculate the increased cancer risk from the generators at the MEI, the cancer risks exposure duration was adjusted to account for the MEI being exposed to construction for the first four years of the 30-year exposure period. The exposure duration for the generators was adjusted for 26 years. Based on this duration, the increased cancer risk from the generators would be 0.3 per million. The maximum annual PM_{2.5} concentration would be less than 0.01 µg/m³ and the HI value would be less than 0.01.

For sensitive receptors at Barrett Elementary School, the increased cancer risk from the generators was adjusted for a seven-year exposure with the students being exposed to

¹⁵ The San Francisco Community Risk Reduction Plan: Technical Support Document, BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

construction for four years and to project operation for the remaining three years.¹⁶ Based on this duration, the increased cancer risk from the project generators would be 0.1 per million. The maximum annual PM_{2.5} concentration would be <0.01 µg/m³ and the HI value would remain <0.01. The emissions and health risk calculations for the proposed generators are included in *Attachment 3*.



For local roadways, BAAQMD has provided the *Roadway Screening Analysis Calculator* to assess whether roadways with traffic volumes of over 10,000 average daily trips (ADT) may have a potentially significant effect on a proposed project. Two adjustments were made to the cancer risk predictions made by this calculator: (1) adjustment for latest vehicle emissions rates predicted using EMFAC2014 and (2) adjustment of cancer risk to reflect new OEHHA guidance (see *Attachment 1*).

The calculator uses EMFAC2011 emission rates for the year 2014. However, a new version of the emissions factor model, EMFAC2014 is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for 2018. The predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.

All project generated traffic (3,979 daily trips) was assumed to use Juan Hernandez to access the project site.¹⁷ The cancer risk was adjusted for exposure duration since the MEI would only be exposed to the increased traffic impacts once the project would be operational. The exposure duration was adjusted for 26 years of exposure since construction would last approximately four years and the distance from the roadway was adjusted for 20 feet. As a result, the increased cancer risk impact from the increase in traffic would be 0.2 per million and the maximum annual PM_{2.5} concentration would be 0.01 µg/m³. Note that BAAQMD has found that non-cancerous hazards (i.e. HI) to be minimal for all surface streets and the HI value is therefore not included.

Barrett Elementary School is about 60 feet from the roadway. The exposure duration was adjusted for three years of exposure. As a result, the increased cancer risk impact from the increase in traffic would be 0.7 per million and the maximum annual PM_{2.5} concentration would be 0.05 µg/m³. Chronic or acute HI for the roadway would be below 0.03.

Total Project Health Risks – Construction and Operation

The greatest project health risk impact occurs at the receptor most affected by combined construction and project operation impacts. The cumulative risk impacts from a project is the combination of construction activity, generator operation and traffic. This project impact is computed by adding the construction cancer risk for an infant to the lifetime cancer risk for the project operational conditions for the roadway at the MEI over a 30-year period. Note that the project MEI is identified as the sensitive receptor that is most affected by the project's construction and operation. Therefore, the receptor may not be the same receptor identified within the separate construction or operation dispersion models.

In the case of this project, the sensitive receptor identified in Figure 1 as the construction MEI is also the project MEI. At this location, the MEI would be exposed to four years of construction cancer risks and 26 years of operational (includes emergency backup generators and increased project traffic) cancer risks. The cancer risks from construction and operation of the project were summed together. Unlike, the increased maximum cancer risk, the annual PM_{2.5} concentration, and HI risks are not additive but based on an annual maximum risk for the entirety of the project. The mitigated maximum cancer risks, annual PM_{2.5} concentrations, and non-cancer hazards from construction and operation activities would be below the single-source significance thresholds as seen in Table 6.

¹⁷ Hexagon Transportation Consultants, Inc., March. *Lillian Commons Proposed Trip Generation Estimates*. 2020

At Barrett Elementary School, the total project impact would with the conditions of approval would be 2.2 per million for the increased cancer risk, 0.01 $\mu\text{g}/\text{m}^3$ for the annual $\text{PM}_{2.5}$ concentration, and 0.01 for the HI value. These risk values do not exceed the BAAQMD Single-Source Thresholds of greater than 10.0 per million, greater than 0.3 $\mu\text{g}/\text{m}^3$, or greater than 1.0.

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

Source	Cancer Risk (per million)	Annual $\text{PM}_{2.5}$ ($\mu\text{g}/\text{m}^3$)	Hazard Index
Project Construction			
Unmitigated (Years 0-4)	34.2 (infant)	0.31	0.04
Mitigated (Years 0-4)	3.0 (infant)	0.19	<0.01
Project Generators (Years 5-30)	0.3 (child-adult)	<0.01	<0.01
Project Traffic on Juan Hernandez Drive (Years 5-30)	0.2	0.01	-
Unmitigated Total/Maximum Project (Years 0-30)	34.7	0.31	0.04
Mitigated Total/Maximum Project (Years 0-30)	3.5	0.19	0.01
BAAQMD Single-Source Threshold	>10.0	>0.3	>1.0
Exceed Threshold?			
Unmitigated/Mitigated	Yes/No	Yes/No	No/No

***Bold** indicates value exceeds threshold

Cumulative Community Risks from All TAC Sources at Project MEI

Community health risk assessments typically look at all substantial sources of TACs located within 1,000 feet of project sites. These sources include highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the area identified State Route 101, Butterfield Boulevard, and Tennant Avenue as roadways with average daily traffic (ADT) that exceed 10,000 vehicles per day. All other nearby streets have ADTs of less than 10,000 vehicles per day. A review of BAAQMD's stationary source Google Earth map tool identified zero sources. Figure 3 shows the sources affecting the project site. Details of the modeling and community risk calculations are included in *Attachment 4*.

Highway – U.S. Highway 101

This analysis involved the development of DPM, organic TACs, and $\text{PM}_{2.5}$ emissions for traffic on U.S. 101 using the Caltrans version of the EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $\text{PM}_{2.5}$ and total organic compounds (e.g., TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $\text{PM}_{2.5}$. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (i.e., Santa Clara County), type of road, traffic mix assigned by CT-EMFAC2017 for the county and adjusted for the local truck mix on U.S. 101, year of analysis, and season.

Default EMFAC2017 vehicle model fleet age distributions for Santa Clara County were assumed. Average daily traffic volumes truck percentages were based on Caltrans data for U.S. 101 for 2016. Traffic volumes were assumed to increase 1 percent per year. Average hourly traffic

distributions for Santa Clara County roadways were developed using the EMFAC model,¹⁸ which were then applied to the average daily traffic volumes to obtain estimated hourly traffic volumes and emissions for U.S. 101.

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 described in *Attachment 4*.

For all hours of the day, other than during peak a.m. and p.m. periods, an average speed of 65 mph was assumed for all vehicles. Based on traffic data from the Santa Clara Valley Transportation Authority's 2017 Monitoring and Conformance Report, traffic speeds during the peak a.m. and p.m. periods were identified.¹⁹ For a 2-hour period during the peak a.m. period, an average travel speed of 10 mph was used for northbound traffic and an average speed of 60 mph was used for southbound traffic. For the peak p.m. period, an average travel speed of 60 mph was used for northbound traffic and an average travel speed of 30 mph was used for southbound traffic.

Dispersion Modeling

Dispersion modeling of TAC and PM_{2.5} emissions was conducted using the U.S. EPA AERMOD dispersion model, which is recommended by the BAAQMD for this type of analysis. Northbound and southbound traffic on U.S. 101 within about 1,000 feet of the project site was evaluated with the model. Emissions from vehicle traffic were modeled in AERMOD using a series of adjacent volume sources along a line (line volume sources), with line segments used to represent northbound and southbound travel lanes on U.S. 101, as shown in Figure 4. The modeling used a five-year data set (2013-2017) of hourly meteorological data from the San Martin Airport prepared by the BAAQMD for use with the AERMOD model. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations.

The modeling used receptors placed within the project boundaries spaced about every 66 feet (20 meters). Receptor heights of 5 feet (1.5 meters) and 15 feet (4.5 meters) were used to represent the breathing heights of residential receptors on the first and second floor levels. Pollutant and TAC concentrations from U.S. 101 traffic on higher floor levels would be lower than those of the first two floor levels.

Based on dispersion modeling the maximum increased cancer risk from U.S. Highway 101 would be less than 23.0 per million, the maximum annual PM_{2.5} concentration would be 0.47 µg/m³, and the HI value would be less than 0.01.

Local Roadways – Butterfield Boulevard and Tennant Avenue

The ADT on Butterfield Boulevard was estimated to be 14,205 vehicles and the ADT on Tennant Avenue was estimated to be 21,480 vehicles. This estimate was based on the peak-hour traffic

¹⁸ The Burden output from EMFAC2007, CARB's previous version of the EMFAC model, was used for this since the current web-based version of EMFAC2011 does not include Burden type output with hour by hour traffic volume information.

¹⁹ Santa Clara Valley Transportation Authority. 2017 CMP Monitoring and Conformance Report April 23, 2018.

volumes included in the project's traffic analysis for existing conditions.²⁰ The AM and PM peak-hour volumes were averaged and then multiplied by 10 to estimate the ADT.

The BAAQMD *Roadway Screening Analysis Calculator* for Santa Clara County was used for these roadways. Butterfield Boulevard was identified as a north-south roadway with the project MEI east of the roadway. Tennant Avenue was identified as an east-west roadway with the project MEI north of the roadway. Estimated risk values for the roadway upon the project MEI are listed in Table 7.

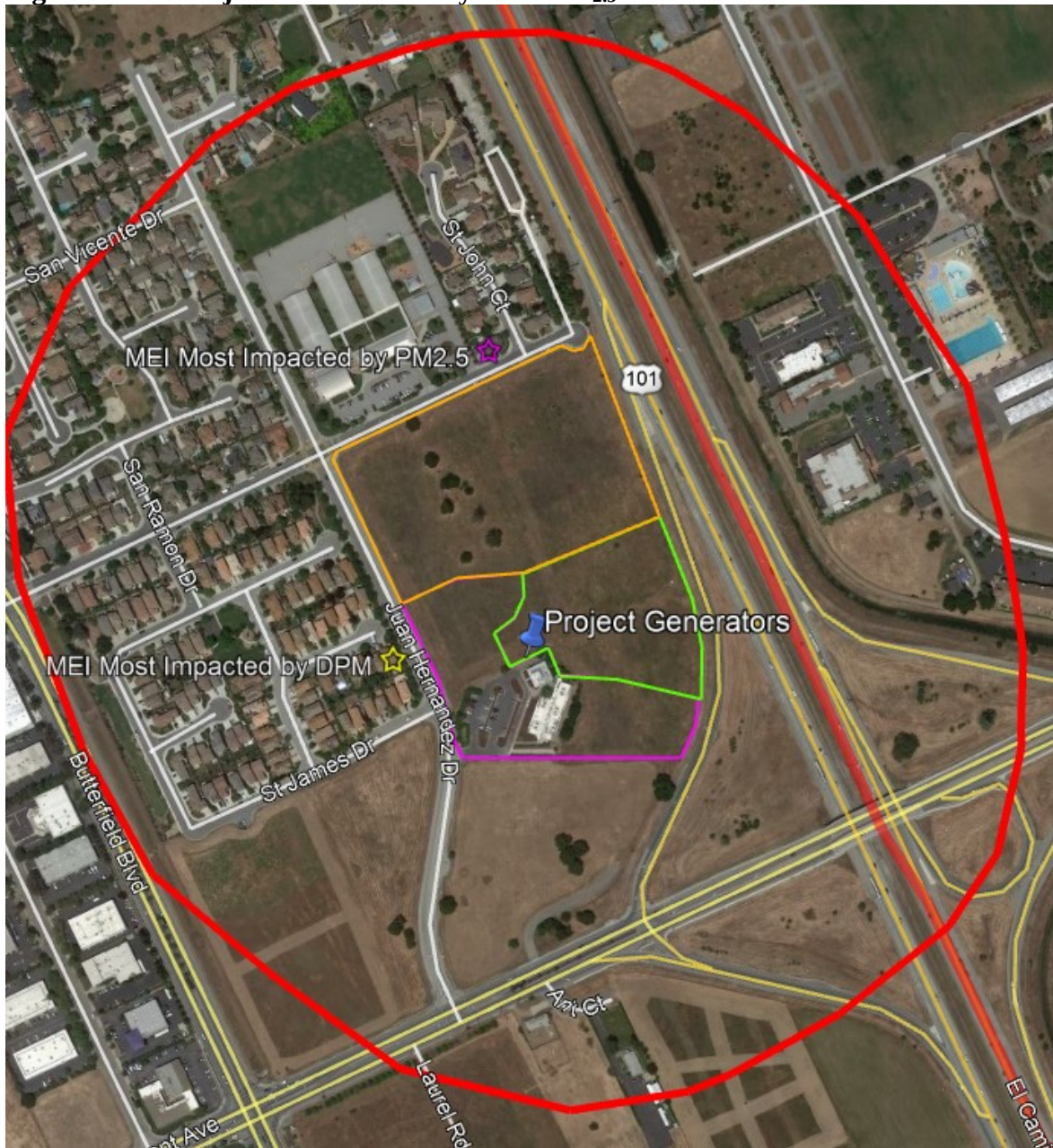
Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identifies the location of nearby stationary sources and their estimated risk and hazard impacts. In addition, BAAQMD's *Permitted Stationary Sources 2018* GIS website²¹ was used to locate updated nearby permitted stationary sources. No stationary sources were identified using either tool.

²⁰ Hexagon Transportation Consultants, Inc., March. *Lillian Commons Volumes*. 2020

²¹ BAAQMD,
<https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65>

Figure 3. Project Site and Nearby TAC PM_{2.5} Sources



Summary of Cumulative Health Risks at Project MEI

Table 7 reports both the project and cumulative community risk impacts at the sensitive receptor most affected by construction (i.e. the construction MEI). Without the conditions of approval, the project would have a *significant* impact with respect to community risk caused by project construction activities, since the maximum increased cancer risk and maximum annual PM_{2.5} concentration do exceed their single-source thresholds. However, as seen in Table 6, *Policy NRE-12.1 (i.e. BAAQMD Best Management Practices) and Condition of Approval AQ-1 and AQ-2 would reduce these impacts to less-than-significant*. The cumulative annual cancer risk, PM_{2.5} concentration, and Hazard risk values, which includes unmitigated and mitigated, would not exceed the cumulative threshold. Therefore, the project would not contribute to a cumulative risk impact

Table 7. Impacts from Combined Sources at Project MEI

Source	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
Unmitigated Total/Maximum Project (Years 0-30)	34.7	0.31	0.04
Mitigated Total/Maximum Project (Years 0-30)	3.5	0.19	0.01
U.S. Highway 101	<23.0	<0.47	<0.01
Butterflied Boulevard (ADT 14,205, MEI 870-ft East)	0.7	0.02	-
Tennant Avenue (ADT 21,408, MEI 950-ft North)	1.2	0.03	-
Combined Sources			
Unmitigated	44.4 (infant)	0.51	0.05
Mitigated	13.2 (infant)	0.39	0.02
BAAQMD Cumulative Source Threshold	>100	>0.8	>10.0
Exceed Threshold?			
Unmitigated	No	No	No
Mitigated	No	No	No

Condition of Approval AQ-1: Implement BAAQMD-recommended best management practices to control

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 are listed below:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Condition of Approval AQ-2: Selection of equipment during construction to minimize emissions. Such equipment selection would include the following:

The project shall develop a plan demonstrating that the off-road equipment used onsite to construct the project would achieve a fleet-wide average 70-percent reduction in DPM exhaust emissions or greater. One feasible plan to achieve this reduction would include the following:

1. All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall meet U.S. EPA Tier 4 particulate matter emissions standards. Alternatively, diesel-powered equipment that meets U.S. EPA Tier 2 or 3 engines and include CARB-certified Level 3 Diesel Particulate Filters²² (or equivalent) would meet this requirement, as would the use of equipment that is electrically powered or uses non-diesel fuels.

Effectiveness of Project Conditions of Approval AQ-1 and AQ-2

Project construction activities were analyzed with the assumption of Tier 4 interim equipment. With implementation of this mitigation, the computed maximum increased lifetime residential cancer risk from construction, assuming infant exposure, would be 3.0 in one million or less, the maximum annual PM_{2.5} concentration would be 0.19 µg/m³, and the Hazard Index would be less than 0.01. As a result, impacts would be reduced below the thresholds with respect to community risk impacts caused by construction activities.

²² See <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

Non-CEQA Impacts: Exposure of Project Residences to TACs and PM_{2.5} from U.S. 101 Traffic

A refined analysis of the impacts of TACs and PM_{2.5} to new sensitive receptors is necessary to evaluate potential cancer risks and PM_{2.5} concentrations from U.S. Route 101 (U.S. 101). A review of the traffic information reported by the California Department of Transportation (Caltrans) indicates that U.S. 101 traffic includes 135,500 vehicles per day²³ (based on an annual average) that are about 7.5 percent trucks, of which 4.6 percent are considered diesel heavy duty trucks and 2.9 percent are medium duty trucks.²⁴

U.S. 101 Traffic Emissions Modeling

Dispersion modeling of TAC and PM_{2.5} emissions was conducted using the U.S. EPA AERMOD dispersion model, which is recommended by the BAAQMD for this type of analysis. Northbound and southbound traffic on U.S. 101 within about 1,000 feet of the project site was evaluated with the model. Emissions from vehicle traffic were modeled in AERMOD using a series of adjacent volume sources along a line (line volume sources), with line segments used to represent northbound and southbound travel lanes on U.S. 101, as shown in Figure 4. The modeling used a five-year data set (2003-2017) of hourly meteorological data from the San Martin Airport prepared by the BAAQMD for use with the AERMOD model. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations. Residential occupation of the project was assumed to occur in 2024

The modeling used receptors placed within the project boundaries spaced about every 20 meters (66 feet). Receptor heights of 1.5 meters (4.9 feet) and 4.5 meters were used to represent the breathing heights of residential receptors on the first and second floor levels. Pollutant and TAC concentrations from U.S. 101 traffic on higher floor levels would be lower than those of the first two floor levels. Figure 4 shows the roadway links and onsite receptor locations used in the modeling.

Computed Cancer and Non-Cancer Health Impacts

The maximum increased lifetime cancer risk and annual PM_{2.5} concentrations for potential new residents across the project site were computed using modeled TAC and PM_{2.5} concentrations and the BAAQMD recommended methods and exposure parameters described in *Attachment 1*. The locations where the maximum TAC and PM_{2.5} impacts from U.S. 101 occurred are shown in Figure 4. Figure 5 shows the computed lifetime cancer risks at potential residential locations across the site, with values ranging from 53.6 in one million to 7.7 in one million. Figures 6 and 7 show the computed lifetime cancer risks with a MERV13 or MERV16 filtration systems installed for residential units, respectively. Figure 8 shows the annual PM_{2.5} concentrations across the site, with values ranging from 1.23 µg/m³ to 0.15 µg/m³. Figures 9 and 10 show the annual PM_{2.5} concentration across the site with a MERV13 or MERV16 filtration system installed, respectively. The modeling results and health risk calculations for the receptor with the maximum cancer risk from U.S. 101 traffic are also provided in *Attachment 4*.

²³ California Department of Transportation. 2018. *2017 Traffic Volumes on the California State Highway System*.

²⁴ Caltrans. 2017. *2016 Annual Average Daily Truck Traffic on the California State Highway System*

The maximum cancer risks that are greater than 10.0 in one million or annual PM_{2.5} concentration greater than 0.3 µg/m³ would exceed the BAAQMD significance thresholds and would need to be controlled per the City's *General Plan Policy NRE-11.2 TACs and Existing Sensitive Uses*.

Various levels of control would be required, depending on the proximity to U.S. 101. For areas furthest from the highway, no control would be necessary, while locations along the highway would require enhanced, MERV16, filtration. A properly installed and operated ventilation system with MERV16 filters should achieve reductions of at least 90 percent and a system with MERV13 would achieve an 80-percent reduction²⁵. Increased cancer risk and PM_{2.5} exposures for MERV16 filtration cases were calculated assuming a combination of outdoor and indoor exposure. For use of MERV16 or MERV13 filtration systems, without the additional use of sealed, inoperable windows and no balconies, an outdoor exposure of three hours to ambient PM_{2.5} concentrations and 21 hours of indoor exposure to filtered air was assumed. In this case, the effective control efficiency using a MERV16 filtration system is about 79 percent and MERV13 is about 70 percent for PM_{2.5} exposure.

²⁵ Bay Area Air Quality Management District (2016). Appendix B: Best Practices to Reduce Exposure to Local Air Pollution, *Planning Healthy Places A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning* (p. 38). http://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en

Condition of Approval AQ-3: Include high-efficiency particulate filtration systems in residential ventilation systems.

The significant exposure for new project receptors is judged by two effects: (1) increased cancer risk, and (2) annual PM_{2.5} concentration. Cancer risk and exposure to annual PM_{2.5} concentrations from U.S. 101 traffic are above the thresholds. Cancer risk is mostly the result of exposure to diesel particulate matter, although, gasoline vehicle exhaust contributes to this effect. Annual PM_{2.5} concentrations are based on the exposure to PM_{2.5} resulting from emissions attributable to truck and auto exhaust, the wearing of brakes and tires and re-entrainment of roadway dust from vehicles traveling over pavement. The modeled PM_{2.5} exposure to future residents drives the mitigation plan. Reducing particulate matter exposure would reduce both annual PM_{2.5} exposures and cancer risk.

The project shall include the following measures to minimize long-term annual PM_{2.5} exposure for new project occupants:

1. Install air filtration in residential and medical buildings. Air filtration devices shall be rated MERV16 or higher for portions of the site that have annual PM_{2.5} exposure above 1.1 µg/m³ (see Figure 4, as this included the homes closest to U.S. 101) and MERV13 or higher for all other portions of the site. To ensure adequate health protection to sensitive receptors (i.e., residents), this ventilation system, whether mechanical or passive, all fresh air circulated into the dwelling units shall be filtered.
2. As part of implementing this measure, an ongoing maintenance plan for the buildings' heating, ventilation, and air conditioning (HVAC) air filtration system shall be required.
3. Ensure that the use agreement and other property documents: (1) require cleaning, maintenance, and monitoring of the affected buildings for air flow leaks, (2) include assurance that new owners or tenants are provided information on the ventilation system, and (3) include provisions that fees associated with owning or leasing a unit(s) in the building include funds for cleaning, maintenance, monitoring, and replacements of the filters, as needed.

Conditions of Approval AQ-4: Provide electrical power at truck loading docks to avoid use of truck refrigeration units.

Conditions of Approval AQ-5: Designate truck circulation routes that avoid residential areas to the greatest extent reasonable.

Effectiveness: A ventilation system with MERV13 filtration would reduce annual PM_{2.5} concentrations of 1.1µg/m³ or less to 0.3 µg/m³ and reduce lifetime cancer risk of 33 chances per million to less than 10 chances per million. Any residential receptors located where uncontrolled concentrations are greater would require ventilation system with MERV16 filtration that would reduce levels by almost 80 percent.

Figure 4. Project Site, On-site Receptors, Roadway Segments Modeled and Receptor with Maximum TAC Impacts

