

APPENDIX A

Air Quality & Greenhouse Gas Assessment

5150 EL CAMINO REAL AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Los Altos, California

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Prepared for:

**Demetri Loukas &
Mike Campbell, AICP, CPSWQ
David J. Powers & Associates, Inc
1871 The Alameda, Suite 200
San José, CA 95126**

Prepared by:

**Mimi McNamara
Casey Divine
James Reyff
Bill Popenuck**

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

Project: #18-227

Introduction

The purpose of this report is to address air quality impacts and compute greenhouse gas (GHG) emissions associated with a new residential project located at 5150 El Camino Real in Los Altos, California. The air quality impacts and GHG emissions from this project would be associated with the demolition of the existing uses at the site, the construction of the new building and infrastructure, and operation of the project. Air pollutant and GHG emissions associated with the construction and operation of the project were predicted using models. In addition, the potential construction health risk impact to nearby sensitive receptors and the impact of existing toxic air contaminant (TAC) sources affecting the proposed residences were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).¹

Project Description

The approximately 3.8-acre project site is located on the south side of El Camino Real (State Route 82 [SR 82]) at its terminus with Rengstorff Avenue, in northern Los Altos. The project proposes to demolish an existing on-site 78,950 square foot (SF) office building and paved parking lot and construct two five-story condominium buildings and two three-story townhome buildings. In total, the project would provide 196 multiple-family residential units. The condominium buildings would provide 172 residential units with approximately 182,325 SF of residential space. The townhome buildings would provide 24 residential units with approximately 46,684 SF of residential space. The project would provide a total of 290 parking spaces. One level of belowground parking would provide 236 parking spaces for residents of the proposed condominiums. Each townhome would include an attached garage at ground level with two parking spaces, amounting to a total of 48 spaces. Six surface parking spaces would be provided for guests and two larger spaces would be provided for loading and deliveries.

Construction of the proposed project is anticipated to occur in three phases, beginning in January 2021. Phase I would construct the at-grade, three-story townhomes at the southern end (rear) of the project site. Phase II would construct the five-story condominium building on the northeastern end of the project site, and the northeastern half of the below-ground parking garage. Phase III would construct the final five-story condominium building at the northwestern end of the site and the northwestern half of the parking garage. Overall, construction of the proposed project is estimated to take 40 months in total. Note that throughout the document that the project is frequently addressed by its phases (i.e. Phase I, Phase II, and Phase III).

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}).

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

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

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

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.² See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly

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

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 project would introduce new sensitive receptors in the form of residences. The closest sensitive receptors to the project site are residences of single-family homes to the south and of multi-family apartments to the west project site. There are also daycare centers (Mountain View KinderCare ages 0-5 years, Mountain View-Los Altos Montessori Children's Center ages 2-5 years) to the east and northwest of the project site.

Regulatory Agencies

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California Environmental Protection Agency [EPA]) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has recently published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.

Regulatory Setting

Federal Regulations

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

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_x and particulate matter (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 significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel

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

(from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

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

State Regulations

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

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

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

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

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.

City of Los Altos General Plan 2002-2020

The City of Los Altos General Plan 2002-2020 includes goals, policies, and actions to reduce exposure of the City's sensitive population to exposure of air pollution, toxic air contaminants, and GHG emissions. The following goals, policies, and actions are applicable to the proposed project:

Goal 8: Maintain or improve air quality in Los Altos.

Policy 8.1: Support the principles of reducing air pollutants through land use, transportation, and energy use planning.

Policy 8.2: Encourage transportation modes that minimize contaminant emissions from motor vehicle use.

Policy 8.3: Interpret and implement the General Plan to be consistent with the regional Bay Area Air Quality Management Plan, as periodically updated.

Policy 8.4: Ensure location and design of development projects so as to conserve air quality and minimize direct and indirect emissions of air contaminants.

City of Los Altos Climate Action Plan

The City of Los Altos has developed a Climate Action Plan (CAP).⁶ The CAP includes a goal to improve communitywide emissions efficiency by 15 percent over 2005 levels by 2020. The reduction measures included in this plan are a diverse mix of incentives, education, and regulations

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

⁶ PMC. City of Los Altos Climate Action Plan. December 2013.

applicable to both new and existing development. The measures are designed to reduce emissions from each source to avoid relying on any one strategy or sector to achieve the target.

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. Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	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	>10.0 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) 660 metric tons annually or 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.			

Air Quality Impacts and Mitigation Measures

Impact 1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable State or federal ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

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.

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the site assuming full build-out of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The model output from CalEEMod is included as *Attachment 2*.

Construction period emissions

CalEEMod provided annual emissions for construction and estimates emissions for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. A construction build-out scenario, including equipment list and schedule, was based on CalEEMod default information. However, the project applicant did provide the start and end dates (i.e. month and year) per phase. The proposed land uses were entered into CalEEMod as follows in Table 2.

Table 2. 5150 El Camino Real Land Use Inputs by Phase

	Phase 1	Phase 2	Phase 3
Residential	24 Townhome Units & 46,684 square feet	86 Condominiums & 166,728 square feet	86 Condominiums & 155,446 square feet
Parking	6 Parking Spaces entered as "Parking Lot"	122 parking spaces entered as "Enclosed Parking with an Elevator"	117 parking spaces entered as "Enclosed Parking with an Elevator"
Other <i>Note: Demolition and Site Preparation were assumed to occur all during Phase 1. The construction phasing for Phase 2 & 3 were adjusted accordingly.</i>	1.11 acres of "Other Asphalt Surface" to represent driveways that would be constructed during Phase 1 77,000 square feet of building demolition. 52 one-way trips estimated for pavement hauling during demolition	Construction phases included were grading, trenching, building construction, paving, and architectural coating	Construction phases included were grading, trenching, building construction, paving, and architectural coating

As stated above, the project applicant did provide the start and end dates for each phase. Therefore, the provided start date was used, but the end date and length of each phase was based on the estimated construction schedule generated by CalEEMod defaults. The estimated construction length of each phase is as follows:

- Phase I construction would begin January 2021 and last 12 months,
- Phase 2 construction would start May 2021 and last 13 months
- Phase 3 construction would start December 2021 and 12 months⁷

The estimated number of construction workdays (considering the schedule overlap) would be 540 days. 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 the construction period emissions would not exceed the BAAQMD significance thresholds.

Table 3. Construction Period Emissions

Scenario	ROG	NO _x	PM ₁₀ Exhaust	PM _{2.5} Exhaust
2021 Construction Emissions (includes Phase 1 and Phase 2 construction)	0.77 tons	3.61 tons	0.17 tons	0.16 tons
2022 Construction Emissions (includes Phase 2 and Phase 2 construction)	2.65 tons	3.19 tons	0.15 tons	0.14 tons
Total construction emissions (tons)	3.41 tons	6.80 tons	0.32 tons	0.31 tons
Average daily emissions (pounds)¹	13.55 lbs./day	26.98 lbs./day	1.28 lbs./day	1.21 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
Notes: ¹ Assumes 504 workdays.				

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM₁₀ and PM_{2.5}. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices.*

⁷ The provided construction start and end dates assumed that Phase 3 construction would start in December 2021 and end in June 2023. More detailed construction scheduling and equipment were not available at the time of this analysis. Therefore, the CalEEMod default construction schedule that was used did not have Phase 3 construction continue into the year 2023. However, due to the condensed construction timeline the average daily construction period emissions would be slightly overpredicted since the number of workdays estimated are less than the proposed length of construction. Thus, construction period emissions are predicted to be even less if the actual number of workdays were used within the evaluation.

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

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

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

Effectiveness of Mitigation Measure AQ-1

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

Operational Period Emissions

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

Land Uses

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

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest the project could possibly be constructed and begin operating would be 2024. Emissions associated with build-out later than 2024 would be lower.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation table. 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. The project traffic analysis provided project trip generation values for the townhomes/condominiums.⁸ The weekday trip rate used for the apartments was 7.32 trips per day. This changed the Saturday trip rate to 7.14 trips per day and the Sunday trip rate to 6.09 trips per day.

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. Indirect emissions from electricity were computed in CalEEMod. The model has a default rate of 641.3 pounds of CO₂ per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. The rate was adjusted to account for PG&E's projected 2020 CO₂ intensity rate. This 2020 rate is based, in part, on the requirement of a renewable energy portfolio standard of 33 percent by the year 2020. The derived 2020 rate for PG&E was estimated at 290 pounds of CO₂ per megawatt of electricity delivered.⁹

⁸ Hexagon Transportation Consultants, Inc., 2019. *5150 El Camino Real Residential Development*. January

⁹ Pacific Gas & Electric, 2015. *Greenhouse Gas Emission Factors: Guidance for PG&E Customers*. November.

Other Inputs

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions. All hearths were assumed to be powered by gas.

Existing Uses

A CalEEMod model run was developed to compute emissions from use of the existing building as if it was operating in 2024. The input for this modeling scenario included 77,000-sf entered as “General Office Building”. This input was applied to the model in the same manner described for the proposed project.

As shown in Table 4, operational emissions would not exceed the BAAQMD significance thresholds. This would be considered a *less-than-significant* impact.

Table 4. Operational Emissions

Scenario	ROG	NOx	Total PM ₁₀	Total PM _{2.5}
2024 Project Operational Emissions (tons/year)	2.05 tons	1.27 tons	1.23 tons	0.35 tons
2024 Existing Use Emissions (tons/year)	0.48 tons	0.57 tons	0.58 tons	0.16 tons
Net Annual Emissions (tons/year)	1.57 tons	0.71 tons	0.65 tons	0.19 tons
BAAQMD Thresholds (tons/year)	10 tons	10 tons	15 tons	10 tons
Exceed Threshold?	No	No	No	No
2021 Project Operational Emissions (lbs/day) ¹	8.63 lbs.	3.87 lbs.	3.55 lbs.	1.04 lbs.
BAAQMD Thresholds (pounds/day)	54 lbs.	54 lbs.	82 lbs.	54 lbs.
Exceed Threshold?	No	No	No	No

Notes: ¹ Assumes 365-day operation.

Impact 2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity.

The project would introduce new residents that are sensitive receptors. Additionally, temporary project construction activity would generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors. A construction health risk assessment was prepared to address project construction impacts on the offsite sensitive receptors. Operation of the project is not expected to be a source of TAC or localized air pollutant emissions, as the project would not generate substantial truck traffic or include stationary sources of emissions.

Community risk impacts are addressed by predicting increased lifetime cancer risk, the increase

in annual PM_{2.5} concentrations and computing the Hazard Index (HI) for non-cancer health risks. The following sections discuss the community health risk impacts from construction, health risk impacts to the new project sensitive receptors, and the cumulative community health risk impact. The methodology for computing community risks impacts is contained in *Attachment 1*.

Construction Community Health Risk Impacts

Project Construction Activity

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary 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}.¹⁰ This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

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, with total emissions from all construction stages as 0.3217 tons (643 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive PM_{2.5} dust emissions were calculated by CalEEMod as 0.0873 tons (175 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM_{2.5} at sensitive receptors (residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.¹¹ For each of the construction sites modeled, the modeling utilized two area sources to represent the on-site construction emissions, one for exhaust emissions and one for fugitive dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (19.7 feet) was used for the area sources. The elevated source height reflects the height of the equipment exhaust pipes plus an additional

¹⁰ DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

¹¹ Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May.

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 2 meters (6.6 feet) 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 4 p.m., when the majority of construction activity would occur.

The modeling used a 5-year meteorological data set (2009-2013) from the Moffett Federal Airfield Airport prepared for use with the AERMOD model by CARB. Annual DPM and PM_{2.5} concentrations from construction activities at the project site during the 2021-2023 period were calculated using the model. DPM and PM_{2.5} concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 1.5 meters (4.9 feet) and 4.5 meters (14.7 feet) were used to represent the breathing height of nearby residences in nearby apartments and single-family homes.

Community Risk Impacts

Figure 1 shows the locations where the maximum-modeled DPM and PM_{2.5} concentrations occurred. The maximum concentrations occurred on the first-floor (1.5-meter receptor breathing height) of a townhome residence located southeast of the project site. The maximum increased cancer risk at the location of the maximally exposed individual (MEI) was calculated using the BAAQMD recommended methods and the maximum annual modeled DPM concentration. The cancer risk calculations are based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. BAAQMD-recommended exposure parameters were used for the cancer risk calculations, as described in *Attachment 1*. Infant and adult exposures were assumed to occur at all residences through the entire construction period. *Attachment 3* includes the construction emission calculations and source information used in the modeling and the cancer risk calculations.

Results of this assessment indicated that the maximum excess residential cancer risks, maximum PM_{2.5} concentration, and HI would exceed the BAAQMD significance threshold of 10 in one million for cancer risk, 0.3 µg/m³ for PM_{2.5} concentrations, and 0.1 for HI. *Implementation of Mitigation Measure AQ-2 would reduce these impacts to a level of less-than-significant* as seen in Table 5.

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	148.6 (infant)	0.85	0.13
Mitigated	3.0 (infant)	0.05	<0.01
<i>BAAQMD Single-Source Threshold</i>	<i>>10.0</i>	<i>>0.3</i>	<i>>0.1</i>
<i>Significant?</i>			
Unmitigated	Yes	Yes	Yes
Mitigated	No	No	No

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



Additionally, modeling was conducted to calculate the risk impacts at two sensitive receptor groups, which included KinderCare Mountain View and Mountain View-Los Altos Montessori Children’s Center. Both are learning centers for children; however, KinderCare also provides infant (6 weeks to 1 year old) education and care. Modeling was also done for the occupants of the proposed townhomes. The modeling done to calculate the cancer risks, non-cancer health hazards, and maximum PM_{2.5} at each nearby group are described below.

KinderCare Mountain View

The KinderCare Mountain View school is adjacent to the eastern project boundary and approximately 70 feet away. A receptor height of 1.0 meter (3.3 feet) was used to represent the breathing height of the infants and children at the school. The exposure parameters for infants between the ages of 0-2 years old were used to calculate the maximum cancer risk. Results of this assessment indicated that maximum increased cancer risk, assuming child exposure and without any mitigation or construction emissions control, would be 106.2 in one million. The maximum-modeled annual PM_{2.5} concentration, which is based on combined exhaust and fugitive dust emissions, would be 0.65 µg/m³, and the maximum computed HI based on this DPM concentration

would be 0.09. The cancer risk and maximum PM_{2.5} concentration do exceed their respective BAAQMD single-source thresholds. However, with *Mitigation Measure AQ-2* these risks are reduced to the following concentrations: 2.0 per million for the maximum cancer risk, 0.05 µg/m³ for the PM_{2.5} concentration, and <0.01 for the HI. None of these risk values exceed the BAAQMD single-source significance threshold for annual cancer risk, PM_{2.5} concentration, or HI.