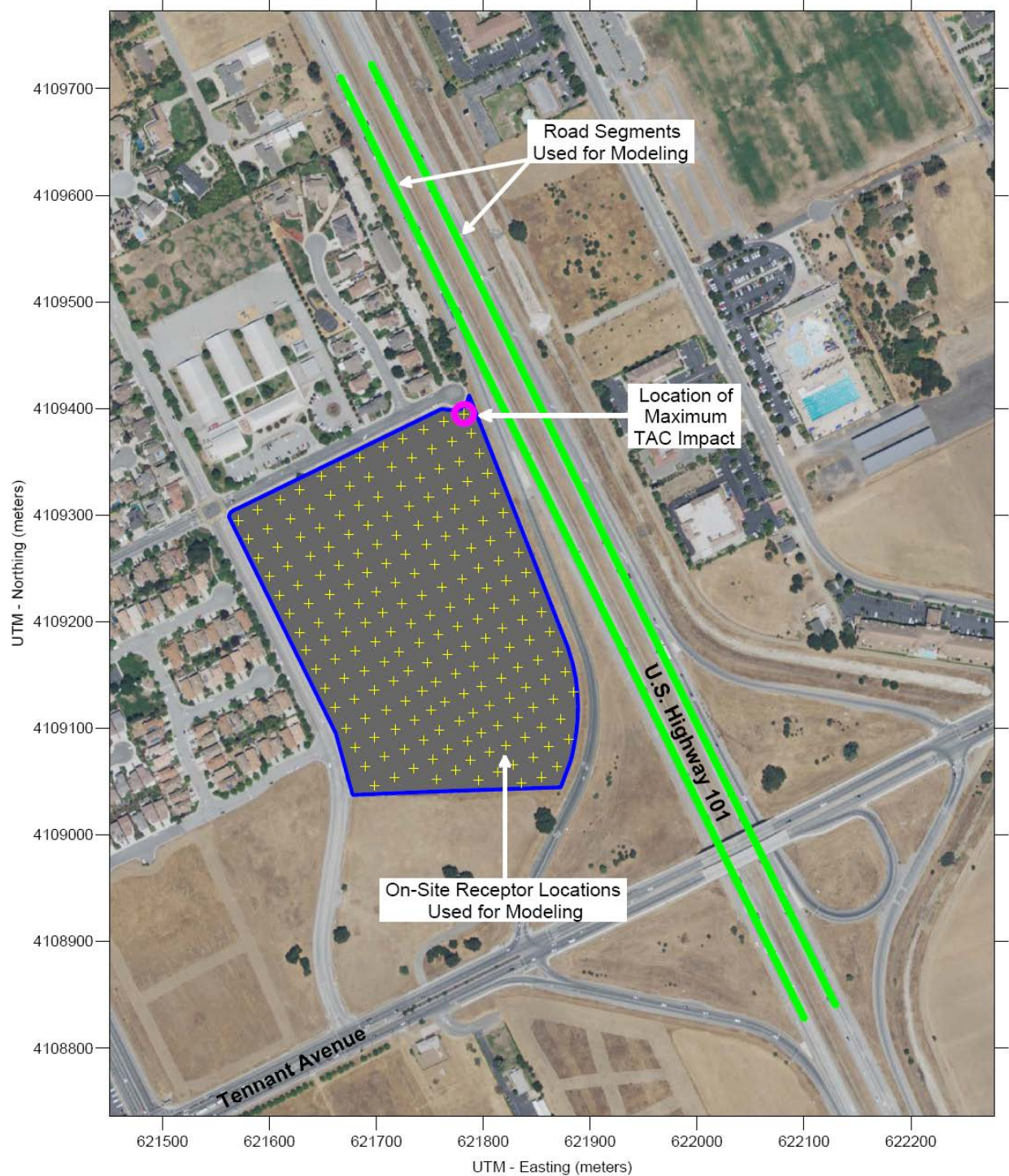


Figure 5. Increased Residential Cancer Risks (per million) in Project Areas

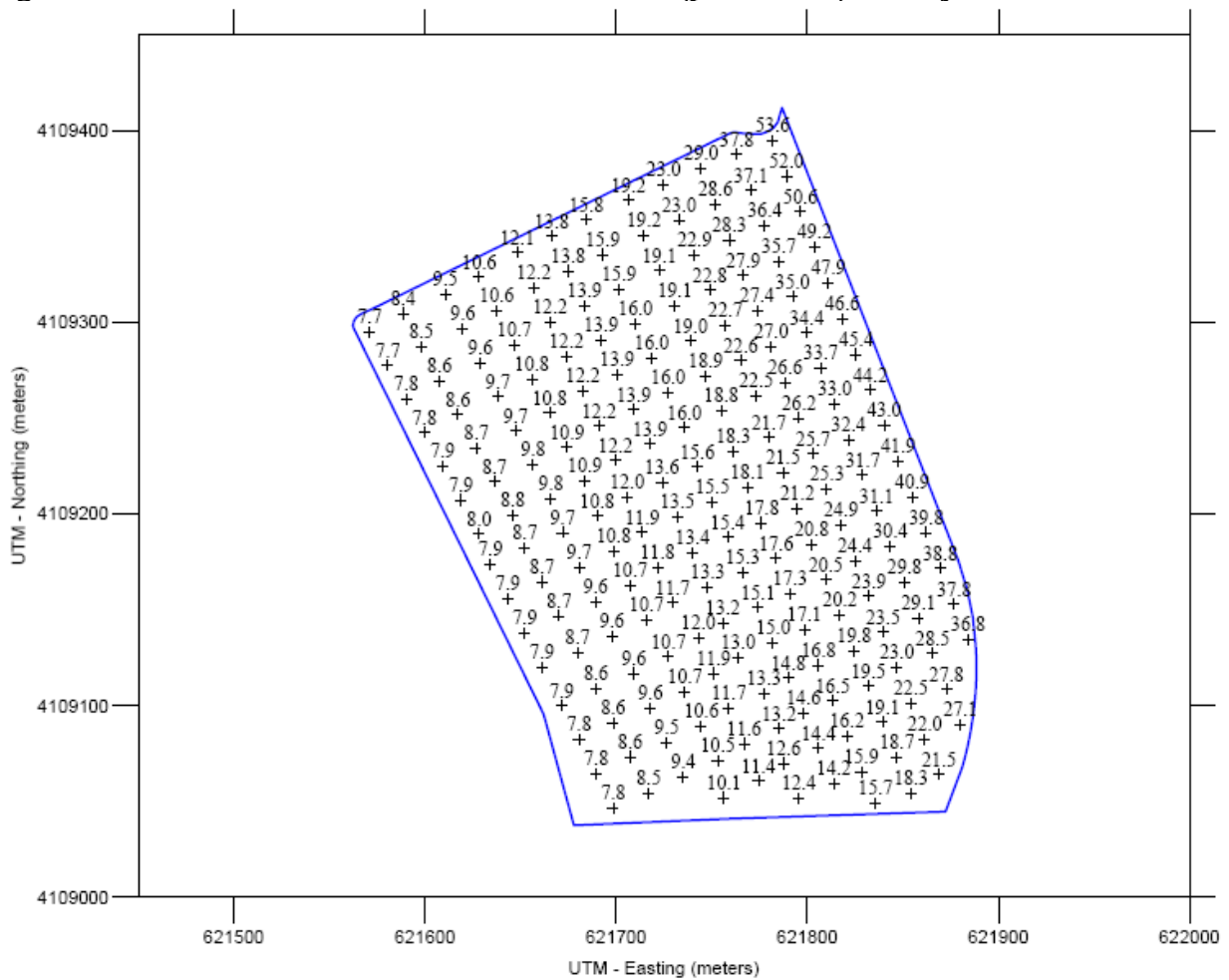


Figure 6. Cancer risk with MERV13 Filtration System

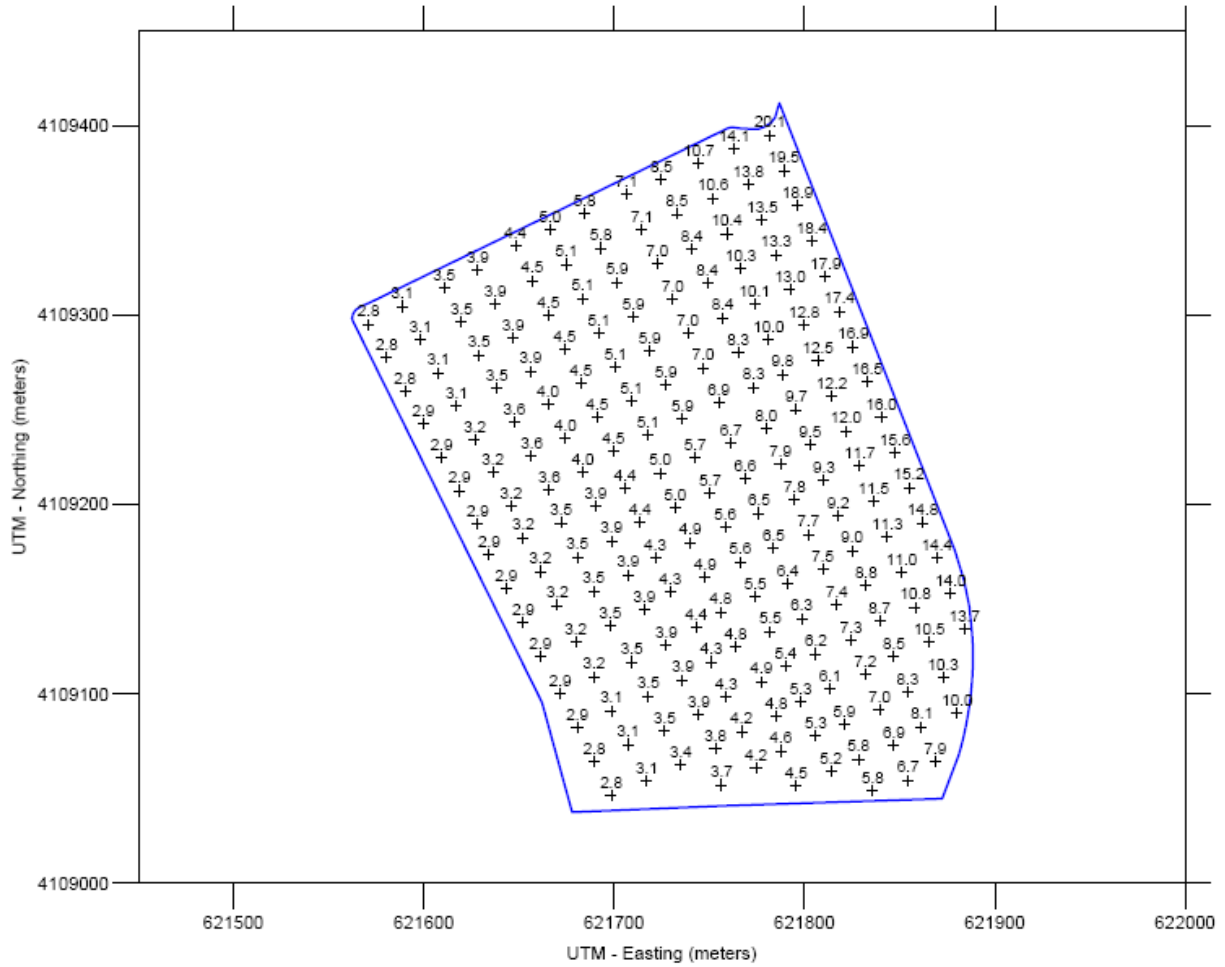


Figure 7. Cancer risk with MERV16 Filtration System

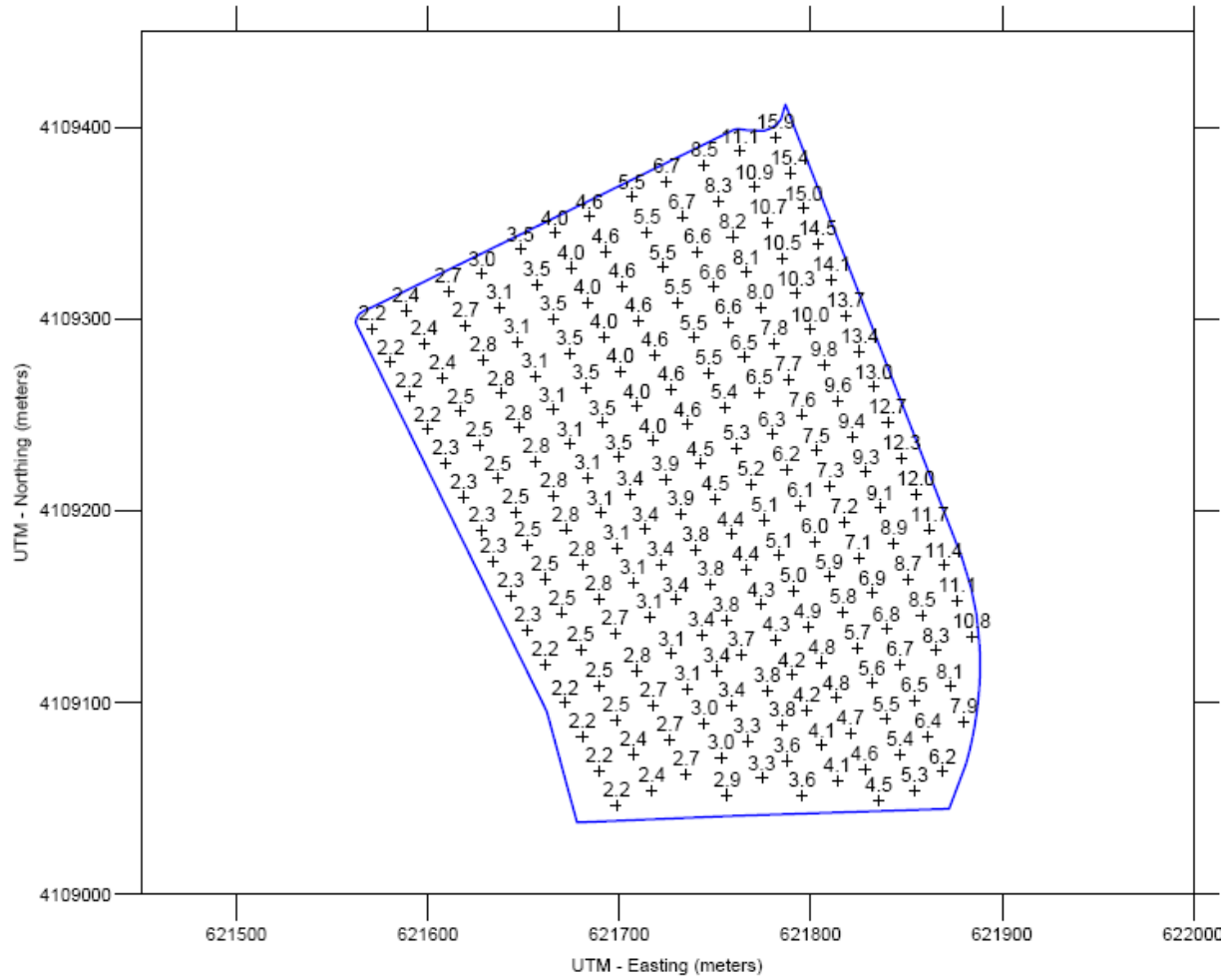


Figure 8. PM_{2.5} Concentrations ($\mu\text{g}/\text{m}^3$) in Project Areas

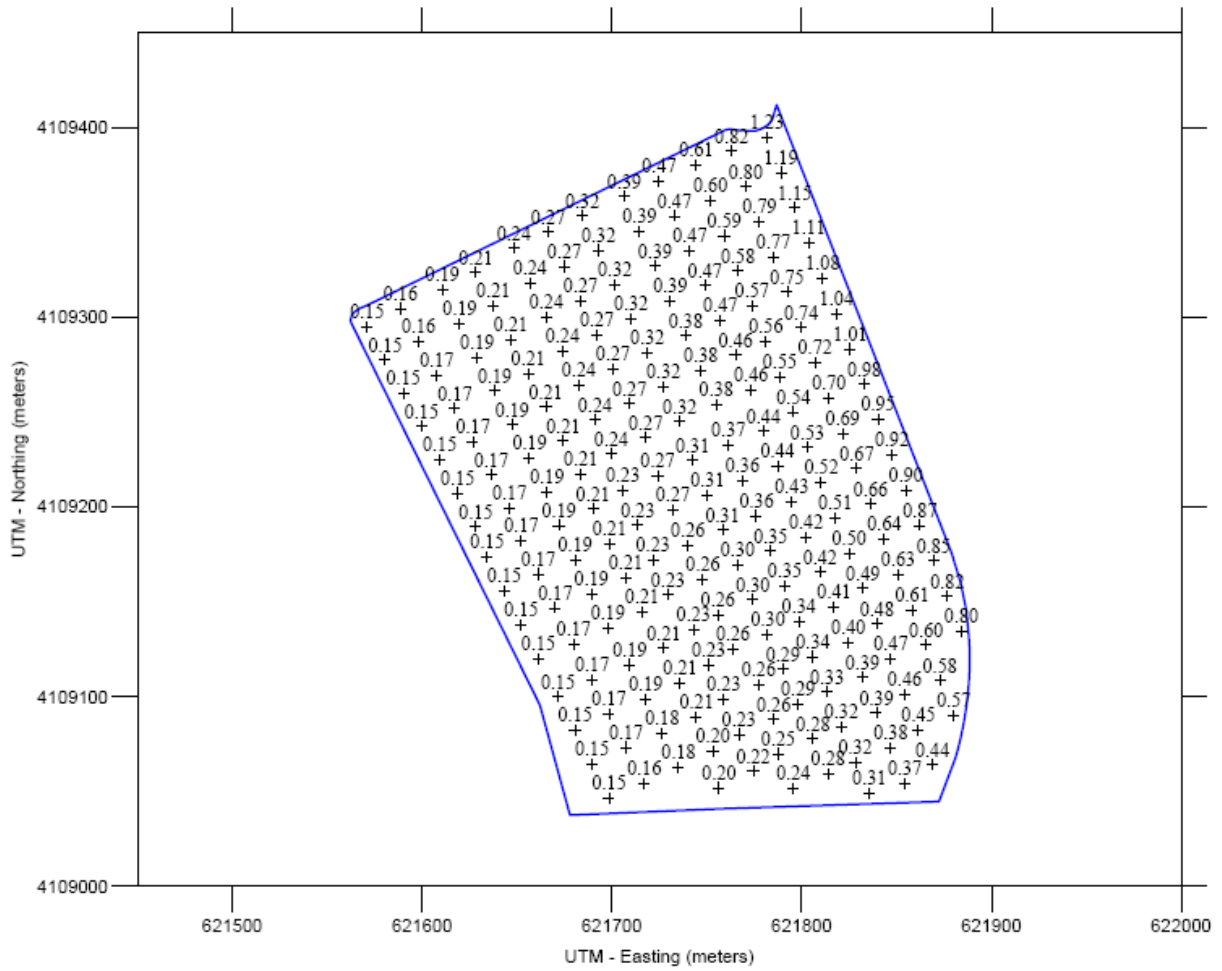


Figure 9. PM_{2.5} with MERV13 Filtration System

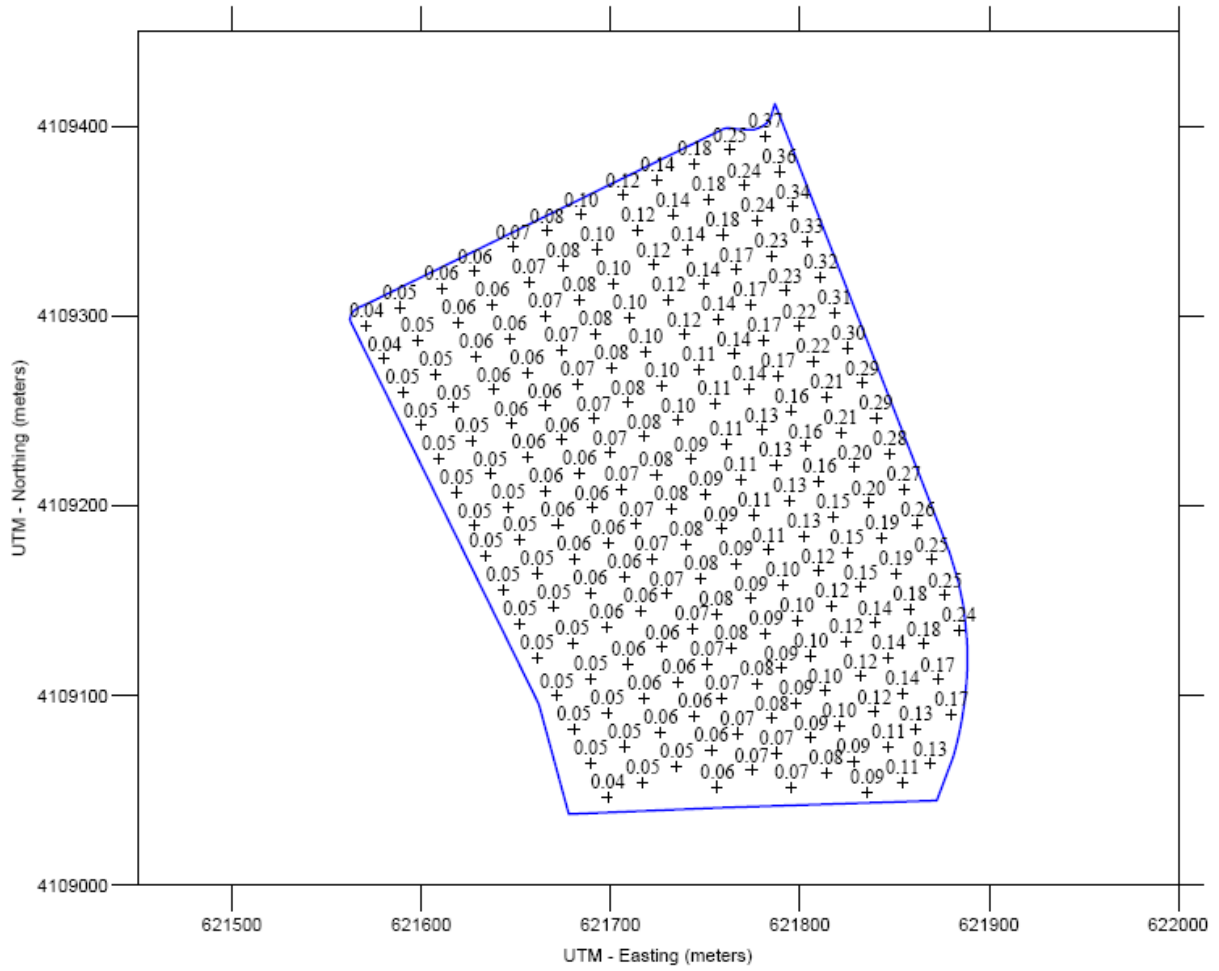
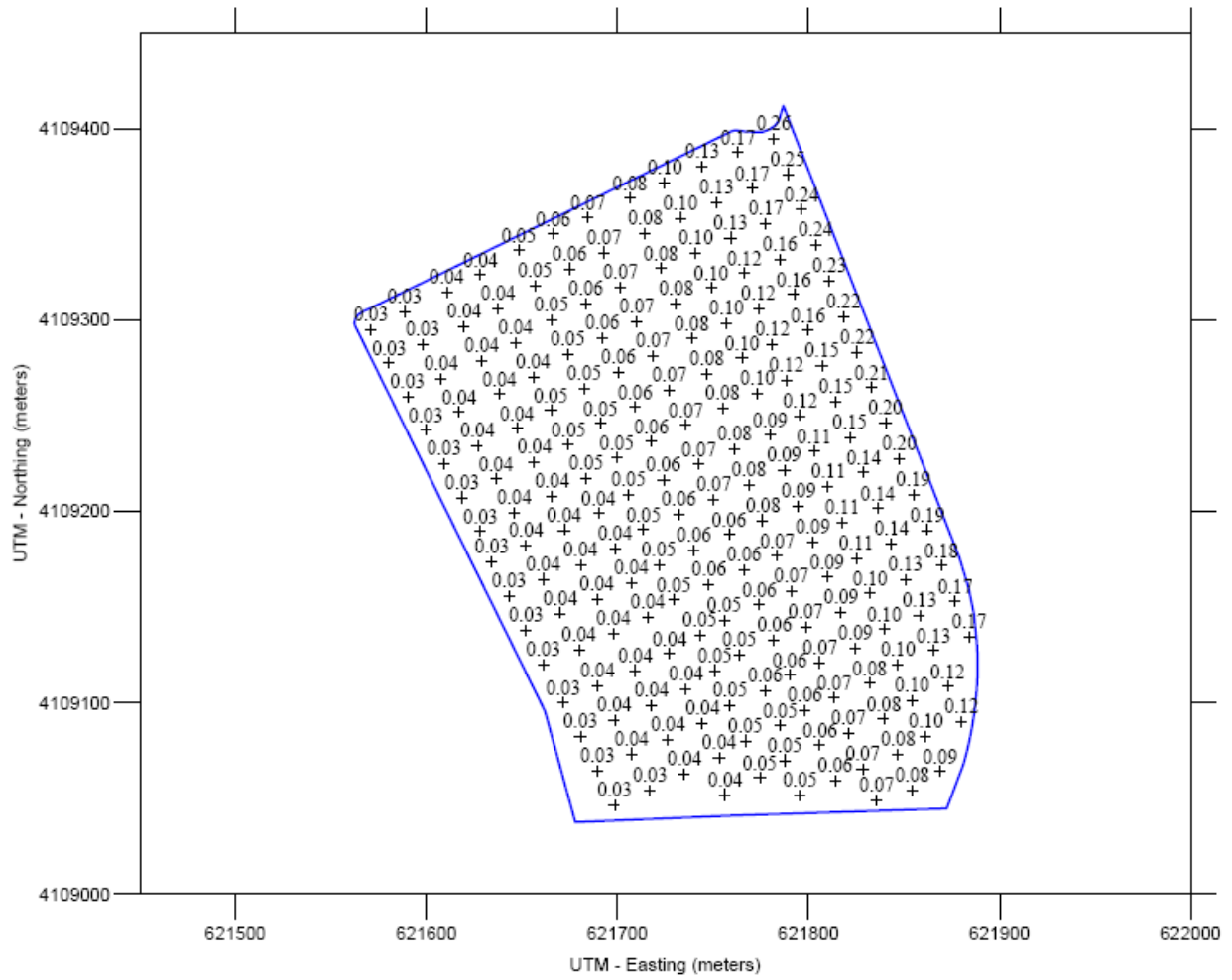


Figure 10. PM_{2.5} with MERV16 Filtration System



Greenhouse Gases

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO₂ and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO₂ being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO₂ equivalents (CO₂e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Recent Regulatory Actions

Assembly Bill 32 (AB 32), California Global Warming Solutions Act (2006)

AB 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building

Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

Senate Bill 375, California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

SB 350 Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Executive Order EO-B-30-15 (2015) and SB 32 GHG Reduction Targets

In April 2015, Governor Brown signed Executive Order which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed SB 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*. While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-

term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit oriented housing;
- Develop walkable and bikable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO₂e per capita (statewide) by 2030 and no more than 2 metric tons CO₂e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

GHG Emissions

The U.S. EPA reported that in 2017, total gross nationwide GHG emissions were 6,457 MMT. These emissions were lower than peak levels of 7,370 MMT that were emitted in 2008. Relative to 1990 levels, these emissions were CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2017 emissions²⁶. In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017. The most recent Bay Area emission inventory was completed for the year 2011, where emissions were 87 MMT²⁷. As a point of comparison, statewide emissions were about 444 MMT in 2011.

²⁶ CARB. 2019. *2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017*. Available at https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf accessed on Nov. 26, 2019.

²⁷ BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. January. Available at http://www.baaqmd.gov/~media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf accessed Nov. 26, 2019.

Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate. Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_{2e}/year/service population and a bright-line threshold of 660 MT CO_{2e}/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.²⁸ The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold.

Impact-GHG 1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, the generator, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above. The effects from project-specific sustainability measures were not included in this analysis.

Service Population Emissions

The project service population efficiency rate is based on the number of future residents and employees. Per the project applicant, there would be a total of 472 employees between the medical offices, hospital, and retail/commercial development. For this project, the number of future residents was estimated by multiplying the total number of units (e.g. 200 units) by the persons per household rate for the City of Morgan Hill found in the California Department of Finance Population and Housing Estimate report.²⁹ Using the 3.15 person per household 2019 rate, the number of future residents is estimated to be 630 residents. The total service population would be 1,102 persons.

²⁸ Dave Vintze, Bay Area Air Quality Management District, 2016. *CLE International 12th Annual Super Conference CEQA Guidelines, Caw Law and Policy Update*. December 12

²⁹ State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2019*. Sacramento, California, May 2019.

Construction GHG Emissions

GHG emissions associated with construction were computed to be 1,943 MT of CO₂e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational GHG Emissions

As shown in Table 8, annual emissions resulting from operation of the proposed project are predicted to be 2,915 MT of CO₂e in 2023 and 2,650 MT of CO₂e in 2030. The service population emission for the years 2025 and 2030 are predicted to be 2.65 and 2.40 MT/CO₂e/year/service population, respectively.

To be considered an exceedance, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold in the opening and future year. Note that if the project exceeds in the opening but not the future year, then the project is still considered to be in exceedance of the thresholds. Emissions from both years must be below at least one of the thresholds. As shown in Table 8, the project would exceed the 660 MT CO₂e/year bright line threshold. However, the project's 2025 and 2030 emissions would not exceed the per capita threshold of 2.8 MT of CO₂e/year/service population. Therefore, GHG emissions from operation of the project would not be an exceedance.

Table 8. Annual Project GHG Emissions (CO₂e) in Metric Tons

Source Category	Proposed Project in 2025	Proposed Project in 2030
Area	3	3
Energy Consumption	258	258
Mobile	2285	2020
Solid Waste Generation	352	352
Water Usage	17	17
Metric Ton Total	2,915	2,650
<i>Bright-Line Significance Threshold</i>	<i>660 MT of CO₂e</i>	
Service Population Emissions	2.65	2.40
<i>Per Capita Significance Threshold</i>	<i>2.8 MT of CO₂e/year/service population</i>	
Exceed Both?	No	No

Supporting Documentation

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

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

Attachment 3 is the health risk assessment. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 4 includes the screening community risk calculations from sources affecting the MEI. Due to the large size of the BAAQMD health risk calculators, these files were not included but are available upon request and would be provided in digital format.

Attachment 1: Health Risk Calculation Methodology

Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.³⁰ These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.³¹ This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.³² Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

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

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

³⁰ 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.

³¹ CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

³² BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile 8-hour breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

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

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

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

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)

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

Where:

C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

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

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

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

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

Non-Cancer Hazards

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

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter (µg/m³).

Annual PM_{2.5} Concentrations

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

Lillian Commons Proposed Project Trip Generation Estimates

Source: ITE Trip Generation Manual, 10th Ed in 2017

²As prescribed by the VTA Transportation Impact Analysis Guidelines (October 2014), the maximum trip reduction for a mixed-use development project with housing and retail components is equal to 15% off the smaller trip generator.

^{2a}As prescribed by the VTA Transportation Impact Analysis Guidelines (October 2014), the maximum trip reduction for a mixed-use development project with housing and employment components is equal to 3% off the smaller trip generator.

³A 20% PM pass-by reduction is typically applied for retail uses in Morgan Hill.

⁴Daily trips for the existing medical offices were estimated based on the ratio between the peak-hour driveway counts and ITE rates.