Mountain View-Los Altos Montessori Children's Center

Mountain View-Los Altos Montessori Children's Center is located approximately 350 feet northwest of the project. The same breathing height was used, but the child exposure parameters were used to calculate the maximum cancer risk instead of the infant exposure parameters since the school is for preschoolers and kindergarteners. The results showed that the maximum increased cancer risk for the students would be 2.0 per million, the maximum annual PM_{2.5} concentration would be 0.05 µg/m³, and the HI would be 0.01. These risk values would not exceed the BAAQMD single-source significance threshold for annual cancer risk, PM_{2.5} concentration, or HI.

Project Sensitive Receptors

This analysis assumed that Phase 1 of the project could be occupied during construction of Phase II and III. During Phase II (i.e. year 2022 of construction), it is assumed that the townhomes would be occupied with new sensitive receptors based on information from the project applicant. For one year of exposure to construction, the maximum cancer risk would be 161.6 per million (assuming infant exposure), the PM_{2.5} concentration would 1.59 µg/m³, and the HI would be 0.20. The maximum cancer risk and PM_{2.5} concentration do exceed the BAAQMD single-source threshold of 10 per million for cancer risk and 0.3 µg/m³ for PM_{2.5} concentrations. However, with *Mitigation Measure AQ-2* the maximum cancer risk would be 5.0 per million (assuming infant exposure), the PM_{2.5} concentration would be 0.21 µg/m³, and the HI would be 0.01. These risk impacts are below the BAAQMD single-source threshold for cancer risk, PM_{2.5} concentration, and HI.

Mitigation Measure 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 on-site to construct the project would achieve a fleet-wide average 93-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, at a minimum, meet U.S. EPA particulate matter emissions standards for Tier 4 engines.¹² Equipment that is electrically powered or uses non-diesel fuels would meet this requirement.
2. Cranes and generators set used during construction should be electrically powered.
3. Portable equipment (i.e. air compressors and welders) should also be electrically powered.

¹² See <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

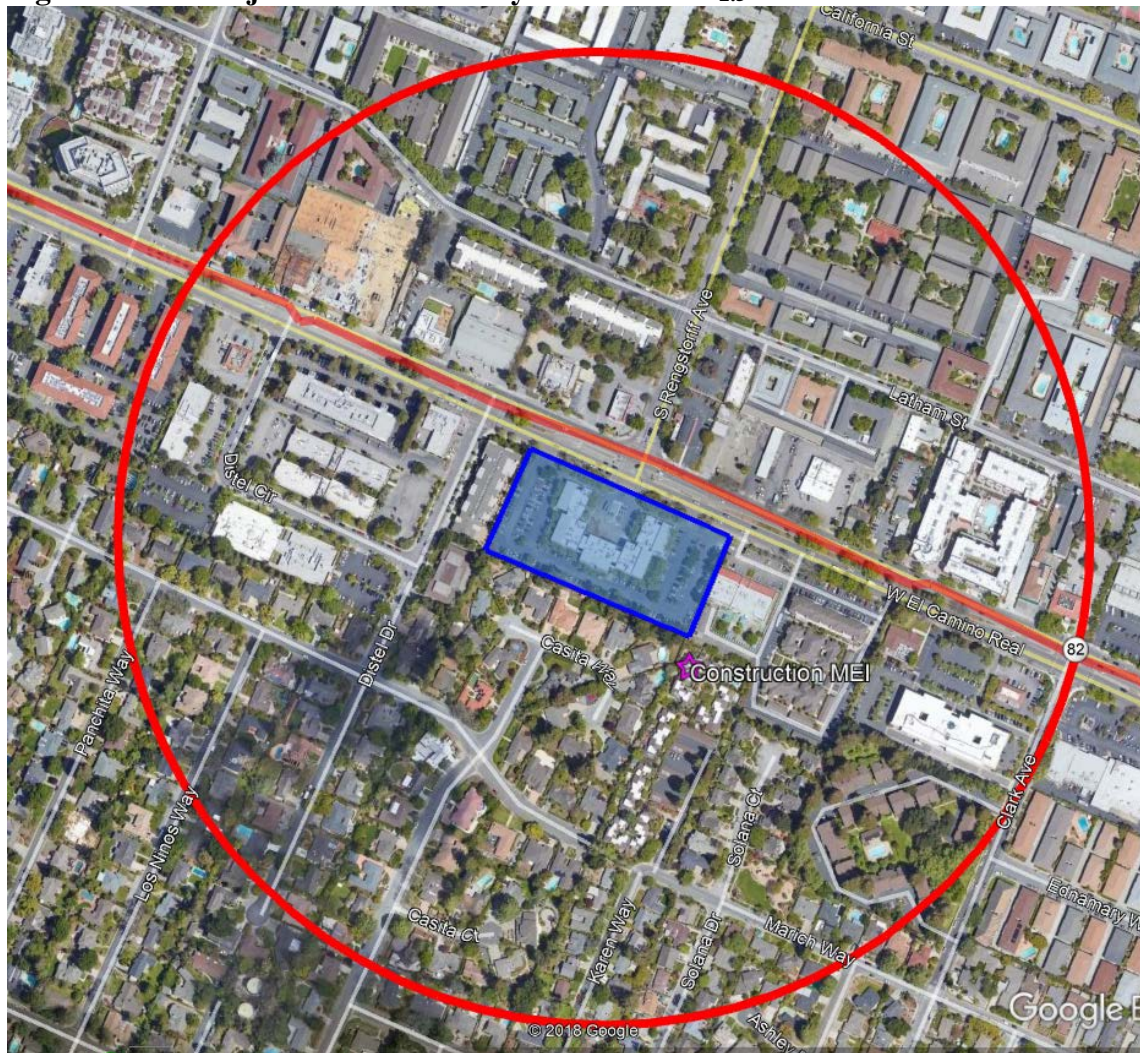
Effectiveness of Mitigation AQ-2

With mitigation described above using equipment that meets Tier 4 particulate matter standards and using some electrical equipment, 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 0.05 µg/m³, and the Hazard Index would be <0.01.

Operational Community Health Risk Impacts – New Residences

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. The only source of TACs and localized air pollutants in the vicinity of the project is traffic from El Camino Real. No stationary sources of TACs were identified within the 1,000-ft influence area. The impacts of El Camino Real traffic upon the project were assessed. Figure 2 shows the sources affecting the project site. Details of the modeling and community risk calculations are included in *Attachment 4*.

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



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. No stationary sources were found using this tool.