CalEEMod Outputs: Construction Period Emissions

Lillian Commons Phase 1 AQ Construction - Santa Clara County, Annual

Lillian Commons Phase 1 AQ Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	14.50	1000sqft	4.13	14,500.00	0
Parking Lot	151.00	Space	0.00	60,400.00	0
High Turnover (Sit Down Restaurant)	10.00	1000sqft	1.78	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate

Land Use - Phase 1 Construction: Parcels B and D

Construction Phase - Default CalEEMod schedule

Trips and VMT -

Energy Use -

Demolition - Demo part of parking lot, based on assumption of 167 cubic yards at 1.4 cubic yards per ton

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblLandUse	LotAcreage	0.33	4.13
tblLandUse	LotAcreage	1.36	0.00

tblLandUse	LotAcreage	0.23	1.78
tblProjectCharacteristics	CO2IntensityFactor	641.35	290

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2917	2.7652	2.3604	4.41E-03	0.1985	0.139	0.3375	0.0948	0.1301	0.2248	0	385.9708	385.9708	0.0846	0	388.0869
2022	0.1716	0.2876	0.3342	5.90E-04	5.18E-03	0.0142	0.0194	1.40E-03	0.0133	0.0147	0	51.4424	51.4424	0.0121	0	51.7457
Maximum	0.2917	2.7652	2.3604	4.41E-03	0.1985	0.139	0.3375	0.0948	0.1301	0.2248	0	385.9708	385.9708	0.0846	0	388.0869

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0879	1.6128	2.5689	4.41E-03	0.1121	0.0109	0.1229	0.03	0.0109	0.0409	0	385.9704	385.9704	0.0846	0	388.0865
2022	0.1513	0.2286	0.3759	5.90E-04	5.18E-03	1.27E-03	6.45E-03	1.40E-03	1.27E-03	2.67E-03	0	51.4423	51.4423	0.0121	0	51.7457
Maximum	0.1513	1.6128	2.5689	4.41E-03	0.1121	0.0109	0.1229	0.03	0.0109	0.0409	0	385.9704	385.9704	0.0846	0	388.0865

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Percent Reduction	48.37	39.68	-9.28	0.00	42.43	92.07	63.75	67.32	91.55	81.83	0.00	0.00	0.00	0.00	0.00	0.00
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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.9922	0.4119
2	4-1-2021	6-30-2021	0.6817	0.4254
3	7-1-2021	9-30-2021	0.6892	0.4300
4	10-1-2021	12-31-2021	0.6904	0.4312
5	1-1-2022	3-31-2022	0.4622	0.3820
		Highest	0.9922	0.4312

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/28/2021	5	20	
2	Site Preparation	Site Preparation	1/29/2021	2/11/2021	5	10	
3	Grading	Grading	2/12/2021	3/11/2021	5	20	
4	Building Construction	Building Construction	3/12/2021	1/27/2022	5	230	
5	Paving	Paving	1/28/2022	2/24/2022	5	20	
6	Architectural Coating	Architectural Coating	2/25/2022	3/24/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 36,750; Non-Residential Outdoor: 12,250; Striped Parking Area:

OffRoad Equipment

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

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	12.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	34.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2700e-003	0.0000	1.2700e-003	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	0.0317	0.3144	0.2157	3.9000e-004	1.2700e-003	0.0155	0.0168	1.9000e-004	0.0144	0.0146	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.6000e-003	3.5000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4518	0.4518	2.0000e-005	0.0000	0.4523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854
Total	5.1000e-004	1.9200e-003	3.7800e-003	1.0000e-005	1.2900e-003	2.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.4366	1.4366	4.0000e-005	0.0000	1.4377

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.7000e-004	0.0000	5.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8400e-003	0.1356	0.2467	3.9000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	5.8400e-003	0.1356	0.2467	3.9000e-004	5.7000e-004	6.2000e-004	1.1900e-003	4.0000e-005	6.2000e-004	6.6000e-004	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.6000e-003	3.5000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4518	0.4518	2.0000e-005	0.0000	0.4523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854
Total	5.1000e-004	1.9200e-003	3.7800e-003	1.0000e-005	1.2900e-003	2.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.4366	1.4366	4.0000e-005	0.0000	1.4377

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5909	0.5909	1.0000e-005	0.0000	0.5912
Total	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5909	0.5909	1.0000e-005	0.0000	0.5912

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4800e-003	0.0608	0.1148	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530

Total	3.4800e-003	0.0608	0.1148	1.9000e-004	0.0407	3.1000e-004	0.0410	0.0112	3.1000e-004	0.0115	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5909	0.5909	1.0000e-005	0.0000	0.5912
Total	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5909	0.5909	1.0000e-005	0.0000	0.5912

3.4 Grading - 2021

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854
Total	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0295	0.0000	0.0295	7.5800e-003	0.0000	7.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2000e-003	0.1033	0.1899	3.0000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
Total	5.2000e-003	0.1033	0.1899	3.0000e-004	0.0295	4.8000e-004	0.0300	7.5800e-003	4.8000e-004	8.0600e-003	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854
Total	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854

3.5 Building Construction - 2021

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8200e-003	0.1518	0.0404	4.0000e-004	9.7200e-003	3.4000e-004	0.0101	2.8100e-003	3.2000e-004	3.1300e-003	0.0000	38.2586	38.2586	1.6700e-003	0.0000	38.3003
Worker	0.0111	7.6500e-003	0.0821	2.6000e-004	0.0285	1.8000e-004	0.0286	7.5700e-003	1.6000e-004	7.7300e-003	0.0000	23.5502	23.5502	5.4000e-004	0.0000	23.5635
Total	0.0159	0.1594	0.1225	6.6000e-004	0.0382	5.2000e-004	0.0387	0.0104	4.8000e-004	0.0109	0.0000	61.8088	61.8088	2.2100e-003	0.0000	61.8639

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0563	1.1512	1.8857	2.8400e-003		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003	0.0000	244.3770	244.3770	0.0590	0.0000	245.8510
Total	0.0563	1.1512	1.8857	2.8400e-003		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003	0.0000	244.3770	244.3770	0.0590	0.0000	245.8510

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8200e-003	0.1518	0.0404	4.0000e-004	9.7200e-003	3.4000e-004	0.0101	2.8100e-003	3.2000e-004	3.1300e-003	0.0000	38.2586	38.2586	1.6700e-003	0.0000	38.3003
Worker	0.0111	7.6500e-003	0.0821	2.6000e-004	0.0285	1.8000e-004	0.0286	7.5700e-003	1.6000e-004	7.7300e-003	0.0000	23.5502	23.5502	5.4000e-004	0.0000	23.5635
Total	0.0159	0.1594	0.1225	6.6000e-004	0.0382	5.2000e-004	0.0387	0.0104	4.8000e-004	0.0109	0.0000	61.8088	61.8088	2.2100e-003	0.0000	61.8639

3.5 Building Construction - 2022

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0129	3.4300e-003	4.0000e-005	8.8000e-004	3.0000e-005	9.0000e-004	2.5000e-004	3.0000e-005	2.8000e-004	0.0000	3.4121	3.4121	1.4000e-004	0.0000	3.4157
Worker	9.3000e-004	6.2000e-004	6.7900e-003	2.0000e-005	2.5600e-003	2.0000e-005	2.5800e-003	6.8000e-004	1.0000e-005	7.0000e-004	0.0000	2.0436	2.0436	4.0000e-005	0.0000	2.0447
Total	1.3300e-003	0.0135	0.0102	6.0000e-005	3.4400e-003	5.0000e-005	3.4800e-003	9.3000e-004	4.0000e-005	9.8000e-004	0.0000	5.4557	5.4557	1.8000e-004	0.0000	5.4604

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0700e-003	0.1037	0.1698	2.6000e-004		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1457

Total	5.0700e-003	0.1037	0.1698	2.6000e-004		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1457
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0129	3.4300e-003	4.0000e-005	8.8000e-004	3.0000e-005	9.0000e-004	2.5000e-004	3.0000e-005	2.8000e-004	0.0000	3.4121	3.4121	1.4000e-004	0.0000	3.4157
Worker	9.3000e-004	6.2000e-004	6.7900e-003	2.0000e-005	2.5600e-003	2.0000e-005	2.5800e-003	6.8000e-004	1.0000e-005	7.0000e-004	0.0000	2.0436	2.0436	4.0000e-005	0.0000	2.0447
Total	1.3300e-003	0.0135	0.0102	6.0000e-005	3.4400e-003	5.0000e-005	3.4800e-003	9.3000e-004	4.0000e-005	9.8000e-004	0.0000	5.4557	5.4557	1.8000e-004	0.0000	5.4604

3.6 Paving - 2022

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.9000e-004	3.1500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9490	0.9490	2.0000e-005	0.0000	0.9495
Total	4.3000e-004	2.9000e-004	3.1500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9490	0.9490	2.0000e-005	0.0000	0.9495

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.3400e-003	0.1004	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.3400e-003	0.1004	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.9000e-004	3.1500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9490	0.9490	2.0000e-005	0.0000	0.9495
Total	4.3000e-004	2.9000e-004	3.1500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9490	0.9490	2.0000e-005	0.0000	0.9495

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1404					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.1424	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.3000e-004	1.4700e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	1.0000e-005	0.0000	0.4431
Total	2.0000e-004	1.3000e-004	1.4700e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	1.0000e-005	0.0000	0.4431

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1404					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4000e-004	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.1409	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.3000e-004	1.4700e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	1.0000e-005	0.0000	0.4431
Total	2.0000e-004	1.3000e-004	1.4700e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	1.0000e-005	0.0000	0.4431

Lillian Commons Phase 2 AQ Construction - Santa Clara County, Annual

Lillian Commons Phase 2 AQ Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	395.00	Space	0.00	158,000.00	0
City Park	2.42	Acre	2.42	105,415.20	0
Apartments Mid Rise	200.00	Dwelling Unit	9.49	178,500.00	572

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate

Land Use - Phase 2 Construction: Parcel C

Construction Phase - Default CalEEMod schedule, no demolition

Trips and VMT -

Energy Use -

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblLandUse	LandUseSquareFeet	200,000.00	178,500.00
tblLandUse	LotAcreage	3.55	0.00

tblLandUse	LotAcreage	5.26	9.49
tblProjectCharacteristics	CO2IntensityFactor	641.35	290

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2836	2.5534	2.426	6.15E-03	0.4208	0.0998	0.5205	0.1577	0.0932	0.2509	0	551.6446	551.6446	0.085	0	553.7694
2023	1.4709	1.4789	1.7531	4.54E-03	0.1755	0.0557	0.2312	0.0474	0.0523	0.0997	0	408.1734	408.1734	0.0513	0	409.4561
Maximum	1.4709	2.5534	2.426	6.15E-03	0.4208	0.0998	0.5205	0.1577	0.0932	0.2509	0	551.6446	551.6446	0.085	0	553.7694

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1377	1.7766	2.6791	6.1500e-003	0.2995	0.0107	0.3102	0.0774	0.0106	0.0880	0.0000	551.6442	551.6442	0.0850	0.0000	553.7691
2023	1.3903	1.2336	1.8937	4.5400e-003	0.1755	7.5600e-003	0.1831	0.0474	7.4700e-003	0.0548	0.0000	408.1732	408.1732	0.0513	0.0000	409.4558
Maximum	1.3903	1.7766	2.6791	6.1500e-003	0.2995	0.0107	0.3102	0.0774	0.0106	0.0880	0.0000	551.6442	551.6442	0.0850	0.0000	553.7691

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Percent Reduction	12.91	25.35	-9.42	0.00	20.33	88.26	34.38	39.16	87.60	59.27	0.00	0.00	0.00	0.00	0.00	0.00
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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-25-2022	6-24-2022	1.1412	0.6158
2	6-25-2022	9-24-2022	0.8204	0.6273
3	9-25-2022	12-24-2022	0.8178	0.6268
4	12-25-2022	3-24-2023	0.7190	0.5705
5	3-25-2023	6-24-2023	0.7220	0.5737
6	6-25-2023	9-24-2023	1.5686	1.5256
		Highest	1.5686	1.5256

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/25/2022	4/7/2022	5	10	
2	Grading	Grading	4/8/2022	5/19/2022	5	30	
3	Building Construction	Building Construction	5/20/2022	7/13/2023	5	300	
4	Paving	Paving	7/14/2023	8/10/2023	5	20	
5	Architectural Coating	Architectural Coating	8/11/2023	9/7/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 361,463; Residential Outdoor: 120,488; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	255.00	65.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	51.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0903	8.0600e-003	0.0984	0.0497	7.4200e-003	0.0571	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	1.8900e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5694	0.5694	1.0000e-005	0.0000	0.5697
Total	2.6000e-004	1.7000e-004	1.8900e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5694	0.5694	1.0000e-005	0.0000	0.5697

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4800e-003	0.0608	0.1148	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	3.4800e-003	0.0608	0.1148	1.9000e-004	0.0407	3.1000e-004	0.0410	0.0112	3.1000e-004	0.0115	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	1.8900e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5694	0.5694	1.0000e-005	0.0000	0.5697
Total	2.6000e-004	1.7000e-004	1.8900e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5694	0.5694	1.0000e-005	0.0000	0.5697

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633
Total	0.0544	0.5827	0.4356	9.3000e-004	0.1301	0.0245	0.1546	0.0540	0.0226	0.0765	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	5.7000e-004	6.3100e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.8981	1.8981	4.0000e-005	0.0000	1.8991
Total	8.6000e-004	5.7000e-004	6.3100e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.8981	1.8981	4.0000e-005	0.0000	1.8991

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0586	0.0000	0.0586	0.0121	0.0000	0.0121	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.2891	0.5508	9.3000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632
Total	0.0152	0.2891	0.5508	9.3000e-004	0.0586	1.5200e-003	0.0601	0.0121	1.5200e-003	0.0137	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	5.7000e-004	6.3100e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.8981	1.8981	4.0000e-005	0.0000	1.8991
Total	8.6000e-004	5.7000e-004	6.3100e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.8981	1.8981	4.0000e-005	0.0000	1.8991

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1374	1.2571	1.3173	2.1700e-003		0.0651	0.0651		0.0613	0.0613	0.0000	186.5388	186.5388	0.0447	0.0000	187.6561
Total	0.1374	1.2571	1.3173	2.1700e-003		0.0651	0.0651		0.0613	0.0613	0.0000	186.5388	186.5388	0.0447	0.0000	187.6561

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0159	0.5083	0.1348	1.4000e-003	0.0344	1.0400e-003	0.0355	9.9500e-003	9.9000e-004	0.0109	0.0000	134.2405	134.2405	5.6400e-003	0.0000	134.3815
Worker	0.0590	0.0393	0.4316	1.4400e-003	0.1628	1.0000e-003	0.1638	0.0433	9.2000e-004	0.0442	0.0000	129.8762	129.8762	2.7500e-003	0.0000	129.9449
Total	0.0749	0.5476	0.5664	2.8400e-003	0.1972	2.0400e-003	0.1993	0.0533	1.9100e-003	0.0552	0.0000	264.1167	264.1167	8.3900e-003	0.0000	264.3264

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0430	0.8784	1.4388	2.1700e-003		6.8100e-003	6.8100e-003		6.8100e-003	6.8100e-003	0.0000	186.5386	186.5386	0.0447	0.0000	187.6558
Total	0.0430	0.8784	1.4388	2.1700e-003		6.8100e-003	6.8100e-003		6.8100e-003	6.8100e-003	0.0000	186.5386	186.5386	0.0447	0.0000	187.6558

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0159	0.5083	0.1348	1.4000e-003	0.0344	1.0400e-003	0.0355	9.9500e-003	9.9000e-004	0.0109	0.0000	134.2405	134.2405	5.6400e-003	0.0000	134.3815
Worker	0.0590	0.0393	0.4316	1.4400e-003	0.1628	1.0000e-003	0.1638	0.0433	9.2000e-004	0.0442	0.0000	129.8762	129.8762	2.7500e-003	0.0000	129.9449
Total	0.0749	0.5476	0.5664	2.8400e-003	0.1972	2.0400e-003	0.1993	0.0533	1.9100e-003	0.0552	0.0000	264.1167	264.1167	8.3900e-003	0.0000	264.3264

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1093	0.9998	1.1290	1.8700e-003		0.0486	0.0486		0.0458	0.0458	0.0000	161.1043	161.1043	0.0383	0.0000	162.0624
Total	0.1093	0.9998	1.1290	1.8700e-003		0.0486	0.0486		0.0458	0.0458	0.0000	161.1043	161.1043	0.0383	0.0000	162.0624

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.3326	0.1045	1.1700e-003	0.0297	3.9000e-004	0.0301	8.5900e-003	3.7000e-004	8.9700e-003	0.0000	112.6019	112.6019	4.1500e-003	0.0000	112.7056
Worker	0.0477	0.0305	0.3428	1.1900e-003	0.1406	8.5000e-004	0.1414	0.0374	7.8000e-004	0.0382	0.0000	107.8699	107.8699	2.1300e-003	0.0000	107.9231
Total	0.0581	0.3631	0.4474	2.3600e-003	0.1703	1.2400e-003	0.1715	0.0460	1.1500e-003	0.0471	0.0000	220.4718	220.4718	6.2800e-003	0.0000	220.6287

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0371	0.7584	1.2422	1.8700e-003		5.8800e-003	5.8800e-003		5.8800e-003	5.8800e-003	0.0000	161.1041	161.1041	0.0383	0.0000	162.0622
Total	0.0371	0.7584	1.2422	1.8700e-003		5.8800e-003	5.8800e-003		5.8800e-003	5.8800e-003	0.0000	161.1041	161.1041	0.0383	0.0000	162.0622

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.3326	0.1045	1.1700e-003	0.0297	3.9000e-004	0.0301	8.5900e-003	3.7000e-004	8.9700e-003	0.0000	112.6019	112.6019	4.1500e-003	0.0000	112.7056
Worker	0.0477	0.0305	0.3428	1.1900e-003	0.1406	8.5000e-004	0.1414	0.0374	7.8000e-004	0.0382	0.0000	107.8699	107.8699	2.1300e-003	0.0000	107.9231
Total	0.0581	0.3631	0.4474	2.3600e-003	0.1703	1.2400e-003	0.1715	0.0460	1.1500e-003	0.0471	0.0000	220.4718	220.4718	6.2800e-003	0.0000	220.6287

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.6000e-004	2.9000e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9130	0.9130	2.0000e-005	0.0000	0.9134
Total	4.0000e-004	2.6000e-004	2.9000e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9130	0.9130	2.0000e-005	0.0000	0.9134

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.3400e-003	0.1004	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.3400e-003	0.1004	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.6000e-004	2.9000e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9130	0.9130	2.0000e-005	0.0000	0.9134
Total	4.0000e-004	2.6000e-004	2.9000e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9130	0.9130	2.0000e-005	0.0000	0.9134

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	1.2914	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	8.8000e-004	9.8700e-003	3.0000e-005	4.0400e-003	2.0000e-005	4.0700e-003	1.0800e-003	2.0000e-005	1.1000e-003	0.0000	3.1042	3.1042	6.0000e-005	0.0000	3.1057
Total	1.3700e-003	8.8000e-004	9.8700e-003	3.0000e-005	4.0400e-003	2.0000e-005	4.0700e-003	1.0800e-003	2.0000e-005	1.1000e-003	0.0000	3.1042	3.1042	6.0000e-005	0.0000	3.1057

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4000e-004	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	1.2900	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	8.8000e-004	9.8700e-003	3.0000e-005	4.0400e-003	2.0000e-005	4.0700e-003	1.0800e-003	2.0000e-005	1.1000e-003	0.0000	3.1042	3.1042	6.0000e-005	0.0000	3.1057
Total	1.3700e-003	8.8000e-004	9.8700e-003	3.0000e-005	4.0400e-003	2.0000e-005	4.0700e-003	1.0800e-003	2.0000e-005	1.1000e-003	0.0000	3.1042	3.1042	6.0000e-005	0.0000	3.1057

Lillian Commons Phase 3 AQ Construction - Santa Clara County, Annual

Lillian Commons Phase 3 AQ Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	55.00	Bed	4.17	100,000.00	0
Enclosed Parking with Elevator	500.00	Space	0.00	200,000.00	0
City Park	0.44	Acre	0.44	19,166.40	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate

Land Use - Phase 3 Construction: Parcel A

Construction Phase - Default CalEEMod schedule, no demolition

Trips and VMT -

Energy Use -

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim

Table Name	Column Name	Default Value	New Value
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tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblLandUse	LandUseSquareFeet	39,366.67	100,000.00
tblLandUse	LotAcreage	0.90	4.17
tblLandUse	LotAcreage	4.50	0.00

tblProjectCharacteristics	CO2IntensityFactor	641.35	290
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0827	0.7672	0.7814	1.88E-03	0.1173	0.0304	0.1477	0.0508	0.0285	0.0793	0	167.9694	167.9694	0.027	0	168.6436
2024	0.7277	1.4968	1.7173	4.14E-03	0.1106	0.0547	0.1653	0.0301	0.0514	0.0814	0	370.2239	370.2239	0.0541	0	371.5761
Maximum	0.7277	1.4968	1.7173	4.14E-03	0.1173	0.0547	0.1653	0.0508	0.0514	0.0814	0	370.2239	370.2239	0.0541	0	371.5761

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0377	0.5803	0.8656	1.88E-03	0.078	3.58E-03	0.0816	0.0211	3.56E-03	0.0247	0	167.9693	167.9693	0.027	0	168.6435
2024	0.6453	1.2865	1.8676	4.14E-03	0.1106	8.00E-03	0.1186	0.0301	7.94E-03	0.038	0	370.2237	370.2237	0.0541	0	371.5759
Maximum	0.6453	1.2865	1.8676	4.14E-03	0.1106	8.00E-03	0.1186	0.0301	7.94E-03	0.038	0	370.2237	370.2237	0.0541	0	371.5759

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	15.72	17.54	-9.38	0	17.23	86.39	36.03	36.72	85.6	61.01	0	0	0	0	0	0

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-8-2023	12-7-2023	0.6873	0.4903
2	12-8-2023	3-7-2024	0.6392	0.5175
3	3-8-2024	6-7-2024	0.6342	0.5202
4	6-8-2024	9-7-2024	0.5634	0.4715
5	9-8-2024	9-30-2024	0.5263	0.5240
		Highest	0.6873	0.5240

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4604	5.0000e-005	5.0900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.9200e-003	9.9200e-003	3.0000e-005	0.0000	0.0106
Energy	0.0229	0.2079	0.1747	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	554.1714	554.1714	0.0371	0.0109	558.3572
Mobile	0.1230	0.4892	1.4808	5.7500e-003	0.5912	4.5000e-003	0.5957	0.1582	4.1800e-003	0.1624	0.0000	527.8018	527.8018	0.0159	0.0000	528.1994
Waste						0.0000	0.0000		0.0000	0.0000	32.6085	0.0000	32.6085	1.9271	0.0000	80.7861
Water						0.0000	0.0000		0.0000	0.0000	1.5672	4.1905	5.7577	0.1614	3.8900e-003	10.9506
Total	0.6063	0.6972	1.6606	7.0000e-003	0.5912	0.0203	0.6116	0.1582	0.0200	0.1783	34.1756	1,086.1736	1,120.3493	2.1416	0.0148	1,178.3039

Mitigated Operational

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

Area	0.4604	5.0000e-005	5.0900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.9200e-003	9.9200e-003	3.0000e-005	0.0000	0.0106
Energy	0.0229	0.2079	0.1747	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	554.1714	554.1714	0.0371	0.0109	558.3572
Mobile	0.1230	0.4892	1.4808	5.7500e-003	0.5912	4.5000e-003	0.5957	0.1582	4.1800e-003	0.1624	0.0000	527.8018	527.8018	0.0159	0.0000	528.1994
Waste						0.0000	0.0000		0.0000	0.0000	32.6085	0.0000	32.6085	1.9271	0.0000	80.7861
Water						0.0000	0.0000		0.0000	0.0000	1.5672	4.1905	5.7577	0.1614	3.8900e-003	10.9506
Total	0.6063	0.6972	1.6606	7.0000e-003	0.5912	0.0203	0.6116	0.1582	0.0200	0.1783	34.1756	1,086.1736	1,120.3493	2.1416	0.0148	1,178.3039

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/8/2023	9/14/2023	5	5	
2	Grading	Grading	9/15/2023	9/26/2023	5	8	
3	Building Construction	Building Construction	9/27/2023	8/13/2024	5	230	
4	Paving	Paving	8/14/2024	9/6/2024	5	18	
5	Architectural Coating	Architectural Coating	9/7/2024	10/2/2024	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150,000; Non-Residential Outdoor: 50,000; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	124.00	52.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
Total	6.6500e-003	0.0688	0.0456	1.0000e-004	0.0452	3.1700e-003	0.0483	0.0248	2.9100e-003	0.0277	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	8.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2739	0.2739	1.0000e-005	0.0000	0.2740
Total	1.2000e-004	8.0000e-005	8.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2739	0.2739	1.0000e-005	0.0000	0.2740

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0203	0.0000	0.0203	5.5900e-003	0.0000	5.5900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7400e-003	0.0304	0.0574	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
Total	1.7400e-003	0.0304	0.0574	1.0000e-004	0.0203	1.6000e-004	0.0205	5.5900e-003	1.6000e-004	5.7500e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	8.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2739	0.2739	1.0000e-005	0.0000	0.2740
Total	1.2000e-004	8.0000e-005	8.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2739	0.2739	1.0000e-005	0.0000	0.2740

3.3 Grading - 2023

Unmitigated Construction On-Site

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

Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4243	10.4243	3.3700e-003	0.0000	10.5085
Total	6.8400e-003	0.0717	0.0590	1.2000e-004	0.0262	3.1000e-003	0.0293	0.0135	2.8500e-003	0.0163	0.0000	10.4243	10.4243	3.3700e-003	0.0000	10.5085

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3652	0.3652	1.0000e-005	0.0000	0.3654
Total	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3652	0.3652	1.0000e-005	0.0000	0.3654

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0118	0.0000	0.0118	3.0300e-003	0.0000	3.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0800e-003	0.0413	0.0760	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.4242	10.4242	3.3700e-003	0.0000	10.5085
Total	2.0800e-003	0.0413	0.0760	1.2000e-004	0.0118	1.9000e-004	0.0120	3.0300e-003	1.9000e-004	3.2200e-003	0.0000	10.4242	10.4242	3.3700e-003	0.0000	10.5085

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3652	0.3652	1.0000e-005	0.0000	0.3654
Total	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3652	0.3652	1.0000e-005	0.0000	0.3654

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0535	0.4891	0.5523	9.2000e-004		0.0238	0.0238		0.0224	0.0224	0.0000	78.8136	78.8136	0.0188	0.0000	79.2823
Total	0.0535	0.4891	0.5523	9.2000e-004		0.0238	0.0238		0.0224	0.0224	0.0000	78.8136	78.8136	0.0188	0.0000	79.2823

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0500e-003	0.1302	0.0409	4.6000e-004	0.0116	1.5000e-004	0.0118	3.3600e-003	1.5000e-004	3.5100e-003	0.0000	44.0687	44.0687	1.6200e-003	0.0000	44.1092
Worker	0.0114	7.2600e-003	0.0816	2.8000e-004	0.0334	2.0000e-004	0.0336	8.8900e-003	1.9000e-004	9.0800e-003	0.0000	25.6611	25.6611	5.1000e-004	0.0000	25.6738
Total	0.0154	0.1374	0.1225	7.4000e-004	0.0451	3.5000e-004	0.0454	0.0123	3.4000e-004	0.0126	0.0000	69.7298	69.7298	2.1300e-003	0.0000	69.7830

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0181	0.3710	0.6077	9.2000e-004		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	78.8135	78.8135	0.0188	0.0000	79.2822
Total	0.0181	0.3710	0.6077	9.2000e-004		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	78.8135	78.8135	0.0188	0.0000	79.2822

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0500e-003	0.1302	0.0409	4.6000e-004	0.0116	1.5000e-004	0.0118	3.3600e-003	1.5000e-004	3.5100e-003	0.0000	44.0687	44.0687	1.6200e-003	0.0000	44.1092
Worker	0.0114	7.2600e-003	0.0816	2.8000e-004	0.0334	2.0000e-004	0.0336	8.8900e-003	1.9000e-004	9.0800e-003	0.0000	25.6611	25.6611	5.1000e-004	0.0000	25.6738