Highways – El Camino Real (State Route 82)

Since the BAAQMD screening tools indicated increased cancer risk at the project, dwelling units closest to El Camino Real, could exceed the cancer risk single-source thresholds, refined modeling was conducted. Refined modeling tends to predict more accurate results than the BAAQMD screening tool because project-specific information is used in the modeling. This includes roadway orientation with respect to receptors (i.e., where dwelling units would be located with respect to traffic), emission estimates (i.e., based on traffic speeds and traffic mix), and meteorological conditions near the project.

The refined analysis involved predicting traffic emissions for the traffic volume and mix of vehicle types on El Camino Real near the project site. These emissions were entered into a dispersion model to predict exposure to TACs. The associated cancer risks were computed based on the BAAQMD recommended methods¹³. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

A review of the traffic information reported by Caltrans indicates that the section of El Camino Real closest to the project has an average daily traffic (ADT) of 45,200 vehicles, as reported by Caltrans.¹⁴ This includes about 2.6 percent trucks, of which 0.6 percent are considered heavy duty trucks and 2.0 percent are medium duty trucks.¹⁵ The analysis involved the development of DPM, PM_{2.5}, and organic TAC emissions for traffic on El Camino Real using the CARB EMFAC2014 emission factor model and the traffic mix on El Camino Real, based on the Caltrans traffic data. DPM emissions are projected to decrease in the future and are reflected in the EMFAC2014 emissions data. 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 retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

Residential occupation of the project was assumed to begin in 2024 or thereafter. In order to estimate TAC and PM_{2.5} emissions over the 30-year exposure period used for calculating increased cancer risks of new project residents from traffic on El Camino Real, the EMFAC2014 model was used to develop vehicle emission factors for the year 2024 using the calculated mix of cars and

¹³ BAAQMD *Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

¹⁴ California Department of Transportation. 2018. *2017 Traffic Volumes on the California State Highway System*.

¹⁵ California Department of Transportation. 2017. *2016 Annual Average Daily Truck Traffic on California State Highways*

trucks on El Camino Real. Year 2024 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated (30 years), since overall vehicle emissions, and in particular diesel truck emissions will decrease in the future. Default EMFAC2014 vehicle model fleet age distributions for Santa Clara County were assumed. Average daily traffic volumes were calculated for 2024 based on Caltrans data for El Camino Real in 2017 and assuming traffic volumes increased 1 percent per year. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,¹⁶ which were then applied to the average daily traffic volumes to obtain estimated hourly traffic volumes and emissions for El Camino Real. An average travel speed of 35 mph was used for all hours except two hours in the morning and evening peak periods. Average travel speeds during those hours were assumed to be 25 mph between 7 a.m. and 9 a.m. and between 4 p.m. and 6 p.m.

Emissions of total organic gases (TOG) were also calculated for 2024 using the EMFAC2014 model. These TOG emissions were then used in the modeling the organic TACs. TOG emissions from exhaust and for running evaporative losses from gasoline vehicles were calculated using EMFAC2014 default model values for Santa Clara County along with the traffic volumes and vehicle mixes for El Camino Real. PM_{2.5} emissions for vehicles traveling on El Camino Real were modeled using the same basic modeling approach that was used for assessing TAC emissions. All PM_{2.5} emissions from all vehicles were used, rather than just the PM_{2.5} fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce PM_{2.5}. Additionally, PM_{2.5} emissions from vehicle tire and brake wear and from re-entrained roadway dust were included in these emissions. PM_{2.5} re-entrained dust emissions from vehicles traffic were calculated using CARB emission calculation procedures.¹⁷ The emission rate calculations used in the analysis are shown in *Attachment 4*.

Dispersion modeling of TAC and PM_{2.5} emissions was conducted using the EPA AERMOD model, which is a BAAQMD recommended model for this type of analysis.¹⁸ East and west bound traffic on El Camino Real within about 1,000 feet of the project site were evaluated with the model. The modeling used a five-year data set (2006-2010) of hourly meteorological data from the San Jose Airport prepared by the BAAQMD for use with the AERMOD model. The airport is about 13 miles east of the project site. Other inputs to the model included road geometry, emission rates, and on-site project receptor locations and heights. Emissions from vehicles traveling on El Camino Real were modeled as line sources comprised of a series adjacent volume sources along each road segment modeled. The modeling included on-site receptors placed in the project residential areas on the first, second and third floor levels with 5-meter spacing (16.4 feet) between receptors. Receptor heights of 1.5 meters (4.9 feet), 4.95 meters (16.2 feet), and 8.2 meters (26.9 feet) were used to represent the breathing heights of residents on the first, second, and third floor receptors, respectively. The closest receptors to El Camino Real, and most affected, are those at the first floor that were represented with a receptor height of 1.5 meters. Figure 3 shows the roadway segments modeled and the project residential receptor locations used in the modeling.

¹⁶ The Burden output from EMFAC2007, a previous version of the EMFAC model, was used for this since the current web-based version of EMFAC2014 does not include Burden type output with hour by hour traffic volume information.

¹⁷ CARB, 2014. *Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust*. Revised and updated, April 2014.

¹⁸ BAAQMD, 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012.

The maximum increased lifetime cancer risk and annual PM_{2.5} concentrations for new residents at the first through third floor levels are shown in Table 6 and were computed using modeled TAC and PM_{2.5} concentrations and the BAAQMD recommended methods and exposure parameters described in *Attachment 1*. The maximum impacts occurred at the first-floor residential level in the northeastern portion of the project site. The maximum cancer risk of 3.3 in one million is below the BAAQMD significance threshold of greater than 10.0 in one million for cancer risk. The maximum PM_{2.5} concentration of 0.76 µg/m³ is above the BAAQMD significance threshold of an annual PM_{2.5} concentration greater than 0.3 µg/m³. The maximum non-cancer health impact (hazard index) is less than 0.01 and is well below its BAAQMD significance threshold of a hazard index of 1.0. The location where the maximum TAC and PM_{2.5} impacts from El Camino Real occurred is shown in Figure 3. Cancer risk at all floor levels and PM_{2.5} impacts above the second-floor level would be below the significance thresholds for cancer risk and PM_{2.5} concentration. Figure 4 shows the computed lifetime cancer risk at first floor residential locations across the site. Modeled cancer risks range from 1.2 in one million to 3.3 in one million. Figures 5 and 6 show the annual PM_{2.5} concentrations at first and second floor residential locations across the project site. On the first-floor level the PM_{2.5} concentrations range from 0.25 to 0.76 µg/m³. For the second-floor level the PM_{2.5} concentrations range from 0.22 to 0.50 µg/m³. Results are listed in Table 6.

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*.

Figure 3. Project Site, On-Site Sensitive Receptors, Roadway Segments Modeled and Receptors with Maximum TAC Impacts

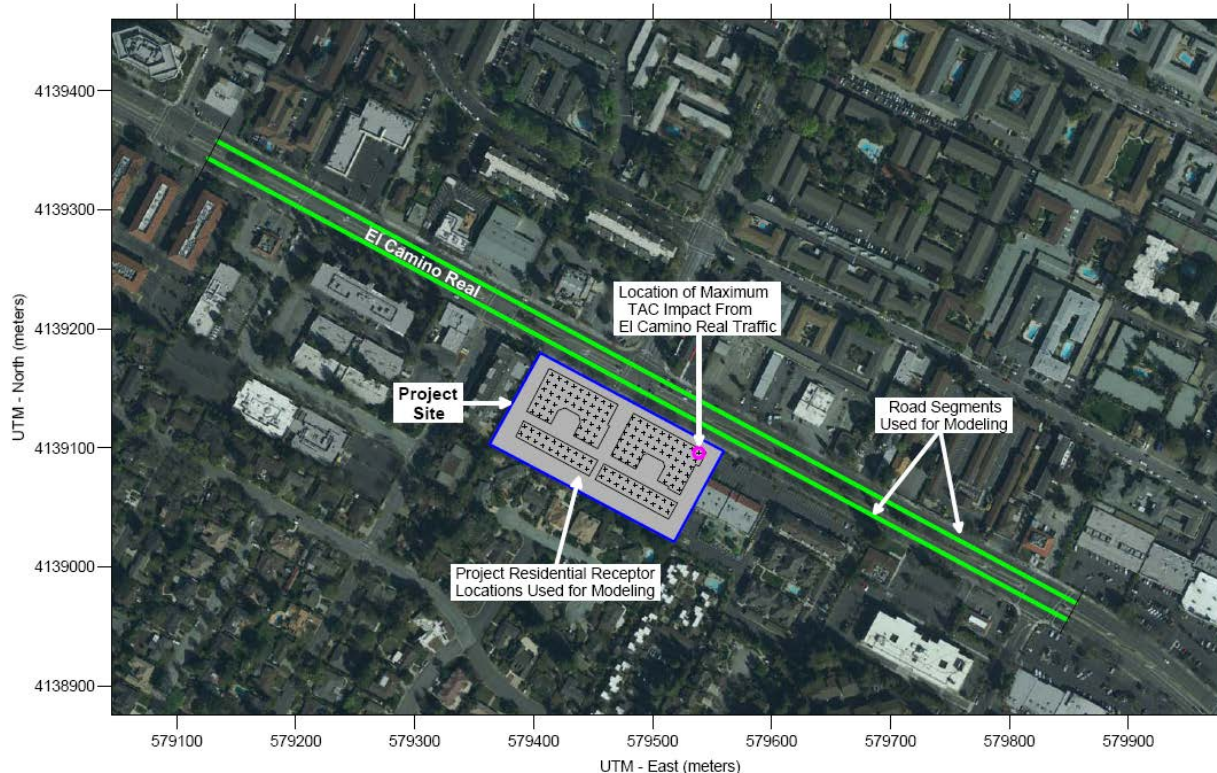


Table 6. Maximum Health Risk Impacts from El Camino Real Traffic at Project Site

Source/Receptor Locations	Maximum Cancer Risk (per million)	Maximum Annual PM _{2.5} (µg/m ³)	Maximum Hazard Index
El Camino Real Traffic			
1 st Floor Level	3.3	0.76	<0.01
2 nd Floor Level	2.4	0.50	<0.01
3 rd Floor Level and above	1.3	0.25	<0.01
BAAQMD Single-Source Threshold	>10.0	>0.3	>1.0
<i>Significant?</i>	<i>No</i>	<i>Yes</i>	<i>No</i>

Figure 4. 1st Floor Level - Maximum Increased Cancer Risks (per million) in Residential Areas

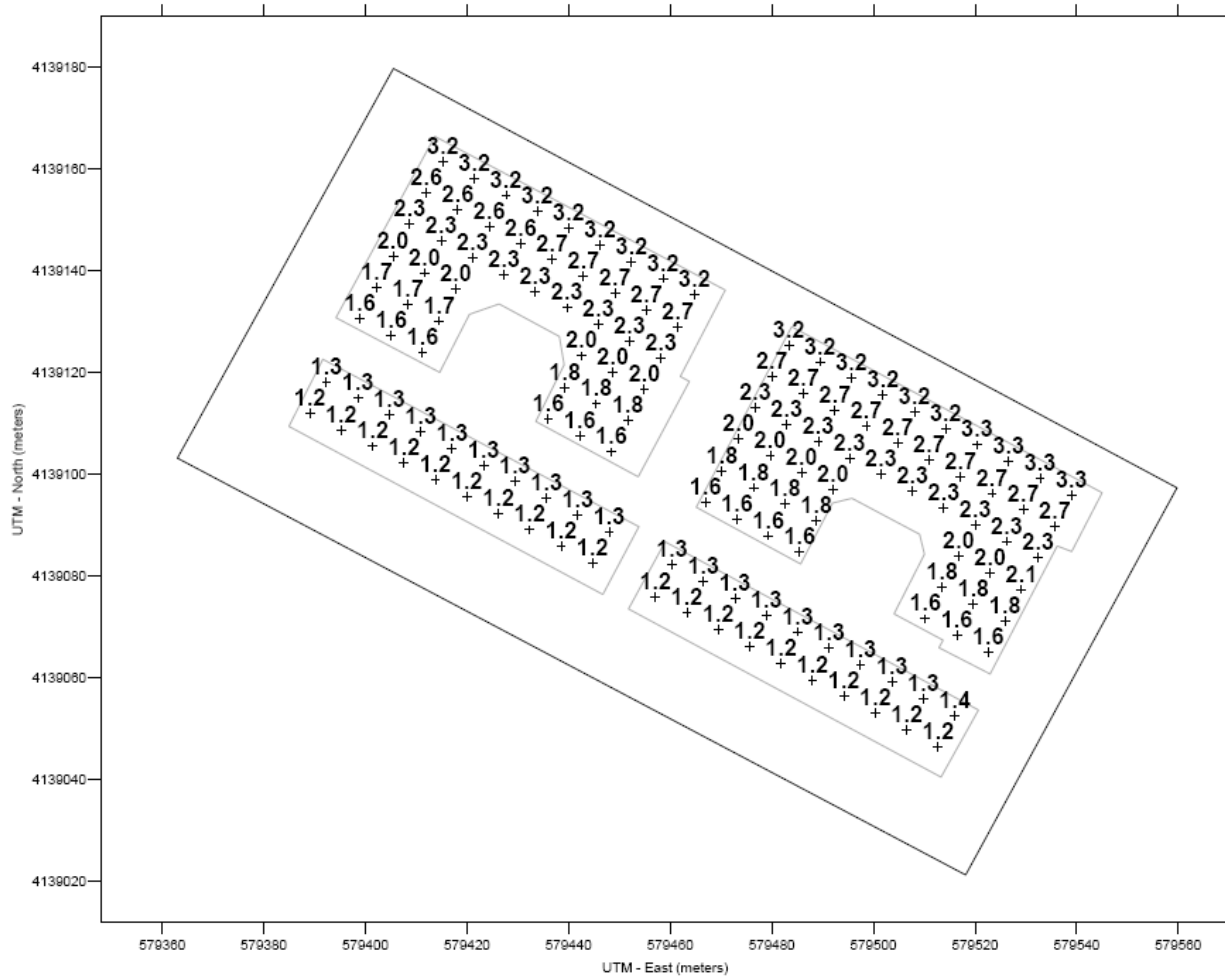


Figure 5. 1st Floor Level - Maximum PM_{2.5} Concentrations ($\mu\text{g}/\text{m}^3$) in Residential Areas