Total	0.0154	0.1374	0.1225	7.4000e-004	0.0451	3.5000e-004	0.0454	0.0123	3.4000e-004	0.0126	0.0000	69.7298	69.7298	2.1300e-003	0.0000	69.7830
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3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1192	1.0890	1.3095	2.1800e-003		0.0497	0.0497		0.0467	0.0467	0.0000	187.7978	187.7978	0.0444	0.0000	188.9080
Total	0.1192	1.0890	1.3095	2.1800e-003		0.0497	0.0497		0.0467	0.0467	0.0000	187.7978	187.7978	0.0444	0.0000	188.9080

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3500e-003	0.3062	0.0941	1.0900e-003	0.0277	3.6000e-004	0.0281	8.0100e-003	3.4000e-004	8.3500e-003	0.0000	104.2851	104.2851	3.7900e-003	0.0000	104.3798
Worker	0.0255	0.0156	0.1802	6.5000e-004	0.0797	4.7000e-004	0.0801	0.0212	4.3000e-004	0.0216	0.0000	58.7326	58.7326	1.0900e-003	0.0000	58.7597
Total	0.0348	0.3218	0.2743	1.7400e-003	0.1074	8.3000e-004	0.1082	0.0292	7.7000e-004	0.0300	0.0000	163.0177	163.0177	4.8800e-003	0.0000	163.1395

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0432	0.8839	1.4478	2.1800e-003		6.8500e-003	6.8500e-003		6.8500e-003	6.8500e-003	0.0000	187.7976	187.7976	0.0444	0.0000	188.9078
Total	0.0432	0.8839	1.4478	2.1800e-003		6.8500e-003	6.8500e-003		6.8500e-003	6.8500e-003	0.0000	187.7976	187.7976	0.0444	0.0000	188.9078

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3500e-003	0.3062	0.0941	1.0900e-003	0.0277	3.6000e-004	0.0281	8.0100e-003	3.4000e-004	8.3500e-003	0.0000	104.2851	104.2851	3.7900e-003	0.0000	104.3798
Worker	0.0255	0.0156	0.1802	6.5000e-004	0.0797	4.7000e-004	0.0801	0.0212	4.3000e-004	0.0216	0.0000	58.7326	58.7326	1.0900e-003	0.0000	58.7597
Total	0.0348	0.3218	0.2743	1.7400e-003	0.1074	8.3000e-004	0.1082	0.0292	7.7000e-004	0.0300	0.0000	163.0177	163.0177	4.8800e-003	0.0000	163.1395

3.5 Paving - 2024

Unmitigated Construction On-Site

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

Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	2.8000e-004	3.2300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0526	1.0526	2.0000e-005	0.0000	1.0530
Total	4.6000e-004	2.8000e-004	3.2300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0526	1.0526	2.0000e-005	0.0000	1.0530

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6200e-003	0.0706	0.1218	1.7000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.6200e-003	0.0706	0.1218	1.7000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	2.8000e-004	3.2300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0526	1.0526	2.0000e-005	0.0000	1.0530
Total	4.6000e-004	2.8000e-004	3.2300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0526	1.0526	2.0000e-005	0.0000	1.0530

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5632					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	0.5648	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	3.5000e-004	4.0400e-003	1.0000e-005	1.7800e-003	1.0000e-005	1.8000e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3157	1.3157	2.0000e-005	0.0000	1.3163
Total	5.7000e-004	3.5000e-004	4.0400e-003	1.0000e-005	1.7800e-003	1.0000e-005	1.8000e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3157	1.3157	2.0000e-005	0.0000	1.3163

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5632					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9000e-004	9.5400e-003	0.0165	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	0.5636	9.5400e-003	0.0165	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	3.5000e-004	4.0400e-003	1.0000e-005	1.7800e-003	1.0000e-005	1.8000e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3157	1.3157	2.0000e-005	0.0000	1.3163

Total	5.7000e-004	3.5000e-004	4.0400e-003	1.0000e-005	1.7800e-003	1.0000e-005	1.8000e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3157	1.3157	2.0000e-005	0.0000	1.3163
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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1230	0.4892	1.4808	5.7500e-003	0.5912	4.5000e-003	0.5957	0.1582	4.1800e-003	0.1624	0.0000	527.8018	527.8018	0.0159	0.0000	528.1994
Unmitigated	0.1230	0.4892	1.4808	5.7500e-003	0.5912	4.5000e-003	0.5957	0.1582	4.1800e-003	0.1624	0.0000	527.8018	527.8018	0.0159	0.0000	528.1994

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.83	10.01	7.37	6,567	6,567
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hospital	711.70	447.70	395.45	1,583,611	1,583,611
Total	712.53	457.71	402.82	1,590,178	1,590,178

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691
Enclosed Parking with Elevator	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691
Hospital	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	327.8021	327.8021	0.0328	6.7800e-003	330.6427
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	327.8021	327.8021	0.0328	6.7800e-003	330.6427
NaturalGas Mitigated	0.0229	0.2079	0.1747	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.3693	226.3693	4.3400e-003	4.1500e-003	227.7145
NaturalGas Unmitigated	0.0229	0.2079	0.1747	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.3693	226.3693	4.3400e-003	4.1500e-003	227.7145

5.2 Energy by Land Use - NaturalGas
Unmitigated

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

City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hospital	4.242e+006	0.0229	0.2079	0.1747	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.3693	226.3693	4.3400e-003	4.1500e-003	227.7145
Total		0.0229	0.2079	0.1747	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.3693	226.3693	4.3400e-003	4.1500e-003	227.7145

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hospital	4.242e+006	0.0229	0.2079	0.1747	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.3693	226.3693	4.3400e-003	4.1500e-003	227.7145
Total		0.0229	0.2079	0.1747	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.3693	226.3693	4.3400e-003	4.1500e-003	227.7145

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.172e+006	154.1670	0.0154	3.1900e-003	155.5029
Hospital	1.32e+006	173.6352	0.0174	3.5900e-003	175.1398

Total		327.8021	0.0328	6.7800e-003	330.6427
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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.172e+006	154.1670	0.0154	3.1900e-003	155.5029
Hospital	1.32e+006	173.6352	0.0174	3.5900e-003	175.1398
Total		327.8021	0.0328	6.7800e-003	330.6427

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4604	5.0000e-005	5.0900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.9200e-003	9.9200e-003	3.0000e-005	0.0000	0.0106
Unmitigated	0.4604	5.0000e-005	5.0900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.9200e-003	9.9200e-003	3.0000e-005	0.0000	0.0106

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0563					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4037					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.7000e-004	5.0000e-005	5.0900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.9200e-003	9.9200e-003	3.0000e-005	0.0000	0.0106
Total	0.4605	5.0000e-005	5.0900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.9200e-003	9.9200e-003	3.0000e-005	0.0000	0.0106

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0563					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4037					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.7000e-004	5.0000e-005	5.0900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.9200e-003	9.9200e-003	3.0000e-005	0.0000	0.0106
Total	0.4605	5.0000e-005	5.0900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.9200e-003	9.9200e-003	3.0000e-005	0.0000	0.0106

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.7577	0.1614	3.8900e-003	10.9506
Unmitigated	5.7577	0.1614	3.8900e-003	10.9506

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.524252	0.2414	2.0000e-005	0.0000	0.2435
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hospital	4.93975 / 0.940905	5.5163	0.1614	3.8800e-003	10.7072
Total		5.7577	0.1614	3.8800e-003	10.9507

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
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Land Use	Mgal	MT/yr			
City Park	0 / 0.524252	0.2414	2.0000e- 005	0.0000	0.2435
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hospital	4.93975 / 0.940905	5.5163	0.1614	3.8800e- 003	10.7072
Total		5.7577	0.1614	3.8800e- 003	10.9507

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	32.6085	1.9271	0.0000	80.7861
Unmitigated	32.6085	1.9271	0.0000	80.7861

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

City Park	0.04	8.1200e-003	4.8000e-004	0.0000	0.0201
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hospital	160.6	32.6004	1.9266	0.0000	80.7660
Total		32.6085	1.9271	0.0000	80.7861

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.04	8.1200e-003	4.8000e-004	0.0000	0.0201
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hospital	160.6	32.6004	1.9266	0.0000	80.7660
Total		32.6085	1.9271	0.0000	80.7861

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

CalEEMod Outputs: Construction TAC Emissions

Lillian Commons Phase 1 TAC - Santa Clara County, Annual

Lillian Commons Phase 1 TAC

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	14.50	1000sqft	4.13	14,500.00	0
Parking Lot	151.00	Space	0.00	60,400.00	0
High Turnover (Sit Down Restaurant)	10.00	1000sqft	1.78	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate

Land Use - Phase 1 Construction: Parcels B and D

Construction Phase - Default CalEEMod schedule

Trips and VMT - TAC trip length 1 mile for localized emissions

Energy Use -

Demolition - Demo part of parking lot, based on assumption of 167 cubic yards at 1.4 cubic yards per ton

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation

[illegible]

tblLandUse	LotAcreage	0.33	4.13
tblLandUse	LotAcreage	1.36	0.00
tblLandUse	LotAcreage	0.23	1.78
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00

2.0 Emissions Summary

2.1 Overall Construction
Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Year	tons/yr										MT/yr					
2021	0.2811	2.6996	2.2776	3.8700e-003	0.1615	0.1386	0.3000	0.0847	0.1297	0.2144	0.0000	336.0951	336.0951	0.0836	0.0000	338.1846
2022	0.1703	0.2821	0.3244	5.3000e-004	5.3000e-004	0.0142	0.0147	1.4000e-004	0.0133	0.0134	0.0000	46.0540	46.0540	0.0120	0.0000	46.3546
Maximum	0.2811	2.6996	2.2776	3.8700e-003	0.1615	0.1386	0.3000	0.0847	0.1297	0.2144	0.0000	336.0951	336.0951	0.0836	0.0000	338.1846

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0773	1.5472	2.4860	3.8700e-003	0.0750	0.0105	0.0855	0.0200	0.0105	0.0304	0.0000	336.0947	336.0947	0.0836	0.0000	338.1842
2022	0.1500	0.2231	0.3661	5.3000e-004	5.3000e-004	1.2300e-003	1.7600e-003	1.4000e-004	1.2300e-003	1.3700e-003	0.0000	46.0540	46.0540	0.0120	0.0000	46.3546
Maximum	0.1500	1.5472	2.4860	3.8700e-003	0.0750	0.0105	0.0855	0.0200	0.0105	0.0304	0.0000	336.0947	336.0947	0.0836	0.0000	338.1842

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	49.63	40.63	-9.61	0.00	53.35	92.35	72.28	76.29	91.83	86.04	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.9843	0.4040
2	4-1-2021	6-30-2021	0.6600	0.4036
3	7-1-2021	9-30-2021	0.6672	0.4081
4	10-1-2021	12-31-2021	0.6666	0.4074
5	1-1-2022	3-31-2022	0.4549	0.3748
		Highest	0.9843	0.4081

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/28/2021	5	20	
2	Site Preparation	Site Preparation	1/29/2021	2/11/2021	5	10	
3	Grading	Grading	2/12/2021	3/11/2021	5	20	
4	Building Construction	Building Construction	3/12/2021	1/27/2022	5	230	
5	Paving	Paving	1/28/2022	2/24/2022	5	20	
6	Architectural Coating	Architectural Coating	2/25/2022	3/24/2022	5	20	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 10****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 36,750; Non-Residential Outdoor: 12,250; Striped Parking Area:****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	12.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	34.00	14.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2700e-003	0.0000	1.2700e-003	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	0.0317	0.3144	0.2157	3.9000e-004	1.2700e-003	0.0155	0.0168	1.9000e-004	0.0144	0.0146	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	6.0000e-004	1.0000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0771	0.0771	1.0000e-005	0.0000	0.0773
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180
Total	1.6000e-004	6.7000e-004	9.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1950	0.1950	1.0000e-005	0.0000	0.1953

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.7000e-004	0.0000	5.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8400e-003	0.1356	0.2467	3.9000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	5.8400e-003	0.1356	0.2467	3.9000e-004	5.7000e-004	6.2000e-004	1.1900e-003	4.0000e-005	6.2000e-004	6.6000e-004	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	6.0000e-004	1.0000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0771	0.0771	1.0000e-005	0.0000	0.0773
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180
Total	1.6000e-004	6.7000e-004	9.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1950	0.1950	1.0000e-005	0.0000	0.1953

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	4.0000e-005	5.3000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0707	0.0707	0.0000	0.0000	0.0708
Total	9.0000e-005	4.0000e-005	5.3000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0707	0.0707	0.0000	0.0000	0.0708

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4800e-003	0.0608	0.1148	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	3.4800e-003	0.0608	0.1148	1.9000e-004	0.0407	3.1000e-004	0.0410	0.0112	3.1000e-004	0.0115	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	4.0000e-005	5.3000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0707	0.0707	0.0000	0.0000	0.0708
Total	9.0000e-005	4.0000e-005	5.3000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0707	0.0707	0.0000	0.0000	0.0708

3.4 Grading - 2021

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180
Total	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0295	0.0000	0.0295	7.5800e-003	0.0000	7.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2000e-003	0.1033	0.1899	3.0000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
Total	5.2000e-003	0.1033	0.1899	3.0000e-004	0.0295	4.8000e-004	0.0300	7.5800e-003	4.8000e-004	8.0600e-003	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180
Total	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180

3.5 Building Construction - 2021

Unmitigated Construction On-Site

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

Total	0.2006	1.8391	1.7487	2.8400e-003		0.1011	0.1011		0.0951	0.0951	0.0000	244.3773	244.3773	0.0590	0.0000	245.8513
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4900e-003	0.0939	0.0253	1.2000e-004	1.3600e-003	8.0000e-005	1.4400e-003	4.0000e-004	8.0000e-005	4.7000e-004	0.0000	11.7440	11.7440	1.0900e-003	0.0000	11.7712
Worker	3.6300e-003	1.6000e-003	0.0212	3.0000e-005	2.6700e-003	4.0000e-005	2.7000e-003	7.1000e-004	3.0000e-005	7.5000e-004	0.0000	2.8179	2.8179	1.1000e-004	0.0000	2.8207
Total	6.1200e-003	0.0955	0.0465	1.5000e-004	4.0300e-003	1.2000e-004	4.1400e-003	1.1100e-003	1.1000e-004	1.2200e-003	0.0000	14.5619	14.5619	1.2000e-003	0.0000	14.5919

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0563	1.1512	1.8857	2.8400e-003		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003	0.0000	244.3770	244.3770	0.0590	0.0000	245.8510
Total	0.0563	1.1512	1.8857	2.8400e-003		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003	0.0000	244.3770	244.3770	0.0590	0.0000	245.8510

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4900e-003	0.0939	0.0253	1.2000e-004	1.3600e-003	8.0000e-005	1.4400e-003	4.0000e-004	8.0000e-005	4.7000e-004	0.0000	11.7440	11.7440	1.0900e-003	0.0000	11.7712
Worker	3.6300e-003	1.6000e-003	0.0212	3.0000e-005	2.6700e-003	4.0000e-005	2.7000e-003	7.1000e-004	3.0000e-005	7.5000e-004	0.0000	2.8179	2.8179	1.1000e-004	0.0000	2.8207
Total	6.1200e-003	0.0955	0.0465	1.5000e-004	4.0300e-003	1.2000e-004	4.1400e-003	1.1100e-003	1.1000e-004	1.2200e-003	0.0000	14.5619	14.5619	1.2000e-003	0.0000	14.5919

3.5 Building Construction - 2022

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	8.1800e-003	2.1200e-003	1.0000e-005	1.2000e-004	1.0000e-005	1.3000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	1.0479	1.0479	9.0000e-005	0.0000	1.0503
Worker	3.0000e-004	1.3000e-004	1.7300e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2447	0.2447	1.0000e-005	0.0000	0.2449
Total	5.1000e-004	8.3100e-003	3.8500e-003	1.0000e-005	3.6000e-004	1.0000e-005	3.7000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.2926	1.2926	1.0000e-004	0.0000	1.2952

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0700e-003	0.1037	0.1698	2.6000e-004		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1457
Total	5.0700e-003	0.1037	0.1698	2.6000e-004		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1457

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	8.1800e-003	2.1200e-003	1.0000e-005	1.2000e-004	1.0000e-005	1.3000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	1.0479	1.0479	9.0000e-005	0.0000	1.0503
Worker	3.0000e-004	1.3000e-004	1.7300e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2447	0.2447	1.0000e-005	0.0000	0.2449
Total	5.1000e-004	8.3100e-003	3.8500e-003	1.0000e-005	3.6000e-004	1.0000e-005	3.7000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.2926	1.2926	1.0000e-004	0.0000	1.2952

3.6 Paving - 2022

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	6.0000e-005	8.0000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1136	0.1136	0.0000	0.0000	0.1137
Total	1.4000e-004	6.0000e-005	8.0000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1136	0.1136	0.0000	0.0000	0.1137

Mitigated Construction On-Site

Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.1424	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	3.7000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0530	0.0530	0.0000	0.0000	0.0531
Total	7.0000e-005	3.0000e-005	3.7000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0530	0.0530	0.0000	0.0000	0.0531

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1404					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4000e-004	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.1409	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	3.7000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0530	0.0530	0.0000	0.0000	0.0531
Total	7.0000e-005	3.0000e-005	3.7000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0530	0.0530	0.0000	0.0000	0.0531

Lillian Commons Phase 2 TAC - Santa Clara County, Annual

Lillian Commons Phase 2 TAC

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	200.00	Dwelling Unit	9.49	178,500.00	572
Parking Lot	395.00	Space	0.00	158,000.00	0
City Park	2.42	Acre	2.42	105,415.20	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate

Land Use - Phase 2 Construction: Parcel C

Construction Phase - Default CalEEMod schedule, no demolition

Energy Use -

Trips and VMT - TAC trip length 1 mile for localized emissions

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim

Table Name	Column Name	Default Value	New Value
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tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	PhaseEndDate	10/5/2023	9/7/2023
tblConstructionPhase	PhaseEndDate	8/10/2023	7/13/2023
tblConstructionPhase	PhaseEndDate	6/16/2022	5/19/2022

tblConstructionPhase	PhaseEndDate	9/7/2023	8/10/2023
tblConstructionPhase	PhaseEndDate	5/5/2022	4/7/2022
tblConstructionPhase	PhaseStartDate	9/8/2023	8/11/2023
tblConstructionPhase	PhaseStartDate	6/17/2022	5/20/2022
tblConstructionPhase	PhaseStartDate	5/6/2022	4/8/2022
tblConstructionPhase	PhaseStartDate	8/11/2023	7/14/2023
tblConstructionPhase	PhaseStartDate	4/22/2022	3/25/2022
tblLandUse	LandUseSquareFeet	200,000.00	178,500.00
tblLandUse	LotAcreage	5.26	9.49
tblLandUse	LotAcreage	3.55	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2352	2.3353	2.0469	3.89E-03	0.2408	0.0982	0.339	0.1092	0.0917	0.2008	0	342.135	342.135	0.0808	0	344.1538
2023	1.4323	1.3568	1.447	2.64E-03	0.0178	0.0547	0.0726	4.87E-03	0.0514	0.0563	0	231.49	231.49	0.0479	0	232.6872
Maximum	1.4323	2.3353	2.0469	3.89E-03	0.2408	0.0982	0.339	0.1092	0.0917	0.2008	0	342.135	342.135	0.0808	0	344.1538

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0892	1.5584	2.3	3.89E-03	0.1196	9.09E-03	0.1287	0.0289	9.06E-03	0.0379	0	342.1347	342.1347	0.0808	0	344.1535
2023	1.3517	1.1114	1.5876	2.64E-03	0.0178	6.57E-03	0.0244	4.87E-03	6.55E-03	0.0114	0	231.4898	231.4898	0.0479	0	232.687
Maximum	1.3517	1.5584	2.3	3.89E-03	0.1196	9.09E-03	0.1287	0.0289	9.06E-03	0.0379	0	342.1347	342.1347	0.0808	0	344.1535

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	13.59	27.69	-11.27	0.00	46.87	89.76	62.80	70.41	89.09	80.80	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-25-2022	6-24-2022	1.0995	0.5741
2	6-25-2022	9-24-2022	0.7171	0.5240
3	9-25-2022	12-24-2022	0.7061	0.5151
4	12-25-2022	3-24-2023	0.6385	0.4900

5	3-25-2023	6-24-2023	0.6500	0.5018
6	6-25-2023	9-24-2023	1.5519	1.5089
		Highest	1.5519	1.5089

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3436	0.0277	2.1227	1.3400e-003		0.0991	0.0991		0.0991	0.0991	9.1179	6.1780	15.2960	0.0170	6.0000e-004	15.8991
Energy	0.0131	0.1122	0.0478	7.2000e-004		9.0700e-003	9.0700e-003		9.0700e-003	9.0700e-003	0.0000	255.5346	255.5346	0.0151	4.9800e-003	257.3950
Mobile	0.2487	0.9776	2.8903	0.0111	1.1298	8.6900e-003	1.1385	0.3024	8.0900e-003	0.3105	0.0000	1,014.7177	1,014.7177	0.0310	0.0000	1,015.4934
Waste						0.0000	0.0000		0.0000	0.0000	18.7178	0.0000	18.7178	1.1062	0.0000	46.3726
Water						0.0000	0.0000		0.0000	0.0000	4.1341	14.3847	18.5187	0.4261	0.0103	32.2463
Total	1.6054	1.1176	5.0608	0.0131	1.1298	0.1169	1.2466	0.3024	0.1163	0.4186	31.9698	1,290.8150	1,322.7848	1.5953	0.0159	1,367.4064

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3436	0.0277	2.1227	1.3400e-003		0.0991	0.0991		0.0991	0.0991	9.1179	6.1780	15.2960	0.0170	6.0000e-004	15.8991
Energy	0.0131	0.1122	0.0478	7.2000e-004		9.0700e-003	9.0700e-003		9.0700e-003	9.0700e-003	0.0000	255.5346	255.5346	0.0151	4.9800e-003	257.3950
Mobile	0.2487	0.9776	2.8903	0.0111	1.1298	8.6900e-003	1.1385	0.3024	8.0900e-003	0.3105	0.0000	1,014.7177	1,014.7177	0.0310	0.0000	1,015.4934

Waste						0.0000	0.0000		0.0000	0.0000	18.7178	0.0000	18.7178	1.1062	0.0000	46.3726
Water						0.0000	0.0000		0.0000	0.0000	4.1341	14.3847	18.5187	0.4261	0.0103	32.2463
Total	1.6054	1.1176	5.0608	0.0131	1.1298	0.1169	1.2466	0.3024	0.1163	0.4186	31.9698	1,290.8150	1,322.7848	1.5953	0.0159	1,367.4064

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/25/2022	4/7/2022	5	10	
2	Grading	Grading	4/8/2022	5/19/2022	5	30	
3	Building Construction	Building Construction	5/20/2022	7/13/2023	5	300	
4	Paving	Paving	7/14/2023	8/10/2023	5	20	
5	Architectural Coating	Architectural Coating	8/11/2023	9/7/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 361,463; Residential Outdoor: 120,488; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	255.00	65.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	51.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0903	8.0600e-003	0.0984	0.0497	7.4200e-003	0.0571	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0682	0.0682	0.0000	0.0000	0.0682
Total	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0682	0.0682	0.0000	0.0000	0.0682

Mitigated Construction On-Site

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

Fugitive Dust					0.0407	0.0000	0.0407	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4800e-003	0.0608	0.1148	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	3.4800e-003	0.0608	0.1148	1.9000e-004	0.0407	3.1000e-004	0.0410	0.0112	3.1000e-004	0.0115	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0682	0.0682	0.0000	0.0000	0.0682
Total	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0682	0.0682	0.0000	0.0000	0.0682

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633
Total	0.0544	0.5827	0.4356	9.3000e-004	0.1301	0.0245	0.1546	0.0540	0.0226	0.0765	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.2000e-004	1.6100e-003	0.0000	2.2000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2273	0.2273	1.0000e-005	0.0000	0.2275
Total	2.8000e-004	1.2000e-004	1.6100e-003	0.0000	2.2000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2273	0.2273	1.0000e-005	0.0000	0.2275

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0586	0.0000	0.0586	0.0121	0.0000	0.0121	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.2891	0.5508	9.3000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632
Total	0.0152	0.2891	0.5508	9.3000e-004	0.0586	1.5200e-003	0.0601	0.0121	1.5200e-003	0.0137	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.2000e-004	1.6100e-003	0.0000	2.2000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2273	0.2273	1.0000e-005	0.0000	0.2275
Total	2.8000e-004	1.2000e-004	1.6100e-003	0.0000	2.2000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2273	0.2273	1.0000e-005	0.0000	0.2275

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1374	1.2571	1.3173	2.1700e-003		0.0651	0.0651		0.0613	0.0613	0.0000	186.5388	186.5388	0.0447	0.0000	187.6561
Total	0.1374	1.2571	1.3173	2.1700e-003		0.0651	0.0651		0.0613	0.0613	0.0000	186.5388	186.5388	0.0447	0.0000	187.6561

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.1700e-003	0.3218	0.0835	4.3000e-004	4.8300e-003	2.4000e-004	5.0800e-003	1.4100e-003	2.3000e-004	1.6400e-003	0.0000	41.2283	41.2283	3.6300e-003	0.0000	41.3190
Worker	0.0191	8.1300e-003	0.1099	1.7000e-004	0.0153	2.0000e-004	0.0155	4.0800e-003	1.8000e-004	4.2700e-003	0.0000	15.5509	15.5509	5.6000e-004	0.0000	15.5649

Total	0.0272	0.3300	0.1934	6.0000e-004	0.0201	4.4000e-004	0.0205	5.4900e-003	4.1000e-004	5.9100e-003	0.0000	56.7792	56.7792	4.1900e-003	0.0000	56.8839
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0430	0.8784	1.4388	2.1700e-003		6.8100e-003	6.8100e-003		6.8100e-003	6.8100e-003	0.0000	186.5386	186.5386	0.0447	0.0000	187.6558
Total	0.0430	0.8784	1.4388	2.1700e-003		6.8100e-003	6.8100e-003		6.8100e-003	6.8100e-003	0.0000	186.5386	186.5386	0.0447	0.0000	187.6558

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.1700e-003	0.3218	0.0835	4.3000e-004	4.8300e-003	2.4000e-004	5.0800e-003	1.4100e-003	2.3000e-004	1.6400e-003	0.0000	41.2283	41.2283	3.6300e-003	0.0000	41.3190
Worker	0.0191	8.1300e-003	0.1099	1.7000e-004	0.0153	2.0000e-004	0.0155	4.0800e-003	1.8000e-004	4.2700e-003	0.0000	15.5509	15.5509	5.6000e-004	0.0000	15.5649
Total	0.0272	0.3300	0.1934	6.0000e-004	0.0201	4.4000e-004	0.0205	5.4900e-003	4.1000e-004	5.9100e-003	0.0000	56.7792	56.7792	4.1900e-003	0.0000	56.8839

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1093	0.9998	1.1290	1.8700e-003		0.0486	0.0486		0.0458	0.0458	0.0000	161.1043	161.1043	0.0383	0.0000	162.0624
Total	0.1093	0.9998	1.1290	1.8700e-003		0.0486	0.0486		0.0458	0.0458	0.0000	161.1043	161.1043	0.0383	0.0000	162.0624

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-003	0.2356	0.0647	3.6000e-004	4.1700e-003	1.0000e-004	4.2700e-003	1.2200e-003	9.0000e-005	1.3100e-003	0.0000	34.4005	34.4005	2.4900e-003	0.0000	34.4627
Worker	0.0152	6.2400e-003	0.0862	1.4000e-004	0.0132	1.7000e-004	0.0133	3.5200e-003	1.6000e-004	3.6800e-003	0.0000	12.9238	12.9238	4.3000e-004	0.0000	12.9345
Total	0.0207	0.2418	0.1509	5.0000e-004	0.0173	2.7000e-004	0.0176	4.7400e-003	2.5000e-004	4.9900e-003	0.0000	47.3243	47.3243	2.9200e-003	0.0000	47.3972

Mitigated Construction On-Site

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

Off-Road	0.0371	0.7584	1.2422	1.8700e-003		5.8800e-003	5.8800e-003		5.8800e-003	5.8800e-003	0.0000	161.1041	161.1041	0.0383	0.0000	162.0622
Total	0.0371	0.7584	1.2422	1.8700e-003		5.8800e-003	5.8800e-003		5.8800e-003	5.8800e-003	0.0000	161.1041	161.1041	0.0383	0.0000	162.0622

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-003	0.2356	0.0647	3.6000e-004	4.1700e-003	1.0000e-004	4.2700e-003	1.2200e-003	9.0000e-005	1.3100e-003	0.0000	34.4005	34.4005	2.4900e-003	0.0000	34.4627
Worker	0.0152	6.2400e-003	0.0862	1.4000e-004	0.0132	1.7000e-004	0.0133	3.5200e-003	1.6000e-004	3.6800e-003	0.0000	12.9238	12.9238	4.3000e-004	0.0000	12.9345
Total	0.0207	0.2418	0.1509	5.0000e-004	0.0173	2.7000e-004	0.0176	4.7400e-003	2.5000e-004	4.9900e-003	0.0000	47.3243	47.3243	2.9200e-003	0.0000	47.3972

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	5.0000e-005	7.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1094	0.1094	0.0000	0.0000	0.1095
Total	1.3000e-004	5.0000e-005	7.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1094	0.1094	0.0000	0.0000	0.1095

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.3400e-003	0.1004	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.3400e-003	0.1004	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	5.0000e-005	7.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1094	0.1094	0.0000	0.0000	0.1095
Total	1.3000e-004	5.0000e-005	7.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1094	0.1094	0.0000	0.0000	0.1095

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	1.2914	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	1.8000e-004	2.4800e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3719	0.3719	1.0000e-005	0.0000	0.3722

Total	4.4000e-004	1.8000e-004	2.4800e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3719	0.3719	1.0000e-005	0.0000	0.3722
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4000e-004	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	1.2900	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	1.8000e-004	2.4800e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3719	0.3719	1.0000e-005	0.0000	0.3722
Total	4.4000e-004	1.8000e-004	2.4800e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3719	0.3719	1.0000e-005	0.0000	0.3722

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2487	0.9776	2.8903	0.0111	1.1298	8.6900e-003	1.1385	0.3024	8.0900e-003	0.3105	0.0000	1,014.7177	1,014.7177	0.0310	0.0000	1,015.4934
Unmitigated	0.2487	0.9776	2.8903	0.0111	1.1298	8.6900e-003	1.1385	0.3024	8.0900e-003	0.3105	0.0000	1,014.7177	1,014.7177	0.0310	0.0000	1,015.4934

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,330.00	1,278.00	1172.00	3,002,489	3,002,489
City Park	4.57	55.06	40.51	36,120	36,120
Parking Lot	0.00	0.00	0.00		
Total	1,334.57	1,333.06	1,212.51	3,038,610	3,038,610

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691
City Park	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691
Parking Lot	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691

Total		0.0131	0.1122	0.0478	7.2000e-004		9.0700e-003	9.0700e-003		9.0700e-003	9.0700e-003	0.0000	129.9714	129.9714	2.4900e-003	2.3800e-003	130.7438
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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.43557e+006	0.0131	0.1122	0.0478	7.2000e-004		9.0700e-003	9.0700e-003		9.0700e-003	9.0700e-003	0.0000	129.9714	129.9714	2.4900e-003	2.3800e-003	130.7438
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0131	0.1122	0.0478	7.2000e-004		9.0700e-003	9.0700e-003		9.0700e-003	9.0700e-003	0.0000	129.9714	129.9714	2.4900e-003	2.3800e-003	130.7438

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	899250	118.2890	0.0118	2.4500e-003	119.3140
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	55300	7.2743	7.3000e-004	1.5000e-004	7.3373
Total		125.5632	0.0126	2.6000e-003	126.6513

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	899250	118.2890	0.0118	2.4500e-003	119.3140
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	55300	7.2743	7.3000e-004	1.5000e-004	7.3373
Total		125.5632	0.0126	2.6000e-003	126.6513

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3436	0.0277	2.1227	1.3400e-003		0.0991	0.0991		0.0991	0.0991	9.1179	6.1780	15.2960	0.0170	6.0000e-004	15.8991
Unmitigated	1.3436	0.0277	2.1227	1.3400e-003		0.0991	0.0991		0.0991	0.0991	9.1179	6.1780	15.2960	0.0170	6.0000e-004	15.8991

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1290					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7083					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.4615	0.0106	0.6354	1.2600e-003		0.0909	0.0909		0.0909	0.0909	9.1179	3.7452	12.8631	0.0147	6.0000e-004	13.4077
Landscaping	0.0449	0.0171	1.4873	8.0000e-005		8.2500e-003	8.2500e-003		8.2500e-003	8.2500e-003	0.0000	2.4329	2.4329	2.3400e-003	0.0000	2.4914
Total	1.3436	0.0277	2.1227	1.3400e-003		0.0991	0.0991		0.0991	0.0991	9.1179	6.1780	15.2960	0.0170	6.0000e-004	15.8991

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1290					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7083					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.4615	0.0106	0.6354	1.2600e-003		0.0909	0.0909		0.0909	0.0909	9.1179	3.7452	12.8631	0.0147	6.0000e-004	13.4077
Landscaping	0.0449	0.0171	1.4873	8.0000e-005		8.2500e-003	8.2500e-003		8.2500e-003	8.2500e-003	0.0000	2.4329	2.4329	2.3400e-003	0.0000	2.4914
Total	1.3436	0.0277	2.1227	1.3400e-003		0.0991	0.0991		0.0991	0.0991	9.1179	6.1780	15.2960	0.0170	6.0000e-004	15.8991

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	18.5187	0.4261	0.0103	32.2463
Unmitigated	18.5187	0.4261	0.0103	32.2463

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.0308 / 8.21507	17.1912	0.4259	0.0103	30.9073
City Park	0 / 2.88338	1.3275	1.3000e-004	3.0000e-005	1.3390
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		18.5187	0.4260	0.0103	32.2463

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
--	--------------------	-----------	-----	-----	------

Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.0308 / 8.21507	17.1912	0.4259	0.0103	30.9073
City Park	0 / 2.88338	1.3275	1.3000e-004	3.0000e-005	1.3390
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		18.5187	0.4260	0.0103	32.2463

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.7178	1.1062	0.0000	46.3726
Unmitigated	18.7178	1.1062	0.0000	46.3726

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Apartments Mid Rise	92	18.6752	1.1037	0.0000	46.2669
City Park	0.21	0.0426	2.5200e-003	0.0000	0.1056
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		18.7178	1.1062	0.0000	46.3726

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	92	18.6752	1.1037	0.0000	46.2669
City Park	0.21	0.0426	2.5200e-003	0.0000	0.1056
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		18.7178	1.1062	0.0000	46.3726

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Lillian Commons Phase 3 TAC - Santa Clara County, Annual

Lillian Commons Phase 3 TAC

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	55.00	Bed	4.17	100,000.00	0
Enclosed Parking with Elevator	500.00	Space	0.00	200,000.00	0
City Park	0.44	Acre	0.44	19,166.40	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate

Land Use - Phase 3 Construction: Parcel A

Construction Phase - Default CalEEMod schedule, no demolition

Energy Use -

Trips and VMT - TAC trip length 1 mile for localized emissions

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim

Table Name	Column Name	Default Value	New Value
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tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblLandUse	LandUseSquareFeet	39,366.67	100,000.00
tblLandUse	LotAcreage	0.90	4.17
tblLandUse	LotAcreage	4.50	0.00

tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0728	0.7234	0.7033	1.30E-03	0.0762	0.0301	0.1064	0.0396	0.0282	0.0679	0	114.2148	114.2148	0.0259	0	114.8623
2024	0.7051	1.3953	1.5399	2.79E-03	0.0117	0.054	0.0657	3.21E-03	0.0508	0.054	0	243.8906	243.8906	0.0516	0	245.1814
Maximum	0.7051	1.3953	1.5399	2.79E-03	0.0762	0.054	0.1064	0.0396	0.0508	0.0679	0	243.8906	243.8906	0.0516	0	245.1814

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0278	0.5365	0.7874	1.30E-03	0.037	3.30E-03	0.0403	9.95E-03	3.30E-03	0.0133	0	114.2146	114.2146	0.0259	0	114.8622
2024	0.6226	1.185	1.6902	2.79E-03	0.0117	7.34E-03	0.019	3.21E-03	7.32E-03	0.0105	0	243.8904	243.8904	0.0516	0	245.1812
Maximum	0.6226	1.185	1.6902	2.79E-03	0.037	7.34E-03	0.0403	9.95E-03	7.32E-03	0.0133	0	243.8904	243.8904	0.0516	0	245.1812

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	16.38	18.75	-10.45	0.00	44.67	87.35	65.54	69.28	86.56	80.47	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-8-2023	12-7-2023	0.6448	0.4478
2	12-8-2023	3-7-2024	0.5870	0.4653
3	3-8-2024	6-7-2024	0.5854	0.4714
4	6-8-2024	9-7-2024	0.5282	0.4364
5	9-8-2024	9-30-2024	0.5257	0.5234
		Highest	0.6448	0.5234

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/8/2023	9/14/2023	5	5	
2	Grading	Grading	9/15/2023	9/26/2023	5	8	
3	Building Construction	Building Construction	9/27/2023	8/13/2024	5	230	

4	Paving	Paving	8/14/2024	9/6/2024	5	18
5	Architectural Coating	Architectural Coating	9/7/2024	10/2/2024	5	18

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150,000; Non-Residential Outdoor: 50,000; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	124.00	52.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
Total	6.6500e-003	0.0688	0.0456	1.0000e-004	0.0452	3.1700e-003	0.0483	0.0248	2.9100e-003	0.0277	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303

Unmitigated Construction Off-Site

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0328	0.0328	0.0000	0.0000	0.0328
Total	4.0000e-005	2.0000e-005	2.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0328	0.0328	0.0000	0.0000	0.0328

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4243	10.4243	3.3700e-003	0.0000	10.5085
Total	6.8400e-003	0.0717	0.0590	1.2000e-004	0.0262	3.1000e-003	0.0293	0.0135	2.8500e-003	0.0163	0.0000	10.4243	10.4243	3.3700e-003	0.0000	10.5085

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	2.0000e-005	2.9000e-004	0.0000	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0438	0.0438	0.0000	0.0000	0.0438
Total	5.0000e-005	2.0000e-005	2.9000e-004	0.0000	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0438	0.0438	0.0000	0.0000	0.0438

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0118	0.0000	0.0118	3.0300e-003	0.0000	3.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0800e-003	0.0413	0.0760	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.4242	10.4242	3.3700e-003	0.0000	10.5085
Total	2.0800e-003	0.0413	0.0760	1.2000e-004	0.0118	1.9000e-004	0.0120	3.0300e-003	1.9000e-004	3.2200e-003	0.0000	10.4242	10.4242	3.3700e-003	0.0000	10.5085

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	2.0000e-005	2.9000e-004	0.0000	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0438	0.0438	0.0000	0.0000	0.0438
Total	5.0000e-005	2.0000e-005	2.9000e-004	0.0000	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0438	0.0438	0.0000	0.0000	0.0438

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Off-Road	0.0535	0.4891	0.5523	9.2000e-004		0.0238	0.0238		0.0224	0.0224	0.0000	78.8136	78.8136	0.0188	0.0000	79.2823
Total	0.0535	0.4891	0.5523	9.2000e-004		0.0238	0.0238		0.0224	0.0224	0.0000	78.8136	78.8136	0.0188	0.0000	79.2823

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0922	0.0253	1.4000e-004	1.6300e-003	4.0000e-005	1.6700e-003	4.8000e-004	4.0000e-005	5.1000e-004	0.0000	13.4632	13.4632	9.7000e-004	0.0000	13.4876
Worker	3.6000e-003	1.4800e-003	0.0205	3.0000e-005	3.1300e-003	4.0000e-005	3.1700e-003	8.4000e-004	4.0000e-005	8.8000e-004	0.0000	3.0744	3.0744	1.0000e-004	0.0000	3.0770
Total	5.7500e-003	0.0937	0.0458	1.7000e-004	4.7600e-003	8.0000e-005	4.8400e-003	1.3200e-003	8.0000e-005	1.3900e-003	0.0000	16.5377	16.5377	1.0700e-003	0.0000	16.5646

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0181	0.3710	0.6077	9.2000e-004		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	78.8135	78.8135	0.0188	0.0000	79.2822
Total	0.0181	0.3710	0.6077	9.2000e-004		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	78.8135	78.8135	0.0188	0.0000	79.2822

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0922	0.0253	1.4000e-004	1.6300e-003	4.0000e-005	1.6700e-003	4.8000e-004	4.0000e-005	5.1000e-004	0.0000	13.4632	13.4632	9.7000e-004	0.0000	13.4876
Worker	3.6000e-003	1.4800e-003	0.0205	3.0000e-005	3.1300e-003	4.0000e-005	3.1700e-003	8.4000e-004	4.0000e-005	8.8000e-004	0.0000	3.0744	3.0744	1.0000e-004	0.0000	3.0770
Total	5.7500e-003	0.0937	0.0458	1.7000e-004	4.7600e-003	8.0000e-005	4.8400e-003	1.3200e-003	8.0000e-005	1.3900e-003	0.0000	16.5377	16.5377	1.0700e-003	0.0000	16.5646

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1192	1.0890	1.3095	2.1800e-003		0.0497	0.0497		0.0467	0.0467	0.0000	187.7978	187.7978	0.0444	0.0000	188.9080
Total	0.1192	1.0890	1.3095	2.1800e-003		0.0497	0.0497		0.0467	0.0467	0.0000	187.7978	187.7978	0.0444	0.0000	188.9080

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-003	0.2176	0.0575	3.3000e-004	3.8900e-003	9.0000e-005	3.9800e-003	1.1400e-003	8.0000e-005	1.2200e-003	0.0000	31.7282	31.7282	2.2400e-003	0.0000	31.7841
Worker	7.9400e-003	3.1600e-003	0.0448	8.0000e-005	7.4700e-003	1.0000e-004	7.5600e-003	2.0000e-003	9.0000e-005	2.0900e-003	0.0000	7.0405	7.0405	2.2000e-004	0.0000	7.0459
Total	0.0128	0.2208	0.1023	4.1000e-004	0.0114	1.9000e-004	0.0115	3.1400e-003	1.7000e-004	3.3100e-003	0.0000	38.7687	38.7687	2.4600e-003	0.0000	38.8301

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0432	0.8839	1.4478	2.1800e-003		6.8500e-003	6.8500e-003		6.8500e-003	6.8500e-003	0.0000	187.7976	187.7976	0.0444	0.0000	188.9078
Total	0.0432	0.8839	1.4478	2.1800e-003		6.8500e-003	6.8500e-003		6.8500e-003	6.8500e-003	0.0000	187.7976	187.7976	0.0444	0.0000	188.9078

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-003	0.2176	0.0575	3.3000e-004	3.8900e-003	9.0000e-005	3.9800e-003	1.1400e-003	8.0000e-005	1.2200e-003	0.0000	31.7282	31.7282	2.2400e-003	0.0000	31.7841
Worker	7.9400e-003	3.1600e-003	0.0448	8.0000e-005	7.4700e-003	1.0000e-004	7.5600e-003	2.0000e-003	9.0000e-005	2.0900e-003	0.0000	7.0405	7.0405	2.2000e-004	0.0000	7.0459
Total	0.0128	0.2208	0.1023	4.1000e-004	0.0114	1.9000e-004	0.0115	3.1400e-003	1.7000e-004	3.3100e-003	0.0000	38.7687	38.7687	2.4600e-003	0.0000	38.8301

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	6.0000e-005	8.0000e-004	0.0000	1.3000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1262	0.1262	0.0000	0.0000	0.1263
Total	1.4000e-004	6.0000e-005	8.0000e-004	0.0000	1.3000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1262	0.1262	0.0000	0.0000	0.1263

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6200e-003	0.0706	0.1218	1.7000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.6200e-003	0.0706	0.1218	1.7000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	6.0000e-005	8.0000e-004	0.0000	1.3000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1262	0.1262	0.0000	0.0000	0.1263
Total	1.4000e-004	6.0000e-005	8.0000e-004	0.0000	1.3000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1262	0.1262	0.0000	0.0000	0.1263

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

Off-Road	4.9000e-004	9.5400e-003	0.0165	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	0.5636	9.5400e-003	0.0165	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	7.0000e-005	1.0000e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.1577	0.1577	0.0000	0.0000	0.1578
Total	1.8000e-004	7.0000e-005	1.0000e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.1577	0.1577	0.0000	0.0000	0.1578

CalEEMod Outputs: Operation/GHG Emissions

Lillian Commons AQ-GHG Model - Santa Clara County, Annual

Lillian Commons AQ-GHG Model

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	55.00	Bed	4.17	39,366.67	0
Medical Office Building	30.40	1000sqft	4.13	30,400.00	0
Enclosed Parking with Elevator	500.00	Space	0.00	200,000.00	0
Parking Lot	546.00	Space	0.00	218,400.00	0
City Park	2.86	Acre	0.00	124,581.60	0
High Turnover (Sit Down Restaurant)	10.00	1000sqft	1.78	10,000.00	0
Apartments Mid Rise	200.00	Dwelling Unit	9.49	178,500.00	572

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	21	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2017 210 rate, SVCE main provider, assuming a 10% opt of SVCE

Land Use - Full build out including the existing medical offices

Construction Phase - No Construction, Operation

Off-road Equipment - No construction equipment

Vehicle Trips - Trip generation rates based on traffic consultant info, no trips for the open space/rec areas

Woodstoves - No hearths

Energy Use - No natural gas for residential land use, carbon-free electricity

Water And Wastewater - 100% aerobic

Stationary Sources - Emergency Generators and Fire Pumps - The three diesel engines were estimated to be approximately 134 horsepower (HP), 201 HP, and 1,341 HP

Stationary Sources - Emergency Generators and Fire Pumps EF -

Vehicle Emission Factors - 2025 EMFAC2017 Santa Clara County

Fleet Mix - EMFAC2017 Fleet Mix for 2025 Santa Clara County

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	PhaseEndDate	4/13/2020	3/30/2020
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	T24NG	8,454.86	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	30.00	0.00
tblFireplaces	NumberWood	34.00	0.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.62	0.59
tblFleetMix	LDA	0.62	0.59
tblFleetMix	LDA	0.62	0.59

tblFleetMix	LDA	0.62	0.59
tblFleetMix	LDA	0.62	0.59
tblFleetMix	LDA	0.62	0.59
tblFleetMix	LDA	0.62	0.59
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.0160e-003	5.3460e-003
tblFleetMix	LHD2	5.0160e-003	5.3460e-003
tblFleetMix	LHD2	5.0160e-003	5.3460e-003
tblFleetMix	LHD2	5.0160e-003	5.3460e-003
tblFleetMix	LHD2	5.0160e-003	5.3460e-003

tblFleetMix	OBUS	2.1830e-003	1.5550e-003
tblFleetMix	OBUS	2.1830e-003	1.5550e-003
tblFleetMix	OBUS	2.1830e-003	1.5550e-003
tblFleetMix	OBUS	2.1830e-003	1.5550e-003
tblFleetMix	OBUS	2.1830e-003	1.5550e-003
tblFleetMix	OBUS	2.1830e-003	1.5550e-003
tblFleetMix	OBUS	2.1830e-003	1.5550e-003
tblFleetMix	SBUS	6.3400e-004	9.1600e-004
tblFleetMix	SBUS	6.3400e-004	9.1600e-004
tblFleetMix	SBUS	6.3400e-004	9.1600e-004
tblFleetMix	SBUS	6.3400e-004	9.1600e-004
tblFleetMix	SBUS	6.3400e-004	9.1600e-004
tblFleetMix	SBUS	6.3400e-004	9.1600e-004
tblFleetMix	SBUS	6.3400e-004	9.1600e-004
tblFleetMix	SBUS	6.3400e-004	9.1600e-004
tblFleetMix	UBUS	1.5080e-003	1.2350e-003
tblFleetMix	UBUS	1.5080e-003	1.2350e-003
tblFleetMix	UBUS	1.5080e-003	1.2350e-003
tblFleetMix	UBUS	1.5080e-003	1.2350e-003
tblFleetMix	UBUS	1.5080e-003	1.2350e-003
tblFleetMix	UBUS	1.5080e-003	1.2350e-003
tblLandUse	LandUseSquareFeet	200,000.00	178,500.00
tblLandUse	LotAcreage	0.90	4.17
tblLandUse	LotAcreage	0.70	4.13
tblLandUse	LotAcreage	4.50	0.00
tblLandUse	LotAcreage	4.91	0.00
tblLandUse	LotAcreage	2.86	0.00
tblLandUse	LotAcreage	0.23	1.78
tblLandUse	LotAcreage	5.26	9.49
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	21
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	134.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,341.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	201.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleEF	HHD	0.32	0.02
tblVehicleEF	HHD	0.05	0.05
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	1.54	6.32
tblVehicleEF	HHD	0.93	0.41
tblVehicleEF	HHD	3.69	5.9250e-003
tblVehicleEF	HHD	4,258.83	1,030.26
tblVehicleEF	HHD	1,538.25	1,386.58
tblVehicleEF	HHD	11.71	0.05
tblVehicleEF	HHD	13.31	5.35
tblVehicleEF	HHD	1.86	2.67
tblVehicleEF	HHD	19.34	2.32
tblVehicleEF	HHD	6.5900e-003	2.5050e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.0790e-003	0.02
tblVehicleEF	HHD	1.1100e-004	1.0000e-006
tblVehicleEF	HHD	6.3050e-003	2.3970e-003
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8400e-003	8.8870e-003
tblVehicleEF	HHD	5.8150e-003	0.02
tblVehicleEF	HHD	1.0200e-004	1.0000e-006
tblVehicleEF	HHD	9.5000e-005	2.0000e-006
tblVehicleEF	HHD	4.7640e-003	8.6000e-005
tblVehicleEF	HHD	0.40	0.43
tblVehicleEF	HHD	5.9000e-005	1.0000e-006
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	4.0600e-004	4.3400e-004
tblVehicleEF	HHD	0.08	2.0000e-006
tblVehicleEF	HHD	0.04	9.5860e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.7700e-004	0.00
tblVehicleEF	HHD	9.5000e-005	2.0000e-006
tblVehicleEF	HHD	4.7640e-003	8.6000e-005
tblVehicleEF	HHD	0.46	0.49
tblVehicleEF	HHD	5.9000e-005	1.0000e-006
tblVehicleEF	HHD	0.15	0.08
tblVehicleEF	HHD	4.0600e-004	4.3400e-004
tblVehicleEF	HHD	0.09	3.0000e-006
tblVehicleEF	LDA	2.7870e-003	1.5230e-003
tblVehicleEF	LDA	3.6670e-003	0.04
tblVehicleEF	LDA	0.44	0.49
tblVehicleEF	LDA	0.90	2.01
tblVehicleEF	LDA	214.54	226.89
tblVehicleEF	LDA	50.82	48.21
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.16
tblVehicleEF	LDA	1.5710e-003	1.2450e-003
tblVehicleEF	LDA	2.2130e-003	1.6250e-003

tblVehicleEF	LDA	1.4470e-003	1.1470e-003
tblVehicleEF	LDA	2.0350e-003	1.4940e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	6.9950e-003	5.5810e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.05	0.18
tblVehicleEF	LDA	2.1480e-003	9.3000e-005
tblVehicleEF	LDA	5.2300e-004	0.00
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.01	8.1120e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.05	0.19
tblVehicleEF	LDT1	6.2290e-003	3.1240e-003
tblVehicleEF	LDT1	8.5310e-003	0.05
tblVehicleEF	LDT1	0.83	0.78
tblVehicleEF	LDT1	1.85	2.18
tblVehicleEF	LDT1	271.39	272.37
tblVehicleEF	LDT1	63.79	58.50
tblVehicleEF	LDT1	0.08	0.06
tblVehicleEF	LDT1	0.10	0.20
tblVehicleEF	LDT1	2.0340e-003	1.5430e-003
tblVehicleEF	LDT1	2.7490e-003	1.9900e-003
tblVehicleEF	LDT1	1.8720e-003	1.4190e-003
tblVehicleEF	LDT1	2.5270e-003	1.8300e-003
tblVehicleEF	LDT1	0.07	0.07
tblVehicleEF	LDT1	0.18	0.13

tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	0.13	0.50
tblVehicleEF	LDT1	0.12	0.25
tblVehicleEF	LDT1	2.7230e-003	2.6170e-003
tblVehicleEF	LDT1	6.7000e-004	0.00
tblVehicleEF	LDT1	0.07	0.07
tblVehicleEF	LDT1	0.18	0.13
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.13	0.50
tblVehicleEF	LDT1	0.13	0.27
tblVehicleEF	LDT2	4.2320e-003	2.6570e-003
tblVehicleEF	LDT2	5.1880e-003	0.06
tblVehicleEF	LDT2	0.61	0.70
tblVehicleEF	LDT2	1.22	2.62
tblVehicleEF	LDT2	307.30	290.83
tblVehicleEF	LDT2	71.92	63.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.08	0.23
tblVehicleEF	LDT2	1.6620e-003	1.3110e-003
tblVehicleEF	LDT2	2.3470e-003	1.6610e-003
tblVehicleEF	LDT2	1.5280e-003	1.2070e-003
tblVehicleEF	LDT2	2.1580e-003	1.5270e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.03	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.40
tblVehicleEF	LDT2	0.07	0.26

tblVehicleEF	LDT2	3.0770e-003	0.01
tblVehicleEF	LDT2	7.3900e-004	8.9000e-005
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.03	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.40
tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LHD1	4.8850e-003	4.8220e-003
tblVehicleEF	LHD1	0.01	7.2910e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.88	0.66
tblVehicleEF	LHD1	2.27	1.01
tblVehicleEF	LHD1	8.98	8.77
tblVehicleEF	LHD1	672.30	764.47
tblVehicleEF	LHD1	30.64	11.28
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.91	0.57
tblVehicleEF	LHD1	0.90	0.29
tblVehicleEF	LHD1	8.5200e-004	8.5700e-004
tblVehicleEF	LHD1	0.01	9.8070e-003
tblVehicleEF	LHD1	0.01	9.0910e-003
tblVehicleEF	LHD1	8.5600e-004	2.3900e-004
tblVehicleEF	LHD1	8.1500e-004	8.2000e-004
tblVehicleEF	LHD1	2.5500e-003	2.4520e-003
tblVehicleEF	LHD1	0.01	8.6510e-003
tblVehicleEF	LHD1	7.8700e-004	2.2000e-004
tblVehicleEF	LHD1	2.4330e-003	1.8120e-003
tblVehicleEF	LHD1	0.10	0.07