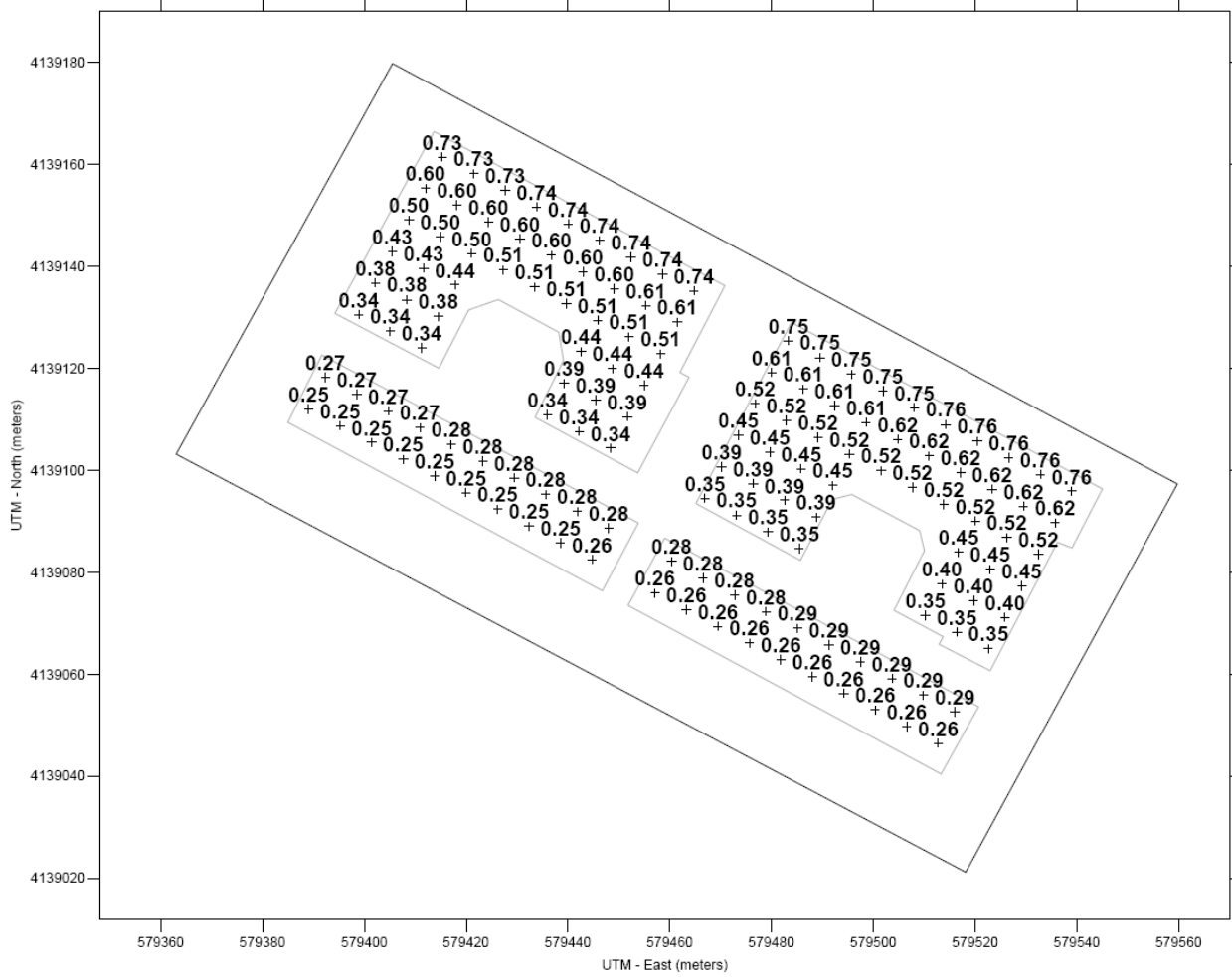
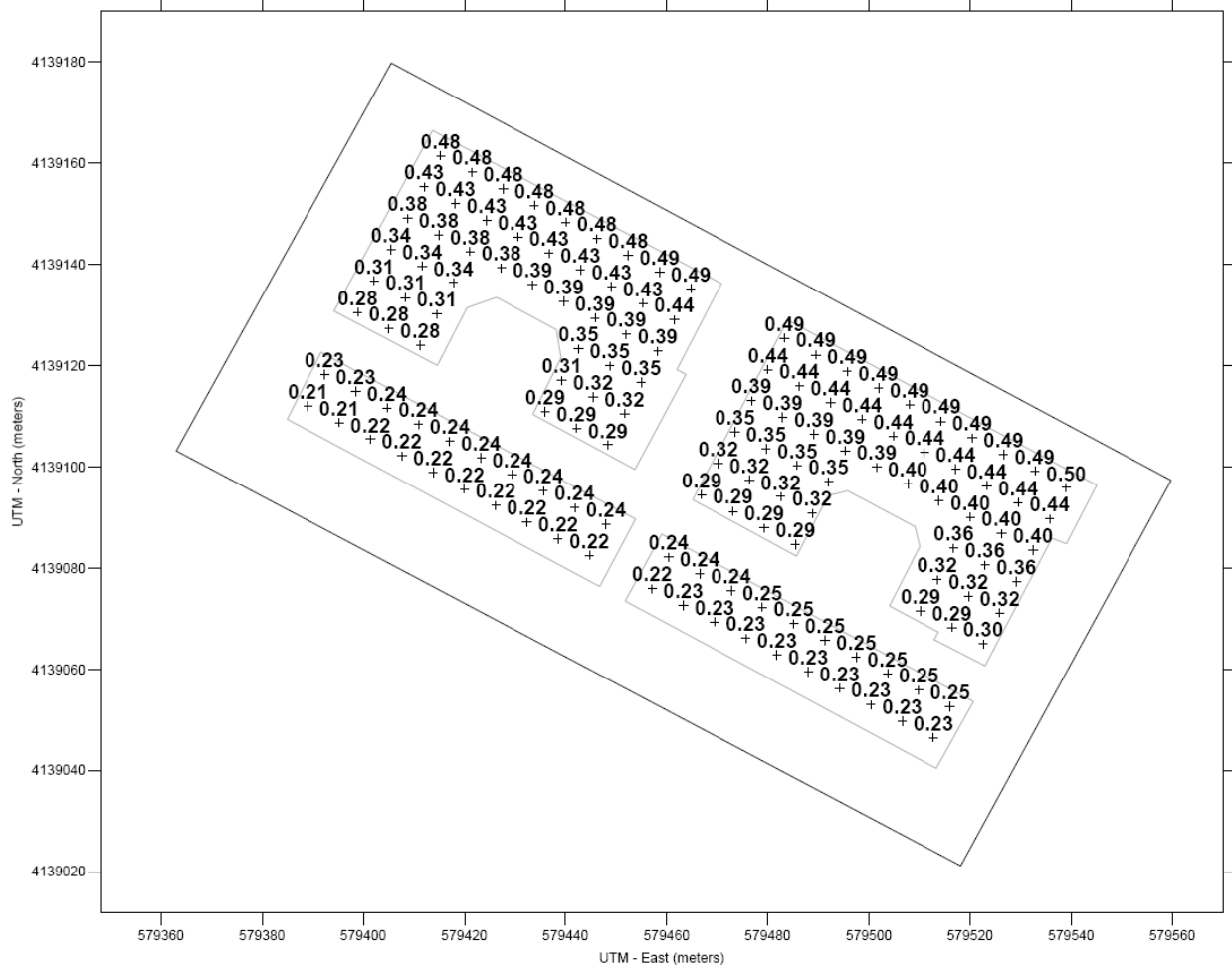