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.2680e-003	9.4400e-004
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.31	0.48
tblVehicleEF	LHD1	0.22	0.06
tblVehicleEF	LHD1	9.0000e-005	8.5000e-005
tblVehicleEF	LHD1	6.5890e-003	7.4620e-003
tblVehicleEF	LHD1	3.4900e-004	1.1200e-004
tblVehicleEF	LHD1	2.4330e-003	1.8120e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.2680e-003	9.4400e-004
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.48
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD2	3.0460e-003	2.9270e-003
tblVehicleEF	LHD2	6.5970e-003	6.3420e-003
tblVehicleEF	LHD2	5.2800e-003	7.0910e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.51	0.56
tblVehicleEF	LHD2	1.04	0.57
tblVehicleEF	LHD2	13.87	13.74
tblVehicleEF	LHD2	694.28	740.94
tblVehicleEF	LHD2	23.21	7.36
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.50	0.68
tblVehicleEF	LHD2	0.38	0.16
tblVehicleEF	LHD2	1.1820e-003	1.4520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	3.9000e-004	1.2200e-004
tblVehicleEF	LHD2	1.1310e-003	1.3890e-003
tblVehicleEF	LHD2	2.6980e-003	2.6970e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5800e-004	1.1200e-004
tblVehicleEF	LHD2	6.9200e-004	9.1300e-004
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.8500e-004	4.8500e-004
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.06	0.23
tblVehicleEF	LHD2	0.07	0.04
tblVehicleEF	LHD2	1.3500e-004	1.3100e-004
tblVehicleEF	LHD2	6.7490e-003	7.1520e-003
tblVehicleEF	LHD2	2.5000e-004	7.3000e-005
tblVehicleEF	LHD2	6.9200e-004	9.1300e-004
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.8500e-004	4.8500e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.06	0.23
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	MCY	0.45	0.32
tblVehicleEF	MCY	0.16	0.25
tblVehicleEF	MCY	18.24	18.37
tblVehicleEF	MCY	10.23	9.09
tblVehicleEF	MCY	170.37	210.00
tblVehicleEF	MCY	44.38	60.43
tblVehicleEF	MCY	1.14	1.14
tblVehicleEF	MCY	0.32	0.27

tblVehicleEF	MCY	2.0610e-003	2.0310e-003
tblVehicleEF	MCY	3.4990e-003	2.9300e-003
tblVehicleEF	MCY	1.9250e-003	1.8970e-003
tblVehicleEF	MCY	3.2870e-003	2.7510e-003
tblVehicleEF	MCY	0.89	1.80
tblVehicleEF	MCY	0.67	0.67
tblVehicleEF	MCY	0.48	0.97
tblVehicleEF	MCY	2.17	2.18
tblVehicleEF	MCY	0.56	1.82
tblVehicleEF	MCY	2.17	1.92
tblVehicleEF	MCY	2.0660e-003	2.0780e-003
tblVehicleEF	MCY	6.7500e-004	5.9800e-004
tblVehicleEF	MCY	0.89	1.80
tblVehicleEF	MCY	0.67	0.67
tblVehicleEF	MCY	0.48	0.97
tblVehicleEF	MCY	2.70	2.71
tblVehicleEF	MCY	0.56	1.82
tblVehicleEF	MCY	2.36	2.09
tblVehicleEF	MDV	7.6840e-003	2.9890e-003
tblVehicleEF	MDV	0.01	0.06
tblVehicleEF	MDV	0.90	0.72
tblVehicleEF	MDV	2.22	2.81
tblVehicleEF	MDV	414.29	351.34
tblVehicleEF	MDV	95.41	74.92
tblVehicleEF	MDV	0.11	0.06
tblVehicleEF	MDV	0.19	0.26
tblVehicleEF	MDV	1.7530e-003	1.3780e-003
tblVehicleEF	MDV	2.4300e-003	1.7330e-003
tblVehicleEF	MDV	1.6150e-003	1.2710e-003
tblVehicleEF	MDV	2.2340e-003	1.5940e-003

tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.15	0.12
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	0.10	0.41
tblVehicleEF	MDV	0.16	0.31
tblVehicleEF	MDV	4.1460e-003	3.4720e-003
tblVehicleEF	MDV	9.9300e-004	7.4100e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.15	0.12
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.41
tblVehicleEF	MDV	0.18	0.34
tblVehicleEF	MH	0.02	8.5740e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.43	0.80
tblVehicleEF	MH	4.93	1.94
tblVehicleEF	MH	1,202.55	1,472.19
tblVehicleEF	MH	58.11	17.63
tblVehicleEF	MH	1.13	1.26
tblVehicleEF	MH	0.74	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0400e-003	2.5000e-004
tblVehicleEF	MH	3.2210e-003	3.2830e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.5600e-004	2.3000e-004
tblVehicleEF	MH	0.69	0.58
tblVehicleEF	MH	0.06	0.05

tblVehicleEF	MH	0.25	0.21
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.02	1.16
tblVehicleEF	MH	0.29	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.6700e-004	1.7400e-004
tblVehicleEF	MH	0.69	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.25	0.21
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	1.16
tblVehicleEF	MH	0.31	0.10
tblVehicleEF	MHD	0.02	3.6170e-003
tblVehicleEF	MHD	3.7120e-003	1.5120e-003
tblVehicleEF	MHD	0.04	8.8700e-003
tblVehicleEF	MHD	0.37	0.39
tblVehicleEF	MHD	0.31	0.21
tblVehicleEF	MHD	4.99	1.02
tblVehicleEF	MHD	133.65	70.85
tblVehicleEF	MHD	1,182.56	1,065.91
tblVehicleEF	MHD	60.25	8.98
tblVehicleEF	MHD	0.36	0.40
tblVehicleEF	MHD	1.09	1.45
tblVehicleEF	MHD	10.18	1.70
tblVehicleEF	MHD	9.6000e-005	3.2300e-004
tblVehicleEF	MHD	3.1040e-003	7.0640e-003
tblVehicleEF	MHD	8.5200e-004	1.1300e-004
tblVehicleEF	MHD	9.1000e-005	3.0900e-004
tblVehicleEF	MHD	2.9630e-003	6.7520e-003
tblVehicleEF	MHD	7.8400e-004	1.0400e-004

tblVehicleEF	MHD	7.8000e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.2300e-004	1.8800e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.30	0.05
tblVehicleEF	MHD	1.2870e-003	6.7200e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	6.9000e-004	8.9000e-005
tblVehicleEF	MHD	7.8000e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	4.2300e-004	1.8800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.33	0.05
tblVehicleEF	OBUS	0.01	7.0670e-003
tblVehicleEF	OBUS	5.3980e-003	3.3170e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.24	0.60
tblVehicleEF	OBUS	0.39	0.39
tblVehicleEF	OBUS	4.64	1.79
tblVehicleEF	OBUS	101.21	94.25
tblVehicleEF	OBUS	1,288.15	1,303.83
tblVehicleEF	OBUS	66.36	14.82
tblVehicleEF	OBUS	0.22	0.39
tblVehicleEF	OBUS	0.92	1.46
tblVehicleEF	OBUS	2.67	1.10
tblVehicleEF	OBUS	2.0000e-005	1.2700e-004

tblVehicleEF	OBUS	2.8390e-003	7.4740e-003
tblVehicleEF	OBUS	8.5700e-004	1.4700e-004
tblVehicleEF	OBUS	1.9000e-005	1.2200e-004
tblVehicleEF	OBUS	2.6960e-003	7.1370e-003
tblVehicleEF	OBUS	7.8800e-004	1.3500e-004
tblVehicleEF	OBUS	1.1610e-003	1.0870e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.1700e-004	4.8600e-004
tblVehicleEF	OBUS	0.04	0.02
tblVehicleEF	OBUS	0.03	0.18
tblVehicleEF	OBUS	0.29	0.09
tblVehicleEF	OBUS	9.7700e-004	8.9500e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.4500e-004	1.4700e-004
tblVehicleEF	OBUS	1.1610e-003	1.0870e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	5.1700e-004	4.8600e-004
tblVehicleEF	OBUS	0.05	0.03
tblVehicleEF	OBUS	0.03	0.18
tblVehicleEF	OBUS	0.32	0.09
tblVehicleEF	SBUS	0.82	0.06
tblVehicleEF	SBUS	0.01	5.7290e-003
tblVehicleEF	SBUS	0.07	5.1560e-003
tblVehicleEF	SBUS	8.35	2.37
tblVehicleEF	SBUS	0.87	0.47
tblVehicleEF	SBUS	8.98	0.74
tblVehicleEF	SBUS	1,084.06	345.98
tblVehicleEF	SBUS	1,038.50	1,037.30

tblVehicleEF	SBUS	57.91	4.26
tblVehicleEF	SBUS	7.20	3.34
tblVehicleEF	SBUS	3.06	4.41
tblVehicleEF	SBUS	11.67	0.90
tblVehicleEF	SBUS	5.9830e-003	3.3290e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	9.4800e-004	5.1000e-005
tblVehicleEF	SBUS	5.7240e-003	3.1850e-003
tblVehicleEF	SBUS	2.6150e-003	2.7110e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.7200e-004	4.7000e-005
tblVehicleEF	SBUS	3.3380e-003	5.9800e-004
tblVehicleEF	SBUS	0.03	5.7950e-003
tblVehicleEF	SBUS	0.99	0.26
tblVehicleEF	SBUS	1.5210e-003	2.6700e-004
tblVehicleEF	SBUS	0.10	0.08
tblVehicleEF	SBUS	0.02	0.04
tblVehicleEF	SBUS	0.45	0.03
tblVehicleEF	SBUS	0.01	3.2940e-003
tblVehicleEF	SBUS	0.01	9.9090e-003
tblVehicleEF	SBUS	7.3400e-004	4.2000e-005
tblVehicleEF	SBUS	3.3380e-003	5.9800e-004
tblVehicleEF	SBUS	0.03	5.7950e-003
tblVehicleEF	SBUS	1.43	0.38
tblVehicleEF	SBUS	1.5210e-003	2.6700e-004
tblVehicleEF	SBUS	0.12	0.09
tblVehicleEF	SBUS	0.02	0.04
tblVehicleEF	SBUS	0.49	0.03
tblVehicleEF	UBUS	0.23	1.66

tblVehicleEF	UBUS	0.04	1.6700e-003
tblVehicleEF	UBUS	3.99	12.57
tblVehicleEF	UBUS	7.27	0.14
tblVehicleEF	UBUS	2,026.89	1,657.49
tblVehicleEF	UBUS	110.88	1.39
tblVehicleEF	UBUS	7.88	0.71
tblVehicleEF	UBUS	14.06	0.01
tblVehicleEF	UBUS	0.58	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.17	5.2020e-003
tblVehicleEF	UBUS	1.1660e-003	1.5000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	8.3320e-003
tblVehicleEF	UBUS	0.16	4.9760e-003
tblVehicleEF	UBUS	1.0720e-003	1.4000e-005
tblVehicleEF	UBUS	2.0210e-003	2.4000e-005
tblVehicleEF	UBUS	0.03	2.0100e-004
tblVehicleEF	UBUS	1.0840e-003	1.1000e-005
tblVehicleEF	UBUS	0.41	0.02
tblVehicleEF	UBUS	7.6040e-003	1.1110e-003
tblVehicleEF	UBUS	0.57	6.9810e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.2400e-003	1.4000e-005
tblVehicleEF	UBUS	2.0210e-003	2.4000e-005
tblVehicleEF	UBUS	0.03	2.0100e-004
tblVehicleEF	UBUS	1.0840e-003	1.1000e-005
tblVehicleEF	UBUS	0.68	1.70
tblVehicleEF	UBUS	7.6040e-003	1.1110e-003
tblVehicleEF	UBUS	0.62	7.6430e-003
tblVehicleTrips	ST_TR	6.39	4.29

tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	158.37	119.45
tblVehicleTrips	ST_TR	8.14	14.05
tblVehicleTrips	ST_TR	8.96	7.35
tblVehicleTrips	SU_TR	5.86	3.93
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	131.84	99.44
tblVehicleTrips	SU_TR	7.19	2.67
tblVehicleTrips	SU_TR	1.55	1.27
tblVehicleTrips	WD_TR	6.65	4.46
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	127.15	95.90
tblVehicleTrips	WD_TR	12.94	22.33
tblVehicleTrips	WD_TR	36.13	29.64
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2584	0.0172	1.4941	8.00E-05		8.27E-03	8.27E-03		8.27E-03	8.27E-03	0	2.4462	2.4462	2.38E-03	0	2.5056
Energy	0.0225	0.2045	0.1717	1.23E-03		0.0155	0.0155		0.0155	0.0155	0	253.3806	253.3806	0.0468	0.0129	258.3899
Mobile	1.1364	1.6736	8.5122	0.024	2.6181	0.0194	2.6374	0.7004	0.0181	0.7186	0	2,282.23	2,282.23	0.1083	0	2,284.94
Stationary	0.0688	0.2845	0.1813	3.30E-04		0.0101	0.0101		0.0101	0.0101	0	31.9108	31.9108	4.47E-03	0	32.0227
Waste						0	0		0	0	142.1282	0	142.1282	8.3995	0	352.1166
Water						0	0		0	0	8.7815	1.7288	10.5104	0.0326	0.0196	17.1638
Total	2.486	2.1797	10.3593	0.0256	2.6181	0.0533	2.6714	0.7004	0.0521	0.7525	150.9097	2,571.70	2,722.61	8.5941	0.0325	2,947.14

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2584	0.0172	1.4941	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3800e-003	0.0000	2.5056
Energy	0.0225	0.2045	0.1717	1.2300e-003		0.0155	0.0155		0.0155	0.0155	0.0000	253.3806	253.3806	0.0468	0.0129	258.3899
Mobile	1.1364	1.6736	8.5122	0.0240	2.6181	0.0194	2.6374	0.7004	0.0181	0.7186	0.0000	2,282.2305	2,282.2305	0.1083	0.0000	2,284.9379
Stationary	0.0688	0.2845	0.1813	3.3000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	31.9108	31.9108	4.4700e-003	0.0000	32.0227
Waste						0.0000	0.0000		0.0000	0.0000	142.1282	0.0000	142.1282	8.3995	0.0000	352.1166
Water						0.0000	0.0000		0.0000	0.0000	8.7815	1.7288	10.5104	0.0326	0.0196	17.1638
Total	2.4860	2.1797	10.3593	0.0256	2.6181	0.0533	2.6714	0.7004	0.0521	0.7525	150.9097	2,571.6969	2,722.6066	8.5941	0.0325	2,947.1364

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/31/2020	3/30/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1364	1.6736	8.5122	0.0240	2.6181	0.0194	2.6374	0.7004	0.0181	0.7186	0.0000	2,282.2305	2,282.2305	0.1083	0.0000	2,284.9379
Unmitigated	1.1364	1.6736	8.5122	0.0240	2.6181	0.0194	2.6374	0.7004	0.0181	0.7186	0.0000	2,282.2305	2,282.2305	0.1083	0.0000	2,284.9379

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	892.00	858.00	786.00	2,013,978	2,013,978
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	959.00	1,194.50	994.40	1,157,596	1,157,596
Hospital	1,228.15	772.75	146.85	2,540,149	2,540,149
Medical Office Building	901.06	223.44	38.61	1,332,979	1,332,979
Parking Lot	0.00	0.00	0.00		
Total	3,980.21	3,048.69	1,965.86	7,044,701	7,044,701

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.593223	0.053202	0.175286	0.106474	0.020914	0.005346	0.013515	0.022567	0.001555	0.001235	0.005021	0.000916	0.000746
City Park	0.593223	0.053202	0.175286	0.106474	0.020914	0.005346	0.013515	0.022567	0.001555	0.001235	0.005021	0.000916	0.000746
Enclosed Parking with Elevator	0.593223	0.053202	0.175286	0.106474	0.020914	0.005346	0.013515	0.022567	0.001555	0.001235	0.005021	0.000916	0.000746
High Turnover (Sit Down Restaurant)	0.593223	0.053202	0.175286	0.106474	0.020914	0.005346	0.013515	0.022567	0.001555	0.001235	0.005021	0.000916	0.000746
Hospital	0.593223	0.053202	0.175286	0.106474	0.020914	0.005346	0.013515	0.022567	0.001555	0.001235	0.005021	0.000916	0.000746
Medical Office Building	0.593223	0.053202	0.175286	0.106474	0.020914	0.005346	0.013515	0.022567	0.001555	0.001235	0.005021	0.000916	0.000746
Parking Lot	0.593223	0.053202	0.175286	0.106474	0.020914	0.005346	0.013515	0.022567	0.001555	0.001235	0.005021	0.000916	0.000746

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.8079	30.8079	0.0425	8.8000e-003	34.4946

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.8079	30.8079	0.0425	8.8000e-003	34.4946
NaturalGas Mitigated	0.0225	0.2045	0.1717	1.2300e-003		0.0155	0.0155		0.0155	0.0155	0.0000	222.5727	222.5727	4.2700e-003	4.0800e-003	223.8953
NaturalGas Unmitigated	0.0225	0.2045	0.1717	1.2300e-003		0.0155	0.0155		0.0155	0.0155	0.0000	222.5727	222.5727	4.2700e-003	4.0800e-003	223.8953

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	2.1042e+006	0.0114	0.1032	0.0866	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003	0.0000	112.2881	112.2881	2.1500e-003	2.0600e-003	112.9554
Hospital	1.66993e+006	9.0000e-003	0.0819	0.0688	4.9000e-004		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	89.1141	89.1141	1.7100e-003	1.6300e-003	89.6436
Medical Office Building	396720	2.1400e-003	0.0195	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1705	21.1705	4.1000e-004	3.9000e-004	21.2963
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0225	0.2045	0.1717	1.2300e-003		0.0155	0.0155		0.0155	0.0155	0.0000	222.5727	222.5727	4.2700e-003	4.0800e-003	223.8953

Mitigated

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

Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	2.1042e+006	0.0114	0.1032	0.0866	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003	0.0000	112.2881	112.2881	2.1500e-003	2.0600e-003	112.9554
Hospital	1.66993e+006	9.0000e-003	0.0819	0.0688	4.9000e-004		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	89.1141	89.1141	1.7100e-003	1.6300e-003	89.6436
Medical Office Building	396720	2.1400e-003	0.0195	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1705	21.1705	4.1000e-004	3.9000e-004	21.2963
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0225	0.2045	0.1717	1.2300e-003		0.0155	0.0155		0.0155	0.0155	0.0000	222.5727	222.5727	4.2700e-003	4.0800e-003	223.8953

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	899250	8.5658	0.0118	2.4500e-003	9.5908
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.172e+006	11.1638	0.0154	3.1900e-003	12.4998
High Turnover (Sit Down Restaurant)	289700	2.7595	3.8100e-003	7.9000e-004	3.0897
Hospital	519640	4.9498	6.8400e-003	1.4100e-003	5.5421
Medical Office Building	277248	2.6409	3.6500e-003	7.5000e-004	2.9569
Parking Lot	76440	0.7281	1.0100e-003	2.1000e-004	0.8153
Total		30.8079	0.0426	8.8000e-003	34.4946

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	899250	8.5658	0.0118	2.4500e-003	9.5908
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.172e+006	11.1638	0.0154	3.1900e-003	12.4998
High Turnover (Sit Down Restaurant)	289700	2.7595	3.8100e-003	7.9000e-004	3.0897
Hospital	519640	4.9498	6.8400e-003	1.4100e-003	5.5421
Medical Office Building	277248	2.6409	3.6500e-003	7.5000e-004	2.9569
Parking Lot	76440	0.7281	1.0100e-003	2.1000e-004	0.8153
Total		30.8079	0.0426	8.8000e-003	34.4946

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2584	0.0172	1.4941	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3800e-003	0.0000	2.5056

Unmitigated	1.2584	0.0172	1.4941	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3800e-003	0.0000	2.5056
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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0455	0.0172	1.4941	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3800e-003	0.0000	2.5056
Total	1.2584	0.0172	1.4941	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3800e-003	0.0000	2.5056

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0455	0.0172	1.4941	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3800e-003	0.0000	2.5056

Total	1.2584	0.0172	1.4941	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3800e-003	0.0000	2.5056
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7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.5104	0.0326	0.0196	17.1638
Unmitigated	10.5104	0.0326	0.0196	17.1638

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.0308 / 8.21507	5.5558	0.0172	0.0103	9.0534
City Park	0 / 3.40764	0.1136	1.6000e-004	3.0000e-005	0.1272
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	3.03534 / 0.193745	1.2368	3.9200e-003	2.3800e-003	2.0447
Hospital	4.93975 / 0.940905	2.0337	6.4100e-003	3.8800e-003	3.3509

Medical Office Building	3.81461 / 0.726592	1.5705	4.9500e-003	3.0000e-003	2.5876
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		10.5104	0.0326	0.0196	17.1638

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.0308 / 8.21507	5.5558	0.0172	0.0103	9.0534
City Park	0 / 3.40764	0.1136	1.6000e-004	3.0000e-005	0.1272
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	3.03534 / 0.193745	1.2368	3.9200e-003	2.3800e-003	2.0447
Hospital	4.93975 / 0.940905	2.0337	6.4100e-003	3.8800e-003	3.3509
Medical Office Building	3.81461 / 0.726592	1.5705	4.9500e-003	3.0000e-003	2.5876
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		10.5104	0.0326	0.0196	17.1638

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	142.1282	8.3995	0.0000	352.1166
Unmitigated	142.1282	8.3995	0.0000	352.1166

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	92	18.6752	1.1037	0.0000	46.2669
City Park	0.25	0.0508	3.0000e-003	0.0000	0.1257
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	119	24.1559	1.4276	0.0000	59.8453
Hospital	160.6	32.6004	1.9266	0.0000	80.7660
Medical Office Building	328.32	66.6460	3.9387	0.0000	165.1126
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		142.1282	8.3995	0.0000	352.1166

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	92	18.6752	1.1037	0.0000	46.2669
City Park	0.25	0.0508	3.0000e-003	0.0000	0.1257
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	119	24.1559	1.4276	0.0000	59.8453
Hospital	160.6	32.6004	1.9266	0.0000	80.7660
Medical Office Building	328.32	66.6460	3.9387	0.0000	165.1126
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		142.1282	8.3995	0.0000	352.1166

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	134	0.73	Diesel
Emergency Generator	1	0	50	201	0.73	Diesel
Emergency Generator	1	0	50	1341	0.73	Diesel

Boilers

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

Equipment Type	Number
----------------	--------

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (100-135 HP)	5.5000e-003	0.0154	0.0200	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5513	2.5513	3.6000e-004	0.0000	2.5603
Emergency Generator - Diesel (135-200 HP)	8.2500e-003	0.0231	0.0210	4.0000e-005		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	3.8270	3.8270	5.4000e-004	0.0000	3.8404
Emergency Generator - Diesel (250-9999 HP)	0.0550	0.2460	0.1403	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5325	25.5325	3.5800e-003	0.0000	25.6219
Total	0.0688	0.2845	0.1813	3.3000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	31.9108	31.9108	4.4800e-003	0.0000	32.0227

11.0 Vegetation

Lillian Commons AQ-GHG Model 2030 - Santa Clara County, Annual

Lillian Commons AQ-GHG Model 2030 Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	55.00	Bed	4.17	39,366.67	0
Medical Office Building	30.40	1000sqft	4.13	30,400.00	0
Enclosed Parking with Elevator	500.00	Space	0.00	200,000.00	0
Parking Lot	546.00	Space	0.00	218,400.00	0
City Park	2.86	Acre	0.00	124,581.60	0
High Turnover (Sit Down Restaurant)	10.00	1000sqft	1.78	10,000.00	0
Apartments Mid Rise	200.00	Dwelling Unit	9.49	178,500.00	572

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	21	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2017 210 rate, SVCE main provider, assuming a 10% opt of SVCE

Land Use - Full build out including the existing medical offices

Construction Phase - No Construction, Operation

Off-road Equipment - No construction equipment

Vehicle Trips - Trip generation rates based on traffic consultant info, no trips for the open space/rec areas

Woodstoves - No hearths

Energy Use - No natural gas for residential land use, carbon-free electricity

Water And Wastewater - 100% aerobic

Stationary Sources - Emergency Generators and Fire Pumps - The three diesel engines were estimated to be approximately 134 horsepower (HP), 201 HP, and 1,341 HP

Stationary Sources - Emergency Generators and Fire Pumps EF -

Vehicle Emission Factors - 2030 EMFAC2017 Santa Clara County

Fleet Mix - EMFAC2017 Fleet Mix for 2025 Santa Clara County

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	PhaseEndDate	4/13/2020	3/30/2020
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	T24NG	8,454.86	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	30.00	0.00
tblFireplaces	NumberWood	34.00	0.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60

tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDA	0.62	0.60
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003

tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	SBUS	6.4600e-004	9.0041e-004
tblFleetMix	SBUS	6.4600e-004	9.0041e-004
tblFleetMix	SBUS	6.4600e-004	9.0041e-004
tblFleetMix	SBUS	6.4600e-004	9.0041e-004
tblFleetMix	SBUS	6.4600e-004	9.0041e-004
tblFleetMix	SBUS	6.4600e-004	9.0041e-004
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tblFleetMix	SBUS	6.4600e-004	9.0041e-004
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblLandUse	LandUseSquareFeet	200,000.00	178,500.00
tblLandUse	LotAcreage	0.90	4.17
tblLandUse	LotAcreage	0.70	4.13
tblLandUse	LotAcreage	4.50	0.00
tblLandUse	LotAcreage	4.91	0.00
tblLandUse	LotAcreage	2.86	0.00
tblLandUse	LotAcreage	0.23	1.78
tblLandUse	LotAcreage	5.26	9.49
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	21
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	134.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,341.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	201.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
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tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.43	6.28
tblVehicleEF	HHD	0.94	0.41
tblVehicleEF	HHD	4.01	6.6850e-003
tblVehicleEF	HHD	4,037.05	930.05
tblVehicleEF	HHD	1,498.85	1,226.35
tblVehicleEF	HHD	12.27	0.05
tblVehicleEF	HHD	12.16	5.20
tblVehicleEF	HHD	1.59	2.52
tblVehicleEF	HHD	19.20	2.31
tblVehicleEF	HHD	3.6830e-003	2.1460e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.6600e-003	0.02
tblVehicleEF	HHD	1.3500e-004	1.0000e-006
tblVehicleEF	HHD	3.5230e-003	2.0530e-003
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8550e-003	8.9050e-003
tblVehicleEF	HHD	5.4140e-003	0.02
tblVehicleEF	HHD	1.2400e-004	1.0000e-006
tblVehicleEF	HHD	1.0100e-004	1.0000e-006
tblVehicleEF	HHD	4.6010e-003	5.8000e-005
tblVehicleEF	HHD	0.37	0.42
tblVehicleEF	HHD	6.4000e-005	1.0000e-006
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tblVehicleEF	HHD	4.1900e-004	2.8400e-004
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tblVehicleEF	HHD	0.04	8.6530e-003
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tblVehicleEF	HHD	1.8800e-004	1.0000e-006
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tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.02
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tblVehicleEF	LDT1	1.3350e-003	9.8400e-004
tblVehicleEF	LDT1	2.0110e-003	1.3440e-003
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tblVehicleEF	LDT1	0.12	0.09

tblVehicleEF	LDT1	0.04	0.04
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tblVehicleEF	LDT1	0.06	0.15
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tblVehicleEF	LDT2	0.05	0.17
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tblVehicleEF	LDT2	0.04	0.18