Figure 6. 2nd Floor Level - Maximum PM_{2.5} Concentrations (µg/m³) in Residential Areas



Cumulative Community Health Risk at Project Site

As stated earlier in the report, the only TAC source within the 1,000-ft influence area that would impact the incoming project sensitive receptors is vehicular traffic on El Camino Real. The PM_{2.5} concentrations as seen in Table 6 above exceed the BAAQMD single-source threshold of 0.3 µg/m³ for PM_{2.5} concentrations. The maximum cancer and HI risks do not exceed their respective BAAQMD single-source threshold. *Mitigation Measure AQ-3 would reduce the PM_{2.5} concentrations on the first and second floor of the condominiums to a level of less-than-significant.*

Mitigation Measure AQ-3: The project shall include the following measures to minimize long-term TAC and annual PM_{2.5} exposure for new project occupants:

The project should install air filtration at residential units within 50 feet of El Camino Real. To ensure adequate health protection to sensitive receptors, a ventilation system is proposed to meet the following minimal design standards:

1. Install air filtration in residential buildings. Air filtration devices shall be rated MERV13 or higher for portions of the site that have annual PM_{2.5} exposure above 0.3 µg/m³ (see Figure 5 and 6, as this included the residential buildings closest to El Camino Real). 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.

Effectiveness of Mitigation AQ-3

A properly installed and operated ventilation system with MERV13 would achieve an 80-percent reduction¹⁹. PM_{2.5} exposures for MERV13 filtration cases were calculated assuming a combination of outdoor and indoor exposure. For use of MERV13 filtration systems, assuming exposure to outdoor air at each unit (from open windows or being outside the unit) 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 MERV13 is about 70 percent for PM_{2.5} exposure. This would

¹⁹ 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

reduce the maximum annual PM_{2.5} concentration of 0.76 to about 0.23 µg/m³. This level would be below the recommended significance thresholds for annual PM_{2.5} exposure from any single source of air pollutants or TACs.

Cumulative Impact on Off-Site Construction MEI

Table 7 reports both the project and cumulative community risk impacts at the sensitive receptor most affected by construction (i.e. the MEI). Without mitigation, the project would have a *significant* impact with respect to community risk caused by project construction activities, since the maximum cancer risk and PM_{2.5} concentration exceed their single-source thresholds. The combined unmitigated annual cancer risk and maximum PM_{2.5} concentration would also exceed the cumulative-source thresholds. However, *Mitigation Measure AQ-2*, as mentioned above, would reduce these risks to a level of *less-than-significant* as seen in Table 7.

Table 7. Impacts from Combined Sources at Off-Site MEI

Source	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
Project Construction	Unmitigated	148.6 (infant)	0.85
	Mitigated	3.0 (infant)	0.05
El Camino Real (i.e. Highway 82) at 360 feet south	11.1	0.11	0.01
Combined Sources	Unmitigated	159.7 (infant)	0.96
	Mitigated	14.1(infant)	0.16
<i>BAAQMD Cumulative Source Threshold</i>	<i>>100</i>	<i>>0.8</i>	<i>>10.0</i>
<i>Significant?</i>			
Unmitigated	Yes	Yes	No
Mitigated	No	No	No

Greenhouse Gas Emissions

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.

BAAQMD Significance Thresholds

The BAAQMD’s CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the 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 2.6 MT CO₂e/year/service population. This is calculated for 2030 based on the GHG reduction goals of EO B-30-15, taking into account the 1990 inventory and the projected 2030 statewide population and employment levels.²⁰

²⁰ Association of Environmental Professionals, 2016. *Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California*. April.

Impact 4: 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, 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 within the operational period emissions. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future residents and future employees. For this project, the number of future residents was estimated by multiplying the total number of units by the persons per household rate for the City found in the California Department of Finance Population and Housing Estimate report.²¹ Using the 2.77 persons per household 2018 estimate for Los Altos, the number of future residents is estimated to be 543 (i.e. 196 dwelling units multiplied by 2.77 person per household).

Construction Emissions

GHG emissions associated with construction were computed to be 1,158 MT of CO_{2e} 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 Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully-developed site under the proposed project. As shown in Table 6, annual net emissions resulting from operation of the proposed project are predicted to be 761 MT of CO_{2e} for the year 2024 and 601 MT of CO_{2e} for the year 2030. The 2030 emissions do not exceed the 2030 “Substantial Progress” threshold of 660 MT of CO_{2e}/yr. The Service Population Emissions for the year 2024 would be 2.9 MT CO_{2e}/year/service

²¹ State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2018*. Sacramento, California, May 2018.

population and 2.7 MT CO_{2e}/year/service population for the year 2030. The 2030 Service Population Emissions do exceed the “Substantial Progress” efficiency metric of 2.6 MT CO_{2e}/year/service population.

To be considered significant, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold. This project does not exceed the 2030 baseline metric ton threshold. Therefore, the project would have a *less-than-significant* impact regarding GHG emissions.

Table 6. Annual Project GHG Emissions (CO_{2e}) in Metric Tons & Per Capita

Source Category	Existing in 2024	Proposed Project in 2024	Proposed Project in 2030
Area	<1	18	18
Energy Consumption	249	403	403
Mobile	531	1,113	953
Solid Waste Generation	36	45	45
Water Usage	22	21	21
Total	839	1,600	1,440
Net New Emissions		761 MT CO_{2e}/year	601 MT CO_{2e}/year
Significance Threshold			<i>660 MT CO_{2e}/year</i>
Service Population Emissions (MT CO _{2e} /year/service population)		2.9	2.7
Significance Threshold			<i>2.6 in 2030</i>
Significant (Exceeds both thresholds)?			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 is also included in this attachment. Also included are any modeling assumptions.

Attachment 3 is the construction 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 emission and health risk assessment calculations for Highway 82 (El Camino Real). AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.²² 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.²³ This HRA used the recent 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.²⁴ 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 are 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 of exposure, and the exposure duration. 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). As recommended by the BAAQMD, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. Additionally, CARB and the BAAQMD recommend

²² 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.

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

²⁴ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways).

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 that would have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

In the case of cancer risk associated with construction, residential receptors are assumed to include 3rd-trimester fetus and infants. From a cancer-risk perspective, infants would be the most sensitive because of their higher breathing rate. Construction projects that last two years or less assume infant exposure while projects lasting longer include 3rd-trimester fetus, infant and child exposures. These exposure assumptions provide the most conservative estimate of cancer risk.