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tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	0.01	9.5240e-003
tblVehicleEF	LDT2	0.06	0.34
tblVehicleEF	LDT2	0.05	0.20
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tblVehicleEF	LHD1	8.6490e-003	5.1950e-003
tblVehicleEF	LHD1	0.01	9.0230e-003
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tblVehicleEF	LHD1	641.43	698.55
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tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.53	0.30
tblVehicleEF	LHD1	0.67	0.23
tblVehicleEF	LHD1	7.8900e-004	9.1500e-004
tblVehicleEF	LHD1	0.01	9.9010e-003
tblVehicleEF	LHD1	0.01	7.0190e-003
tblVehicleEF	LHD1	6.6500e-004	2.1000e-004
tblVehicleEF	LHD1	7.5500e-004	8.7500e-004
tblVehicleEF	LHD1	2.6030e-003	2.4750e-003
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tblVehicleEF	LHD1	0.08	0.05

tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	1.0210e-003	7.7200e-004
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tblVehicleEF	LHD1	0.26	0.43
tblVehicleEF	LHD1	0.15	0.04
tblVehicleEF	LHD1	8.9000e-005	8.0000e-005
tblVehicleEF	LHD1	6.2670e-003	6.8120e-003
tblVehicleEF	LHD1	3.0000e-004	1.0000e-004
tblVehicleEF	LHD1	1.8620e-003	1.4030e-003
tblVehicleEF	LHD1	0.08	0.05
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0210e-003	7.7200e-004
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tblVehicleEF	LHD1	0.26	0.43
tblVehicleEF	LHD1	0.16	0.05
tblVehicleEF	LHD2	2.5430e-003	2.5050e-003
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tblVehicleEF	LHD2	3.2330e-003	4.8110e-003
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tblVehicleEF	LHD2	0.45	0.49
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tblVehicleEF	LHD2	13.62	13.00
tblVehicleEF	LHD2	675.95	679.81
tblVehicleEF	LHD2	21.83	6.44
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.22	0.38
tblVehicleEF	LHD2	0.26	0.12
tblVehicleEF	LHD2	1.0460e-003	1.5020e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3120e-003	0.01

tblVehicleEF	LHD2	3.7400e-004	1.0600e-004
tblVehicleEF	LHD2	1.0000e-003	1.4370e-003
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tblVehicleEF	LHD2	8.8860e-003	0.01
tblVehicleEF	LHD2	3.4400e-004	9.8000e-005
tblVehicleEF	LHD2	5.1500e-004	6.4200e-004
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.0800e-004	3.7400e-004
tblVehicleEF	LHD2	0.09	0.10
tblVehicleEF	LHD2	0.04	0.14
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	1.3300e-004	1.2400e-004
tblVehicleEF	LHD2	6.5670e-003	6.5570e-003
tblVehicleEF	LHD2	2.3300e-004	6.4000e-005
tblVehicleEF	LHD2	5.1500e-004	6.4200e-004
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.0800e-004	3.7400e-004
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.04	0.14
tblVehicleEF	LHD2	0.05	0.02
tblVehicleEF	MCY	0.46	0.32
tblVehicleEF	MCY	0.16	0.25
tblVehicleEF	MCY	17.52	17.61
tblVehicleEF	MCY	10.34	9.20
tblVehicleEF	MCY	171.38	209.76
tblVehicleEF	MCY	42.85	59.23
tblVehicleEF	MCY	1.14	1.14
tblVehicleEF	MCY	0.32	0.27

tblVehicleEF	MCY	2.1570e-003	2.1380e-003
tblVehicleEF	MCY	3.3210e-003	2.8620e-003
tblVehicleEF	MCY	2.0120e-003	1.9940e-003
tblVehicleEF	MCY	3.1070e-003	2.6760e-003
tblVehicleEF	MCY	0.88	1.79
tblVehicleEF	MCY	0.61	0.63
tblVehicleEF	MCY	0.46	0.95
tblVehicleEF	MCY	2.12	2.13
tblVehicleEF	MCY	0.46	1.49
tblVehicleEF	MCY	2.11	1.88
tblVehicleEF	MCY	2.0640e-003	2.0760e-003
tblVehicleEF	MCY	6.5900e-004	5.8600e-004
tblVehicleEF	MCY	0.88	1.79
tblVehicleEF	MCY	0.61	0.63
tblVehicleEF	MCY	0.46	0.95
tblVehicleEF	MCY	2.66	2.67
tblVehicleEF	MCY	0.46	1.49
tblVehicleEF	MCY	2.30	2.04
tblVehicleEF	MDV	5.1180e-003	1.7720e-003
tblVehicleEF	MDV	7.2260e-003	0.04
tblVehicleEF	MDV	0.68	0.55
tblVehicleEF	MDV	1.51	2.32
tblVehicleEF	MDV	358.67	301.13
tblVehicleEF	MDV	82.28	63.46
tblVehicleEF	MDV	0.07	0.04
tblVehicleEF	MDV	0.11	0.18
tblVehicleEF	MDV	1.3880e-003	1.0340e-003
tblVehicleEF	MDV	2.0820e-003	1.3440e-003
tblVehicleEF	MDV	1.2780e-003	9.5400e-004
tblVehicleEF	MDV	1.9150e-003	1.2360e-003

tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.13	0.10
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.01	6.8870e-003
tblVehicleEF	MDV	0.09	0.34
tblVehicleEF	MDV	0.10	0.20
tblVehicleEF	MDV	3.5870e-003	2.9760e-003
tblVehicleEF	MDV	8.4800e-004	6.2800e-004
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.13	0.10
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.02	9.9830e-003
tblVehicleEF	MDV	0.09	0.34
tblVehicleEF	MDV	0.11	0.22
tblVehicleEF	MH	8.2310e-003	5.0270e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.45	0.31
tblVehicleEF	MH	3.72	1.64
tblVehicleEF	MH	1,184.19	1,350.27
tblVehicleEF	MH	56.79	15.54
tblVehicleEF	MH	0.84	1.06
tblVehicleEF	MH	0.62	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	8.8300e-004	2.1200e-004
tblVehicleEF	MH	3.2210e-003	3.2970e-003
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	8.1200e-004	1.9500e-004
tblVehicleEF	MH	0.46	0.35
tblVehicleEF	MH	0.04	0.03

tblVehicleEF	MH	0.18	0.14
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	0.01	0.54
tblVehicleEF	MH	0.22	0.07
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.3200e-004	1.5400e-004
tblVehicleEF	MH	0.46	0.35
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	0.18	0.14
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.01	0.54
tblVehicleEF	MH	0.24	0.08
tblVehicleEF	MHD	0.02	3.8320e-003
tblVehicleEF	MHD	2.7470e-003	1.0340e-003
tblVehicleEF	MHD	0.03	8.3830e-003
tblVehicleEF	MHD	0.37	0.41
tblVehicleEF	MHD	0.25	0.15
tblVehicleEF	MHD	3.74	0.87
tblVehicleEF	MHD	131.96	65.10
tblVehicleEF	MHD	1,167.79	993.45
tblVehicleEF	MHD	59.45	8.55
tblVehicleEF	MHD	0.34	0.34
tblVehicleEF	MHD	1.04	1.43
tblVehicleEF	MHD	9.99	1.69
tblVehicleEF	MHD	5.2000e-005	1.6200e-004
tblVehicleEF	MHD	3.0080e-003	7.0060e-003
tblVehicleEF	MHD	8.2100e-004	1.1200e-004
tblVehicleEF	MHD	5.0000e-005	1.5500e-004
tblVehicleEF	MHD	2.8710e-003	6.6960e-003
tblVehicleEF	MHD	7.5400e-004	1.0300e-004

tblVehicleEF	MHD	6.4300e-004	2.8900e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.8200e-004	1.6800e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.23	0.04
tblVehicleEF	MHD	1.2710e-003	6.1800e-004
tblVehicleEF	MHD	0.01	9.4800e-003
tblVehicleEF	MHD	6.6000e-004	8.5000e-005
tblVehicleEF	MHD	6.4300e-004	2.8900e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	3.8200e-004	1.6800e-004
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.25	0.05
tblVehicleEF	OBUS	0.01	7.0980e-003
tblVehicleEF	OBUS	4.0840e-003	2.1970e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.24	0.64
tblVehicleEF	OBUS	0.30	0.26
tblVehicleEF	OBUS	4.08	1.58
tblVehicleEF	OBUS	110.55	97.36
tblVehicleEF	OBUS	1,272.30	1,210.85
tblVehicleEF	OBUS	64.94	13.46
tblVehicleEF	OBUS	0.24	0.43
tblVehicleEF	OBUS	0.85	1.45
tblVehicleEF	OBUS	2.74	1.13
tblVehicleEF	OBUS	2.2000e-005	1.4200e-004

tblVehicleEF	OBUS	2.8340e-003	7.8820e-003
tblVehicleEF	OBUS	9.3800e-004	1.5600e-004
tblVehicleEF	OBUS	2.1000e-005	1.3600e-004
tblVehicleEF	OBUS	2.6900e-003	7.5260e-003
tblVehicleEF	OBUS	8.6200e-004	1.4400e-004
tblVehicleEF	OBUS	1.1660e-003	1.0620e-003
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.3200e-004	4.8700e-004
tblVehicleEF	OBUS	0.04	0.02
tblVehicleEF	OBUS	0.03	0.18
tblVehicleEF	OBUS	0.26	0.08
tblVehicleEF	OBUS	1.0660e-003	9.2400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.2100e-004	1.3300e-004
tblVehicleEF	OBUS	1.1660e-003	1.0620e-003
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	5.3200e-004	4.8700e-004
tblVehicleEF	OBUS	0.05	0.02
tblVehicleEF	OBUS	0.03	0.18
tblVehicleEF	OBUS	0.28	0.08
tblVehicleEF	SBUS	0.81	0.07
tblVehicleEF	SBUS	7.6490e-003	4.4040e-003
tblVehicleEF	SBUS	0.06	6.3380e-003
tblVehicleEF	SBUS	8.87	2.93
tblVehicleEF	SBUS	0.48	0.37
tblVehicleEF	SBUS	7.57	0.86
tblVehicleEF	SBUS	1,023.58	337.48
tblVehicleEF	SBUS	1,008.60	970.50

tblVehicleEF	SBUS	61.81	5.06
tblVehicleEF	SBUS	4.35	2.71
tblVehicleEF	SBUS	1.72	3.09
tblVehicleEF	SBUS	10.76	1.18
tblVehicleEF	SBUS	2.1870e-003	2.0480e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	8.4940e-003	0.02
tblVehicleEF	SBUS	1.1020e-003	6.8000e-005
tblVehicleEF	SBUS	2.0920e-003	1.9600e-003
tblVehicleEF	SBUS	2.5880e-003	2.6690e-003
tblVehicleEF	SBUS	8.1060e-003	0.02
tblVehicleEF	SBUS	1.0130e-003	6.2000e-005
tblVehicleEF	SBUS	3.7080e-003	8.7000e-004
tblVehicleEF	SBUS	0.03	8.3040e-003
tblVehicleEF	SBUS	1.05	0.32
tblVehicleEF	SBUS	1.7580e-003	4.1400e-004
tblVehicleEF	SBUS	0.07	0.06
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.01	3.2190e-003
tblVehicleEF	SBUS	9.7440e-003	9.2880e-003
tblVehicleEF	SBUS	7.4900e-004	5.0000e-005
tblVehicleEF	SBUS	3.7080e-003	8.7000e-004
tblVehicleEF	SBUS	0.03	8.3040e-003
tblVehicleEF	SBUS	1.53	0.46
tblVehicleEF	SBUS	1.7580e-003	4.1400e-004
tblVehicleEF	SBUS	0.08	0.07
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.43	0.04
tblVehicleEF	UBUS	0.23	1.86

tblVehicleEF	UBUS	0.05	2.1860e-003
tblVehicleEF	UBUS	3.04	14.11
tblVehicleEF	UBUS	7.59	0.14
tblVehicleEF	UBUS	1,937.16	1,668.67
tblVehicleEF	UBUS	126.43	1.40
tblVehicleEF	UBUS	4.75	0.71
tblVehicleEF	UBUS	13.02	0.02
tblVehicleEF	UBUS	0.54	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.10	5.1160e-003
tblVehicleEF	UBUS	1.3960e-003	1.5000e-005
tblVehicleEF	UBUS	0.23	0.03
tblVehicleEF	UBUS	3.0000e-003	8.3320e-003
tblVehicleEF	UBUS	0.10	4.8930e-003
tblVehicleEF	UBUS	1.2840e-003	1.4000e-005
tblVehicleEF	UBUS	2.5990e-003	6.1000e-005
tblVehicleEF	UBUS	0.04	8.1400e-004
tblVehicleEF	UBUS	1.5170e-003	3.6000e-005
tblVehicleEF	UBUS	0.23	0.03
tblVehicleEF	UBUS	9.4350e-003	4.9280e-003
tblVehicleEF	UBUS	0.65	9.2610e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.4020e-003	1.4000e-005
tblVehicleEF	UBUS	2.5990e-003	6.1000e-005
tblVehicleEF	UBUS	0.04	8.1400e-004
tblVehicleEF	UBUS	1.5170e-003	3.6000e-005
tblVehicleEF	UBUS	0.48	1.90
tblVehicleEF	UBUS	9.4350e-003	4.9280e-003
tblVehicleEF	UBUS	0.71	0.01
tblVehicleTrips	ST_TR	6.39	4.29

tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	158.37	119.45
tblVehicleTrips	ST_TR	8.14	14.05
tblVehicleTrips	ST_TR	8.96	7.35
tblVehicleTrips	SU_TR	5.86	3.93
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	131.84	99.44
tblVehicleTrips	SU_TR	7.19	2.67
tblVehicleTrips	SU_TR	1.55	1.27
tblVehicleTrips	WD_TR	6.65	4.46
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	127.15	95.90
tblVehicleTrips	WD_TR	12.94	22.33
tblVehicleTrips	WD_TR	36.13	29.64
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2581	0.0172	1.4916	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3600e-003	0.0000	2.5053
Energy	0.0225	0.2045	0.1717	1.2300e-003		0.0155	0.0155		0.0155	0.0155	0.0000	253.3806	253.3806	0.0468	0.0129	258.3899
Mobile	0.8976	1.4420	7.1600	0.0219	2.6185	0.0161	2.6346	0.7006	0.0151	0.7157	0.0000	2,017.5857	2,017.5857	0.0859	0.0000	2,019.73
Stationary	0.0688	0.2845	0.1813	3.3000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	31.9108	31.9108	4.4700e-003	0.0000	32.0227
Waste						0.0000	0.0000		0.0000	0.0000	142.1282	0.0000	142.1282	8.3995	0.0000	352.1166
Water						0.0000	0.0000		0.0000	0.0000	8.7815	1.7288	10.5104	0.0326	0.0196	17.1638
Total	2.2469	1.9481	9.0046	0.0235	2.6185	0.0500	2.6685	0.7006	0.0490	0.7496	150.9097	2,307.0521	2,457.9618	8.5717	0.0325	2,681.9324

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2581	0.0172	1.4916	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3600e-003	0.0000	2.5053
Energy	0.0225	0.2045	0.1717	1.2300e-003		0.0155	0.0155		0.0155	0.0155	0.0000	253.3806	253.3806	0.0468	0.0129	258.3899
Mobile	0.8976	1.4420	7.1600	0.0219	2.6185	0.0161	2.6346	0.7006	0.0151	0.7157	0.0000	2,017.5857	2,017.5857	0.0859	0.0000	2,019.7342
Stationary	0.0688	0.2845	0.1813	3.3000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	31.9108	31.9108	4.4700e-003	0.0000	32.0227
Waste						0.0000	0.0000		0.0000	0.0000	142.1282	0.0000	142.1282	8.3995	0.0000	352.1166
Water						0.0000	0.0000		0.0000	0.0000	8.7815	1.7288	10.5104	0.0326	0.0196	17.1638
Total	2.2469	1.9481	9.0046	0.0235	2.6185	0.0500	2.6685	0.7006	0.0490	0.7496	150.9097	2,307.0521	2,457.9618	8.5717	0.0325	2,681.9324

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8976	1.4420	7.1600	0.0219	2.6185	0.0161	2.6346	0.7006	0.0151	0.7157	0.0000	2,017.5857	2,017.5857	0.0859	0.0000	2,019.7342

Unmitigated	0.8976	1.4420	7.1600	0.0219	2.6185	0.0161	2.6346	0.7006	0.0151	0.7157	0.0000	2,017.5857	2,017.5857	0.0859	0.0000	2,019.7342
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4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	892.00	858.00	786.00	2,013,978	2,013,978
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	959.00	1,194.50	994.40	1,157,596	1,157,596
Hospital	1,228.15	772.75	146.85	2,540,149	2,540,149
Medical Office Building	901.06	223.44	38.61	1,332,979	1,332,979
Parking Lot	0.00	0.00	0.00		
Total	3,980.21	3,048.69	1,965.86	7,044,701	7,044,701

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
City Park	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
Enclosed Parking with Elevator	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
High Turnover (Sit Down Restaurant)	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
Hospital	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
Medical Office Building	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728

High Turnover (Sit Down Restaurant)	2.1042e+006	0.0114	0.1032	0.0866	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003	0.0000	112.2881	112.2881	2.1500e-003	2.0600e-003	112.9554
Hospital	1.66993e+006	9.0000e-003	0.0819	0.0688	4.9000e-004		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	89.1141	89.1141	1.7100e-003	1.6300e-003	89.6436
Medical Office Building	396720	2.1400e-003	0.0195	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1705	21.1705	4.1000e-004	3.9000e-004	21.2963
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0225	0.2045	0.1717	1.2300e-003		0.0155	0.0155		0.0155	0.0155	0.0000	222.5727	222.5727	4.2700e-003	4.0800e-003	223.8953

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartment Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	2.1042e+006	0.0114	0.1032	0.0866	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003	0.0000	112.2881	112.2881	2.1500e-003	2.0600e-003	112.9554
Hospital	1.66993e+006	9.0000e-003	0.0819	0.0688	4.9000e-004		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	89.1141	89.1141	1.7100e-003	1.6300e-003	89.6436
Medical Office Building	396720	2.1400e-003	0.0195	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1705	21.1705	4.1000e-004	3.9000e-004	21.2963
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0225	0.2045	0.1717	1.2300e-003		0.0155	0.0155		0.0155	0.0155	0.0000	222.5727	222.5727	4.2700e-003	4.0800e-003	223.8953

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	899250	8.5658	0.0118	2.4500e-003	9.5908
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.172e+006	11.1638	0.0154	3.1900e-003	12.4998
High Turnover (Sit Down Restaurant)	289700	2.7595	3.8100e-003	7.9000e-004	3.0897
Hospital	519640	4.9498	6.8400e-003	1.4100e-003	5.5421
Medical Office Building	277248	2.6409	3.6500e-003	7.5000e-004	2.9569
Parking Lot	76440	0.7281	1.0100e-003	2.1000e-004	0.8153
Total		30.8079	0.0426	8.8000e-003	34.4946

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	899250	8.5658	0.0118	2.4500e-003	9.5908
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.172e+006	11.1638	0.0154	3.1900e-003	12.4998
High Turnover (Sit Down Restaurant)	289700	2.7595	3.8100e-003	7.9000e-004	3.0897
Hospital	519640	4.9498	6.8400e-003	1.4100e-003	5.5421
Medical Office Building	277248	2.6409	3.6500e-003	7.5000e-004	2.9569

Landscaping	0.0453	0.0172	1.4916	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3600e-003	0.0000	2.5053
Total	1.2581	0.0172	1.4916	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3600e-003	0.0000	2.5053

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0453	0.0172	1.4916	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3600e-003	0.0000	2.5053
Total	1.2581	0.0172	1.4916	8.0000e-005		8.2700e-003	8.2700e-003		8.2700e-003	8.2700e-003	0.0000	2.4462	2.4462	2.3600e-003	0.0000	2.5053

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.5104	0.0326	0.0196	17.1638
Unmitigated	10.5104	0.0326	0.0196	17.1638

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.0308 / 8.21507	5.5558	0.0172	0.0103	9.0534
City Park	0 / 3.40764	0.1136	1.6000e-004	3.0000e-005	0.1272
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	3.03534 / 0.193745	1.2368	3.9200e-003	2.3800e-003	2.0447
Hospital	4.93975 / 0.940905	2.0337	6.4100e-003	3.8800e-003	3.3509
Medical Office Building	3.81461 / 0.726592	1.5705	4.9500e-003	3.0000e-003	2.5876
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		10.5104	0.0326	0.0196	17.1638

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.0308 / 8.21507	5.5558	0.0172	0.0103	9.0534
City Park	0 / 3.40764	0.1136	1.6000e-004	3.0000e-005	0.1272

Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	3.03534 / 0.193745	1.2368	3.9200e-003	2.3800e-003	2.0447
Hospital	4.93975 / 0.940905	2.0337	6.4100e-003	3.8800e-003	3.3509
Medical Office Building	3.81461 / 0.726592	1.5705	4.9500e-003	3.0000e-003	2.5876
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		10.5104	0.0326	0.0196	17.1638

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	142.1282	8.3995	0.0000	352.1166
Unmitigated	142.1282	8.3995	0.0000	352.1166

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
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Land Use	tons	MT/yr			
Apartments Mid Rise	92	18.6752	1.1037	0.0000	46.2669
City Park	0.25	0.0508	3.0000e-003	0.0000	0.1257
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	119	24.1559	1.4276	0.0000	59.8453
Hospital	160.6	32.6004	1.9266	0.0000	80.7660
Medical Office Building	328.32	66.6460	3.9387	0.0000	165.1126
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		142.1282	8.3995	0.0000	352.1166

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	92	18.6752	1.1037	0.0000	46.2669
City Park	0.25	0.0508	3.0000e-003	0.0000	0.1257
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	119	24.1559	1.4276	0.0000	59.8453
Hospital	160.6	32.6004	1.9266	0.0000	80.7660
Medical Office Building	328.32	66.6460	3.9387	0.0000	165.1126
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Total		142.1282	8.3995	0.0000	352.1166
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9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	134	0.73	Diesel
Emergency Generator	1	0	50	201	0.73	Diesel
Emergency Generator	1	0	50	1341	0.73	Diesel

Boilers

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

Equipment Type	Number
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10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (400-135 HP)	5.5000e-003	0.0154	0.0200	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5513	2.5513	3.6000e-004	0.0000	2.5603
Emergency Generator - Diesel (475-300 HP)	8.2500e-003	0.0231	0.0210	4.0000e-005		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	3.8270	3.8270	5.4000e-004	0.0000	3.8404
Emergency Generator - Diesel (750-900 HP)	0.0550	0.2460	0.1403	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5325	25.5325	3.5800e-003	0.0000	25.6219

Total	0.0688	0.2845	0.1813	3.3000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	31.9108	31.9108	4.4800e-003	0.0000	32.0227
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11.0 Vegetation

Attachment 3: Construction Health Risk Calculations

Lillian Commons, Morgan Hill, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Emissions Model		DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
Year	Activity			(lb/yr)	(lb/hr)	(g/s)		
2021	Phase 1	0.1386	DPM_PBD	277.2	0.05842	7.36E-03	22,559	3.26E-07
2022	Construction	0.0142		28.4	0.00599	7.54E-04	22,559	3.34E-08
2022	Phase 2	0.0982	DPM_PC	196.4	0.04139	5.22E-03	39,775	1.31E-07
2023	Construction	0.0547		109.4	0.02306	2.91E-03	39,775	7.30E-08
2023	Phase 3	0.0301	DPM_PA	60.2	0.01269	1.60E-03	18,617	8.59E-08
2024	Construction	0.0540		108.0	0.02276	2.87E-03	18,617	1.54E-07
Total		0.3898		780	0	0.02		

Operation Hours

hr/day = 13 (7am - 8pm)*

days/yr = 365

hours/year = 4745

*City of Morgan Hill Construction Noise Hours

PM2.5 Fugitive Dust Emissions and Modeling Emission Rates - Unmitigated

Construction		Area Source	(ton/year)	PM2.5 Emissions			Modeled Area (m ²)	PM2.5 Emission Rate g/s/m ²
Year	Activity			(lb/yr)	(lb/hr)	(g/s)		
2021	Phase 1	FUG_PBD	0.0847	169.4	0.03570	4.50E-03	22,559	1.99E-07
2022	Construction		0.0001	0.3	0.00006	7.44E-06	22,559	3.30E-10
2022	Phase 2	FUG_PC	0.1092	218.4	0.04603	5.80E-03	39,775	1.46E-07
2023	Construction		0.0049	9.7	0.00205	2.59E-04	39,775	6.50E-09
2023	Phase 3	FUG_PA	0.0396	79.2	0.01669	2.10E-03	18,617	1.13E-07
2024	Construction		0.0032	6.4	0.00135	1.70E-04	18,617	9.16E-09
Total			0.2417	483	0	0.01		

Operation Hours

hr/day = 13 (7am - 8pm)*

days/yr = 365

hours/year = 4745

*City of Morgan Hill Construction Noise Hours

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Emissions Model	Activity	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2021	Phase 1	0.0105	DPM_PBD	21.0	0.00443	5.58E-04	22,559	2.47E-08
2022	Construction	0.0012		2.5	0.00052	6.53E-05	22,559	2.90E-09
2022	Phase 2	0.0091	DPM_PC	18.2	0.00383	4.83E-04	39,775	1.21E-08
2023	Construction	0.0066		13.1	0.00277	3.49E-04	39,775	8.77E-09
2023	Phase 3	0.0033	DPM_PA	6.6	0.00139	1.75E-04	18,617	9.41E-09
2024	Construction	0.0073		14.7	0.00309	3.90E-04	18,617	2.09E-08
Total		0.0105		21.0	0.0044	0.0006		

Operation Hours

hr/day = 9 (7am - 8pm)*

days/yr = 365

hours/year = 3285

*City of Morgan Hill Construction Noise Hours

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

							PM2.5	
Construction		Area	PM2.5 Emissions				Modeled Area	Emission Rate
Year	Activity	Source	(ton/year)	(lb/yr)	(lb/hr)	(g/s)	(m²)	g/s/m²
2021	Phase 1	FUG_P1	0.0200	40.0	0.00843	1.06E-03	22,559	4.71E-08
2022	Construction		0.0001	0.3	0.00006	7.44E-06	22,559	3.30E-10
2022	Phase 2	FUG_P2	0.0289	57.8	0.01218	1.53E-03	39,775	3.86E-08
2023	Construction		0.0049	9.7	0.00205	2.59E-04	39,775	6.50E-09
2023	Phase 3	FUG_P3	0.0100	19.9	0.00419	5.28E-04	18,617	2.84E-08
2024	Construction		0.0032	6.4	0.00135	1.70E-04	18,617	9.16E-09
Total			0.0200	40.0	0.0084	0.0011		

Operation Hours

hr/day = 9 (7am - 8pm)*

days/yr = 365

hours/year = 3285

*City of Morgan Hill Construction Noise Hours

Lillian Commons, Morgan Hill, CA - Unmitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors- 5 feet 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/m³)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10⁻⁶ = Conversion factor

Values

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
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			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum Risk		
			DPM Conc (ug/m3)	Age Sensitivity Factor	Modeled		Age Sensitivity Factor	Hazard Index	Fugitive PM2.5		Total PM2.5		
					DPM Conc (ug/m3)								
					Year							Annual	
0	0.25	-0.25 - 0*	2021	0.0330	10	0.45	2021	0.0330	-	-			
1	1	0 - 1	2021	0.0330	10	5.42	2021	0.0330	1	0.09	0.007	0.021	0.054
2	1	1 - 2	2022	0.1302	10	21.38	2022	0.1302	1	0.37	0.026	0.178	0.308
3	1	2 - 3	2023	0.1783	3	4.61	2023	0.1783	1	0.51	0.036	0.025	0.203
4	1	3 - 4	2024	0.0914	3	2.36	2024	0.0914	1	0.26	0.018	0.006	0.097
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00	0.036	0.178	0.308
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						34.2				1.24			

* Third trimester of pregnancy

Lillian Commons, Morgan Hill, CA - Mitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors - 5 feet receptor height

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^{-1}$

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

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Values

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
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			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum Risk		
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor		Hazard Index	Fugitive PM2.5	Total PM2.5
			Year	Annual			Year	Annual					
0	0.25	-0.25 - 0*	2021	0.0025	10	0.03	2021	0.0025	-	-			
1	1	0 - 1	2021	0.0025	10	0.41	2021	0.0025	1	0.01	0.001	0.005	0.038
2	1	1 - 2	2022	0.0120	10	1.97	2022	0.0120	1	0.03	0.002	0.047	0.177
3	1	2 - 3	2023	0.0098	3	0.25	2023	0.0098	1	0.03	0.002	0.012	0.190
4	1	3 - 4	2024	0.0124	3	0.32	2024	0.0124	1	0.04	0.002	0.006	0.097
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00	0.002	0.047	0.190
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						3.0				0.11			

* Third trimester of pregnancy

Barrett Elementary School, Morgan Hill, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Elementary School - 5 feet - Child Exposure

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

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10⁻⁶

Where: C_{air} = concentration in air (µg/m³)

SAF = Student Adjustment Factor (unitless)

= (24 hrs/9 hrs) x (7 days/5 days) = 3.73

8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

	Infant	School Child	Adult
Age -->	0 - <2	2 - <16	16 - 30
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	230
A =	1	1	1
EF =	350	180	250
AT =	70	70	70
SAF =	1.00	3.73	1.00

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Child - Exposure Information			Child Cancer Risk (per million)
		DPM Conc (ug/m3)		Age*	
				Sensitivity Factor	
1	1	2021	0.0392	3	1.8
2	1	2022	0.1051	3	4.7
3	1	2023	0.1308	3	5.9
4	1	2024	0.0756	3	3.4
TOTAL					15.8

Maximum		
Hazard Index	Fugitive PM2.5	Total PM2.5
0.008	0.0254	0.0646
0.021	0.1308	0.236
0.026	0.0196	0.150
0.015	0.0048	0.080
0.026	0.131	0.236

* Students assumed to be from 5 to 10 years of age

Juan Hernandez, Morgan Hill CA
Standby Emergency Generator Impacts
Off-site Sensitive Receptors (1.5 meter receptor heights)

DPM Emission Rates		
Source Type	DPM Emissions per Generator	
	Max Daily (lb/day)	Annual (lb/year)
134 hp Generator (Gen 1)	0.0044	1.62
CalEEMod DPM Emissions	8.10E-04	tons/year

Modeling Information	
Model	AERMOD
Source	Diesel Generator Engine
Source Type	Point
Meteorological Data	2013-2017 San Martin Airport Meteorological Data
Point Source Stack Parameters	
Generator Engine Size (hp)	134
Stack Height (ft)	12.00
Stack Diameter (ft)**	0.60
Exhaust Gas Flowrate (CFM)*	2.00
Stack Exit Velocity (ft/sec)**	149.00
Exhaust Temperature (°F)**	872.00
Emissions Rate (lb/hr)	0.000185

* AERMOD default

**BAAQMD default generator parameters

Juan Hernandez, Morgan Hill CA
Standby Emergency Generator Impacts
Off-site Sensitive Receptors (1.5 meter receptor heights)

DPM Emission Rates		
Source Type	DPM Emissions per Generator	
	Max Daily (lb/day)	Annual (lb/year)
201 hp Generator (Gen 2)	0.007	2.42
CalEEMod DPM Emissions	0.00121	tons/year

Modeling Information		
Model	AERMOD	
Source	Diesel Generator Engine	
Source Type	Point	
Meteorological Data	2013-2017 San Martin Airport Meerological Data	
Point Source Stack Parameters		
Generator Engine Size (hp)	201	near ground level release
Stack Height (ft)	12.00	
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)	0.000276	

* AERMOD default

**BAAQMD default generator parameters

Juan Hernandez, Morgan Hill CA
Standby Emergency Generator Impacts
Off-site Sensitive Receptors (1.5 meter receptor heights)

DPM Emission Rates		
Source Type	DPM Emissions per Generator	
	Max Daily (lb/day)	Annual (lb/year)
1,341 hp Generator (Gen 3)	0.044	16.18
CalEEMod DPM Emissions	0.00809	tons/year

Modeling Information		
Model	AERMOD	
Source	Diesel Generator Engine	
Source Type	Point	
Meteorological Data	2013-2017 San Martin Airport Meerological Data	
Point Source Stack Parameters		
Generator Engine Size (hp)	1341	near ground level release
Stack Height (ft)	12.00	
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)	0.001847	

* AERMOD default

**BAAQMD default generator parameters

**Juan Hernandez, Morgan Hill, CA - Cancer Risks from Project Operation
Project Emergency Generator**

Impacts at Off-Site Receptors - 5 feet receptor height

Impact at Project MEI (25-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/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
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			Infant/Child Cancer Risk (per million)
			DPM Conc (ug/m3)		Age Sensitivity	
			Year	Annual	Factor	
0	0.25	-0.25 - 0*	2021	0.0000	10	0.00
1	1	0 - 1	2021	0.0000	10	0.00
2	1	1 - 2	2022	0.0000	10	0.00
3	1	2 - 3	2023	0.0000	3	0.00
4	1	3 - 4	2024	0.0000	3	0.00
5	1	4 - 5	2025	0.0008	3	0.02
6	1	5 - 6	2026	0.0008	3	0.02
7	1	6 - 7	2027	0.0008	3	0.02
8	1	7 - 8	2028	0.0008	3	0.02
9	1	8 - 9	2029	0.0008	3	0.02
10	1	9 - 10	2030	0.0008	3	0.02
11	1	10 - 11	2031	0.0008	3	0.02
12	1	11 - 12	2032	0.0008	3	0.02
13	1	12 - 13	2033	0.0008	3	0.02
14	1	13 - 14	2034	0.0008	3	0.02
15	1	14 - 15	2035	0.0008	3	0.02
16	1	15 - 16	2036	0.0008	3	0.02
17	1	16-17	2037	0.0008	1	0.00
18	1	17-18	2038	0.0008	1	0.00
19	1	18-19	2039	0.0008	1	0.00
20	1	19-20	2040	0.0008	1	0.00
21	1	20-21	2041	0.0008	1	0.00
22	1	21-22	2042	0.0008	1	0.00
23	1	22-23	2043	0.0008	1	0.00
24	1	23-24	2044	0.0008	1	0.00
25	1	24-25	2045	0.0008	1	0.00
26	1	25-26	2046	0.0008	1	0.00
27	1	26-27	2047	0.0008	1	0.00
28	1	27-28	2048	0.0008	1	0.00
29	1	28-29	2049	0.0008	1	0.00
30	1	29-30	2050	0.0008	1	0.00
Total Increased Cancer Risk						0.26

* Third trimester of pregnancy

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- **County:** Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
- **Roadway Direction:** Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
- **Side of the Roadway:** Identify on which side of the roadway the project is located.
- **Distance from Roadway:** Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 foot values for greater distances.
- **Annual Average Daily Traffic (ADT):** Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>.

Notes and References listed below the Search Boxes

Search Parameters

County

Roadway Direction

Side of the Roadway

Distance from Roadway feet

Annual Average Daily Traffic (ADT)

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.054 (µg/m³)

Cancer Risk

2.30 (per million)

Juan Hernandez Drive-School Impact

Existing plus project volumes from traffic report
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

Adjusted for Exposure
Duration (Years)

1.58

(per million)

0.68

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggregate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehicles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

0.429

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- **County:** Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
- **Roadway Direction:** Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
- **Side of the Roadway:** Identify on which side of the roadway the project is located.
- **Distance from Roadway:** Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 foot values for greater distances.
- **Annual Average Daily Traffic (ADT):** Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>.

Notes and References listed below the Search Boxes

Search Parameters

County

Roadway Direction

Side of the Roadway

Distance from Roadway feet

Annual Average Daily Traffic (ADT)

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.012 (µg/m³)

Cancer Risk

0.51 (per million)

Juan Hernandez Drive- Project Impact

Existing plus project volumes from traffic report
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

Adjusted for Exposure
Duration (Years)

0.35

(per million)

0.16

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggregate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehicles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

0.471

Lillian Commons, Morgan Hill, CA
Maximum DPM Cancer Risk Calculations From Project (Construction + Operation)
Impacts at Off-Site Project ME1 - 5 Feet 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/m³)
 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			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum Risk		
				DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor		Hazard Index	Fugitive PM2.5	Total PM2.5
				Year	Annual			DPM Conc (ug/m3)	Sensitivity					
Mitigated Construction	0	0.25	-0.25 - 0*	2021	0.0025	10	0.03	2021	0.0025	-	-			
	1	1	0 - 1	2021	0.0025	10	0.41	2021	0.0025	1	0.01	0.001	0.024	0.056
	2	1	1 - 2	2022	0.0120	10	1.97	2022	0.0120	1	0.03	0.002	0.119	0.251
	3	1	2 - 3	2023	0.0098	3	0.25	2023	0.0098	1	0.03	0.002	0.051	0.110
	4	1	3 - 4	2024	0.0124	3	0.32	2024	0.0124	1	0.04	0.002	0.042	0.117
	5	1	4 - 5	2025	0.0008	3	0.02	2025	0.0008	1	0.00	0.000		0.010
	6	1	5 - 6	2026	0.0008	3	0.02	2026	0.0008	1	0.00			
	7	1	6 - 7	2027	0.0008	3	0.02	2027	0.0008	1	0.00			
	8	1	7 - 8	2028	0.0008	3	0.02	2028	0.0008	1	0.00			
	9	1	8 - 9	2029	0.0008	3	0.02	2029	0.0008	1	0.00			
Operation	10	1	9 - 10	2030	0.0008	3	0.02	2030	0.0008	1	0.00			
	11	1	10 - 11	2031	0.0008	3	0.02	2031	0.0008	1	0.00			
	12	1	11 - 12	2032	0.0008	3	0.02	2032	0.0008	1	0.00			
	13	1	12 - 13	2033	0.0008	3	0.02	2033	0.0008	1	0.00			
	14	1	13 - 14	2034	0.0008	3	0.02	2034	0.0008	1	0.00			
	15	1	14 - 15	2035	0.0008	3	0.02	2035	0.0008	1	0.00			
	16	1	15 - 16	2036	0.0008	3	0.02	2036	0.0008	1	0.00			
	17	1	16-17	2037	0.0008	1	0.00	2037	0.0008	1	0.00			
	18	1	17-18	2038	0.0008	1	0.00	2038	0.0008	1	0.00			
	19	1	18-19	2039	0.0008	1	0.00	2039	0.0008	1	0.00			
	20	1	19-20	2040	0.0008	1	0.00	2040	0.0008	1	0.00			
	21	1	20-21	2041	0.0008	1	0.00	2041	0.0008	1	0.00			
	22	1	21-22	2042	0.0008	1	0.00	2042	0.0008	1	0.00			
	23	1	22-23	2043	0.0008	1	0.00	2043	0.0008	1	0.00			
	24	1	23-24	2044	0.0008	1	0.00	2044	0.0008	1	0.00			
	25	1	24-25	2045	0.0008	1	0.00	2045	0.0008	1	0.00			
	26	1	25-26	2046	0.0008	1	0.00	2046	0.0008	1	0.00			
	27	1	26-27	2047	0.0008	1	0.00	2047	0.0008	1	0.00			
	28	1	27-28	2048	0.0008	1	0.00	2048	0.0008	1	0.00			
	29	1	28-29	2049	0.0008	1	0.00	2049	0.0008	1	0.00			
	30	1	29-30	2050	0.0008	1	0.00	2050	0.0008	1	0.00			
Project Traffic on Juan Hernandez Drive							0.2				0.20			0.01
Total Increased Cancer Risk							3.5				0.36	0.002	0.119	0.251

* Third trimester of pregnancy

Barrett Elementary School, Morgan Hill, CA - Construction & Operation Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations
Elementary School - 5 feet - Child Exposure

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

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10⁻⁶

Where: C_{air} = concentration in air (µg/m³)

SAF = Student Adjustment Factor (unitless)

= (24 hrs/9 hrs) x (7 days/5 days) = 3.73

8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

	Infant	School Child	Adult
Age -->	0 - <2	2 - <16	16 - 30
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	230
A =	1	1	1
EF =	350	180	250
AT =	70	70	70
SAF =	1.00	3.73	1.00

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Child - Exposure Information			Child Cancer Risk (per million)
		DPM Conc (ug/m3)		Age*	
				Sensitivity Factor	
1	1	2021	0.0030	3	0.1
2	1	2022	0.0097	3	0.4
3	1	2023	0.0078	3	0.4
4	1	2024	0.0103	3	0.5
Mitigated Construction Total					1.4
Project Traffic (3 Years)	3	2025-2027		3	0.7
Project Generator (3 Years)	3	2025-2027		3	0.1
TOTAL					2.2

* Students assumed to be from 5 to 10 years of age

Maximum		
Hazard Index	Fugitive PM2.5	Total PM2.5
0.001	0.006	0.045
0.002	0.0346	0.140
0.002	0.0093	0.140
0.002	0.0048	0.080
0.002	0.035	0.140

Attachment 4: Screening Community Risk Calculations

Juan Hernandez, Morgan Hill, CA

Project Operation - Highway 101

DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions

Year = 2024

Meridian Avenue

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
NB101_DPM	Northbound Highway 101	N	3	982.8	0.61	16.97	55.7	3.4	variable	73,028
SB101_DPM	Southbound Highway 101	S	3	982.7	0.61	16.97	55.7	3.4	variable	73,028
									Total	146,055

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	30	10
Emissions per Vehicle (g/VMT)	0.0015	0.001269	0.000608	0.001198

Emission Factors from CT-EMFAC2017

Analysis Year = 2024

Vehicle Type	2017 Caltrans Vehicles (veh/day)	2024 Vehicles (veh/day)
Truck 1 (MDT)	4,006	4,286
Truck 2 (HDT)	6,300	6,741
Non-Truck	126,194	135,028
Total	136,500	146,055

Increase From 2017 1.07
Vehicles/Direction 73,028
 Avg Vehicles/Hour/Direction 3,043

Traffic Data Year = 2017

Caltrans AADT (2017) & Truck %s (2016)	AADT Total	Total Truck	Trucks by Axle			
			2	3	4	5
Rte 101, A Tennant Ave	136,500	10,306	4,006	776	290	5,234
Rte 101, A Morgan Hill, Cochrane Rd			38.87%	7.53%	2.81%	50.79%

Percent of Total Vehicles 7.55% 2.93% 0.57% 0.21% 3.83%

Traffic Increase per Year (%) = 1.00%

2024 Hourly Traffic Volumes and DPM Emissions - NB101_DPM

[illegible]

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - SB101_DPM

	% Per				% Per				% Per		
Hour	Hour	VPH	g/mile	Hour	Hour	VPH	g/mile	Hour	Hour	VPH	g/mile
1	3.90%	2846	7.24E-04	9	6.42%	4687	1.01E-03	17	5.62%	4101	4.23E-04
2	2.58%	1883	4.79E-04	10	7.34%	5357	1.36E-03	18	3.27%	2385	2.46E-04
3	2.87%	2092	5.32E-04	11	6.42%	4687	1.19E-03	19	2.35%	1716	4.37E-04
4	3.32%	2427	6.18E-04	12	6.88%	5022	1.28E-03	20	0.86%	628	1.60E-04
5	2.18%	1590	4.05E-04	13	6.25%	4562	1.16E-03	21	3.09%	2260	5.75E-04
6	3.38%	2469	6.28E-04	14	6.19%	4520	1.15E-03	22	4.13%	3013	7.67E-04
7	6.02%	4394	1.12E-03	15	5.10%	3725	9.48E-04	23	2.52%	1841	4.68E-04
8	4.64%	3390	7.30E-04	16	3.78%	2762	7.03E-04	24	0.92%	670	1.70E-04
Total									73,028		

Meridian Avenue

[illegible]

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	30	10
Emissions per Vehicle (g/VMT)	0.002505	0.00215	0.001907	0.006049

Emission Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - NB101_PM25

[illegible]

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - NB101_PM25

	% Per				% Per				% Per		
Hour	Hour	VPH	g/mile	Hour	Hour	VPH	g/mile	Hour	Hour	VPH	g/mile
1	1.15%	841	3.57E-04	9	7.11%	5194	1.89E-03	17	7.39%	5394	1.74E-03
2	0.42%	305	1.30E-04	10	4.39%	3203	1.36E-03	18	8.18%	5971	1.93E-03
3	0.41%	296	1.26E-04	11	4.66%	3407	1.45E-03	19	5.70%	4159	1.77E-03
4	0.26%	191	8.12E-05	12	5.89%	4300	1.83E-03	20	4.27%	3122	1.33E-03
5	0.50%	365	1.55E-04	13	6.15%	4493	1.91E-03	21	3.26%	2379	1.01E-03
6	0.90%	660	2.80E-04	14	6.04%	4409	1.87E-03	22	3.30%	2407	1.02E-03
7	3.79%	2768	1.18E-03	15	7.01%	5123	2.18E-03	23	2.46%	1797	7.64E-04
8	7.76%	5670	2.06E-03	16	7.14%	5212	2.21E-03	24	1.87%	1363	5.79E-04
								Total	73,028		

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - NB101_TEXH											
Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	841	3.98E-03	9	7.11%	5194	2.19E-02	17	7.39%	5394	3.22E-02
2	0.42%	306	1.45E-03	10	4.39%	3207	1.52E-02	18	8.17%	5966	3.56E-02
3	0.41%	299	1.42E-03	11	4.67%	3408	1.61E-02	19	5.70%	4159	1.97E-02
4	0.27%	195	9.23E-04	12	5.89%	4303	2.04E-02	20	4.27%	3121	1.48E-02
5	0.50%	365	1.73E-03	13	6.15%	4490	2.13E-02	21	3.26%	2380	1.13E-02
6	0.91%	662	3.14E-03	14	6.03%	4407	2.09E-02	22	3.30%	2410	1.14E-02
7	3.79%	2771	1.31E-02	15	7.01%	5118	2.42E-02	23	2.46%	1794	8.50E-03
8	7.76%	5669	2.39E-02	16	7.13%	5210	2.47E-02	24	1.86%	1360	6.44E-03
Total										73,028	

Year = 2022

[illegible]

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	30	10
Emissions per Vehicle per Hour (g/hour)	1.32146	1.32146	1.32146	1.32146
Emissions per Vehicle per Mile (g/VMT)	0.02033	0.02033	0.02033	0.02033

[illegible]

1				2				3			
Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	841	2.90E-03	9	7.11%	5194	1.79E-02	17	7.39%	5394	1.86E-02
2	0.42%	306	1.06E-03	10	4.39%	3207	1.11E-02	18	8.17%	5966	2.06E-02
3	0.41%	299	1.03E-03	11	4.67%	3408	1.18E-02	19	5.70%	4159	1.43E-02
4	0.27%	195	6.72E-04	12	5.89%	4303	1.48E-02	20	4.27%	3121	1.08E-02
5	0.50%	365	1.26E-03	13	6.15%	4490	1.55E-02	21	3.26%	2380	8.21E-03
6	0.91%	662	2.28E-03	14	6.03%	4407	1.52E-02	22	3.30%	2410	8.31E-03
7	3.79%	2771	9.55E-03	15	7.01%	5118	1.76E-02	23	2.46%	1794	6.19E-03
8	7.76%	5669	1.95E-02	16	7.13%	5210	1.80E-02	24	1.86%	1360	4.69E-03
Total								73,028			

Year = 2022

[illegible]

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	30	10.0
Tire Wear - Emissions per Vehicle (g/VMT)	0.00223	0.00223	0.00223	0.00223
Brake Wear - Emissions per Vehicle (g/VMT)	0.01762	0.01762	0.01762	0.01762
Road Dust - Emissions per Vehicle (g/VMT)	0.00894	0.00894	0.00894	0.00894
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02879	0.02879	0.02879	0.02879

[illegible]

Hour		% Per Hour	VPH	g/mile	Hour		% Per Hour	VPH	g/mile	Hour		% Per Hour	VPH	g/mile
1	1.15%	841	4.10E-03	9	7.11%	5194	2.54E-02	17	7.39%	5394	2.63E-02			
2	0.42%	306	1.49E-03	10	4.39%	3207	1.57E-02	18	8.17%	5966	2.91E-02			
3	0.41%	299	1.46E-03	11	4.67%	3408	1.66E-02	19	5.70%	4159	2.03E-02			
4	0.27%	195	9.51E-04	12	5.89%	4303	2.10E-02	20	4.27%	3121	1.52E-02			
5	0.50%	365	1.78E-03	13	6.15%	4490	2.19E-02	21	3.26%	2380	1.16E-02			
6	0.91%	662	3.23E-03	14	6.03%	4407	2.15E-02	22	3.30%	2410	1.18E-02			
7	3.79%	2771	1.35E-02	15	7.01%	5118	2.50E-02	23	2.46%	1794	8.76E-03			
8	7.76%	5669	2.77E-02	16	7.13%	5210	2.54E-02	24	1.86%	1360	6.64E-03			
Total											73,028			

**Juan Hernandez, Morgan Hill - Highway 101 Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
On-Site 1st Floor Residential Receptors (1.5 meter receptor heights)**

Emissions Year 2024

Receptor Information

Number of Receptors 197
Receptor Height = 1st Floor - 1.5 meters above ground level
Receptor distances = 20 meter spacing in project residential areas

Meteorological Conditions

BAAQMD San Martin Airport Data 2013-2017
Land Use Classification urban
Wind speed = variable
Wind direction = variable

MEI Maximum Concentrations

Meteorological Data Years	Concentration ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.06429	1.2982	0.7952

Meteorological Data Years	PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	1.2296	1.1284	0.1011

Juan Hernandez, Morgan Hill - Highway 101 Traffic - Maximum Cancer Risks
On-Site 1st Floor Residential Receptors (1.5 meter receptor heights)
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

Values

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

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - <2	2 - <16	16 - 30
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information				Cancer Risk (per million)			
				Age Sensitivity Factor	Annual TAC Conc (ug/m3)			DPM	Exhaust TOG	Evaporative TOG	Total
					DPM	TOG	TOG				
0	2022	0.25	-0.25 - 0*	10	0.0643	1.2982	0.7952	0.874	0.101	0.004	0.98
1	2022	1	1	10	0.0643	1.2982	0.7952	10.56	1.218	0.044	11.82
2	2023	1	2	10	0.0643	1.2982	0.7952	10.56	1.218	0.044	11.82
3	2024	1	3	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
4	2025	1	4	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
5	2026	1	5	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
6	2027	1	6	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
7	2028	1	7	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
8	2029	1	8	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
9	2030	1	9	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
10	2031	1	10	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
11	2032	1	11	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
12	2033	1	12	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
13	2034	1	13	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
14	2035	1	14	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
15	2036	1	15	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
16	2037	1	16	3	0.0643	1.2982	0.7952	1.66	0.192	0.007	1.86
17	2038	1	17	1	0.0643	1.2982	0.7952	0.18	0.0213	0.001	0.207
18	2039	1	18	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
19	2040	1	19	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
20	2041	1	20	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
21	2042	1	21	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
22	2043	1	22	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
23	2044	1	23	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
24	2045	1	24	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
25	2046	1	25	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
26	2047	1	26	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
27	2048	1	27	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
28	2049	1	28	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
29	2050	1	29	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
30	2051	1	30	1	0.0643	1.2982	0.7952	0.18	0.021	0.001	0.207
Total Increased Cancer Risk			Total					47.85	5.517	0.199	53.6

* Third trimester of pregnancy

**Juan Hernandez, Morgan Hill - Highway 101 Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
On-Site 2nd Floor Residential Receptors (4.5 meter receptor heights)**

Emissions Year 2024
Receptor Information
 Number of Receptors 197
 Receptor Height = 2nd Floor - 4.5 meters above ground level
 Receptor distances = 20 meter spacing in project residential areas

Meteorological Conditions
 BAAQMD San Martin Airport Data 2013-2017
 Land Use Classification urban
 Wind speed = variable
 Wind direction = variable

MEI Maximum Concentrations

Meteorological Data Years	Concentration ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.05932	1.1682	0.7109

Meteorological Data Years	PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	1.0995	1.0087	0.0908

Juan Hernandez, Morgan Hill - Highway 101 Traffic - Maximum Cancer Risks
On-Site 2nd Floor Residential Receptors (4.5 meter receptor heights)
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

Values

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

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - <2	2 - <16	16 - 30
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information				Cancer Risk (per million)			
				Age Sensitivity Factor	Annual TAC Conc (ug/m3)			DPM	Exhaust TOG	Evaporative TOG	Total
					DPM	TOG	TOG				
0	2022	0.25	-0.25 - 0*	10	0.0593	1.1682	0.7109	0.807	0.091	0.003	0.90
1	2022	1	1	10	0.0593	1.1682	0.7109	9.74	1.096	0.039	10.88
2	2023	1	2	10	0.0593	1.1682	0.7109	9.74	1.096	0.039	10.88
3	2024	1	3	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
4	2025	1	4	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
5	2026	1	5	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
6	2027	1	6	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
7	2028	1	7	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
8	2029	1	8	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
9	2030	1	9	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
10	2031	1	10	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
11	2032	1	11	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
12	2033	1	12	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
13	2034	1	13	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
14	2035	1	14	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
15	2036	1	15	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
16	2037	1	16	3	0.0593	1.1682	0.7109	1.53	0.172	0.006	1.71
17	2038	1	17	1	0.0593	1.1682	0.7109	0.17	0.0192	0.001	0.190
18	2039	1	18	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
19	2040	1	19	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
20	2041	1	20	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
21	2042	1	21	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
22	2043	1	22	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
23	2044	1	23	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
24	2045	1	24	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
25	2046	1	25	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
26	2047	1	26	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
27	2048	1	27	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
28	2049	1	28	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
29	2050	1	29	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
30	2051	1	30	1	0.0593	1.1682	0.7109	0.17	0.019	0.001	0.190
Total Increased Cancer Risk			Total					44.15	4.965	0.178	49.29

* Third trimester of pregnancy

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- **County:** Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
- **Roadway Direction:** Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
- **Side of the Roadway:** Identify on which side of the roadway the project is located.
- **Distance from Roadway:** Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.
- **Annual Average Daily Traffic (ADT):** Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>.

Notes and References listed below the Search Boxes

Search Parameters	Results	
County Roadway Direction Side of the Roadway Distance from Roadway Annual Average Daily Traffic (ADT)	<u>Santa Clara County</u> EAST-WEST DIRECTIONAL ROADWAY PM2.5 annual average 0.030 (µg/m ³) Cancer Risk 1.68 (per million) Tennant Avenue - Project Offsite MEI Existing Traffic Conditions Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997	Adjusted for 2015 OEHHA and EMFAC2014 for 2018 1.15 (per million) Note that EMFAC2014 predicts DSL PM2.5 aggregate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehicles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- **County:** Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
 - **Roadway Direction:** Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
 - **Side of the Roadway:** Identify on which side of the roadway the project is located.
 - **Distance from Roadway:** Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.
 - **Annual Average Daily Traffic (ADT):** Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).
- When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>.

Notes and References listed below the Search Boxes

Search Parameters	Results	
County Roadway Direction Side of the Roadway Distance from Roadway Annual Average Daily Traffic (ADT)	<u>Santa Clara County</u> NORTH-SOUTH DIRECTIONAL ROADWAY PM2.5 annual average 0.021 (µg/m ³) Cancer Risk 0.94 (per million) Butterfield Boulevard - Project Offsite MEI Existing Traffic Conditions Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997	Adjusted for 2015 OEHHA and EMFAC2014 for 2018 0.65 (per million) Note that EMFAC2014 predicts DSL PM2.5 aggregate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehicles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
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Notes and References listed below the Search Boxes

Search Parameters

County

Santa Clara

Roadway Direction

East-West

Side of the Roadway

North

Distance from Roadway

950

feet

Annual Average Daily Traffic (ADT)

22,205

Results

Santa Clara County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.031

($\mu\text{g}/\text{m}^3$)

Cancer Risk

1.74

(per million)

Tennant Avenue - Project Onsite Receptor

Cumulative plus project volumes from traffic report
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

1.19

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggregate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehicles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

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• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/VCEQA-GUIDELINES/Tools-and-Methodology.aspx>.

Notes and References listed below the Search Boxes

Search Parameters

County

Santa Clara

Roadway Direction

North-South

Side of the Roadway

East

Distance from Roadway

870

feet

Annual Average Daily Traffic (ADT)

15,275

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.023

($\mu\text{g}/\text{m}^3$)

Cancer Risk

1.02

(per million)

Butterfield Boulevard - Project Onsite Receptors

Cumulative plus project volumes from traffic report
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

0.70

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggregate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehicles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.