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)
- A = Inhalation absorption factor
- EF = Exposure frequency (days/year)
- 10⁻⁶ = Conversion factor

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

Parameter	Exposure Type →	Infant		Child		Adult
	Age Range →	3 rd Trimester	0<2	2 < 9	2 < 16	16 - 30
DPM Cancer Potency Factor (mg/kg-day) ⁻¹		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day)*		361	1,090	631	572	261
Inhalation Absorption Factor		1	1	1	1	1
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14
Exposure Frequency (days/year)		350	350	350	350	350

Age Sensitivity Factor	10	10	3	3	1
Fraction of Time at Home	0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73

* 95th percentile breathing rates for 3rd trimester and infants and 80th percentile for children and adults

Non-Cancer Hazards

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

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

Annual PM_{2.5} Concentrations

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

Attachment 2: CalEEMod Modeling Output

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

5150 ECR All Phases AQ Operation Emissions
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	24.00	Dwelling Unit	0.00	46,684.00	69
Condo/Townhouse	172.00	Dwelling Unit	3.80	322,174.00	492
Parking Lot	6.00	Space	0.00	2,400.00	0
Enclosed Parking with Elevator	239.00	Space	2.15	95,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

Project Characteristics - PG&E 2020 290 Rate

Land Use - Project Land Uses

Construction Phase - Operational Emissions Run

Off-road Equipment - Operational Emissions

Vehicle Trips - weekday 7.32, sat 7.14, sun 6.09

Woodstoves - all gas

Water And Wastewater - 100% aerobic

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	PhaseEndDate	2/11/2021	1/29/2021
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	29.40	62.72
tblFireplaces	NumberWood	33.32	0.00
tblLandUse	LandUseSquareFeet	24,000.00	46,684.00
tblLandUse	LandUseSquareFeet	172,000.00	322,174.00
tblLandUse	LotAcreage	1.50	0.00
tblLandUse	LotAcreage	10.75	3.80
tblLandUse	LotAcreage	0.05	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	WorkerTripNumber	0.00	18.00
tblVehicleTrips	ST_TR	5.67	7.14
tblVehicleTrips	SU_TR	4.84	6.09

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tblVehicleTrips	WD_TR	5.81	7.32
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.0000	0.0000
		Highest	0.0000	0.0000

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	1.7541	0.0303	1.4627	1.6000e-004		9.1600e-003	9.1600e-003		9.1600e-003	9.1600e-003	0.0000	18.0415	18.0415	2.5900e-003	2.9000e-004	18.1918
Energy	0.0198	0.1691	0.0720	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	399.7142	399.7142	0.0241	7.8100e-003	402.6447
Mobile	0.2786	1.0748	3.2628	0.0121	1.1982	9.4600e-003	1.2076	0.3207	8.8000e-003	0.3295	0.0000	1,112.1445	1,112.1445	0.0345	0.0000	1,113.0077
Waste						0.0000	0.0000		0.0000	0.0000	18.3017	0.0000	18.3017	1.0816	0.0000	45.3416
Water						0.0000	0.0000		0.0000	0.0000	4.5181	12.7960	17.3141	0.0168	0.0101	20.7418
Total	2.0525	1.2742	4.7974	0.0134	1.1982	0.0323	1.2305	0.3207	0.0316	0.3523	22.8198	1,542.6962	1,565.5160	1.1597	0.0182	1,599.9276

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

2.2 Overall Operational

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	1.7541	0.0303	1.4627	1.6000e-004		9.1600e-003	9.1600e-003		9.1600e-003	9.1600e-003	0.0000	18.0415	18.0415	2.5900e-003	2.9000e-004	18.1918
Energy	0.0198	0.1691	0.0720	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	399.7142	399.7142	0.0241	7.8100e-003	402.6447
Mobile	0.2786	1.0748	3.2628	0.0121	1.1982	9.4600e-003	1.2076	0.3207	8.8000e-003	0.3295	0.0000	1,112.1445	1,112.1445	0.0345	0.0000	1,113.0077
Waste						0.0000	0.0000		0.0000	0.0000	18.3017	0.0000	18.3017	1.0816	0.0000	45.3416
Water						0.0000	0.0000		0.0000	0.0000	4.5181	12.7960	17.3141	0.0168	0.0101	20.7418
Total	2.0525	1.2742	4.7974	0.0134	1.1982	0.0323	1.2305	0.3207	0.0316	0.3523	22.8198	1,542.6962	1,565.5160	1.1597	0.0182	1,599.9276

	ROG	NOx	CO	SO2	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	1/29/2021	1/29/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 2.15

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40

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	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 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					0.0000	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
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
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	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591
Total	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591

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3.2 Site Preparation - 2021

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					0.0000	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
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction 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	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591
Total	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591

4.0 Operational Detail - Mobile

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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	0.2786	1.0748	3.2628	0.0121	1.1982	9.4600e-003	1.2076	0.3207	8.8000e-003	0.3295	0.0000	1,112.1445	1,112.1445	0.0345	0.0000	1,113.0077
Unmitigated	0.2786	1.0748	3.2628	0.0121	1.1982	9.4600e-003	1.2076	0.3207	8.8000e-003	0.3295	0.0000	1,112.1445	1,112.1445	0.0345	0.0000	1,113.0077

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	175.68	171.36	146.16	394,587	394,587
Condo/Townhouse	1,259.04	1,228.08	1047.48	2,827,870	2,827,870
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	1,434.72	1,399.44	1,193.64	3,222,456	3,222,456

4.3 Trip Type Information

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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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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
Condo/Townhouse	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704
Enclosed Parking with Elevator	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704
Parking Lot	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated							0.0000	0.0000		0.0000	0.0000	203.8846	203.8846	0.0204	4.2200e-003	205.6513
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	203.8846	203.8846	0.0204	4.2200e-003	205.6513
NaturalGas Mitigated	0.0198	0.1691	0.0720	1.0800e-003			0.0137	0.0137		0.0137	0.0137	195.8297	195.8297	3.7500e-003	3.5900e-003	196.9934
NaturalGas Unmitigated	0.0198	0.1691	0.0720	1.0800e-003			0.0137	0.0137		0.0137	0.0137	195.8297	195.8297	3.7500e-003	3.5900e-003	196.9934

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					
Condo/Townhouse	3.22036e+006	0.0174	0.1484	0.0631	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.8506	171.8506	3.2900e-003	3.1500e-003	172.8718
Condo/Townhouse	449352	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
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
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		0.0198	0.1691	0.0720	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	195.8297	195.8297	3.7500e-003	3.5900e-003	196.9934

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5.2 Energy by Land Use - NaturalGas

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					
Condo/Townhouse	3.22036e+006	0.0174	0.1484	0.0631	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.8506	171.8506	3.2900e-003	3.1500e-003	172.8718
Condo/Townhouse	449352	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
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
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		0.0198	0.1691	0.0720	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	195.8297	195.8297	3.7500e-003	3.5900e-003	196.9934

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	121090	15.9284	1.5900e-003	3.3000e-004	16.0665
Condo/Townhouse	867814	114.1538	0.0114	2.3600e-003	115.1430
Enclosed Parking with Elevator	560216	73.6918	7.3700e-003	1.5200e-003	74.3304
Parking Lot	840	0.1105	1.0000e-005	0.0000	0.1115
Total		203.8846	0.0204	4.2100e-003	205.6513

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	121090	15.9284	1.5900e-003	3.3000e-004	16.0665
Condo/Townhouse	867814	114.1538	0.0114	2.3600e-003	115.1430
Enclosed Parking with Elevator	560216	73.6918	7.3700e-003	1.5200e-003	74.3304
Parking Lot	840	0.1105	1.0000e-005	0.0000	0.1115
Total		203.8846	0.0204	4.2100e-003	205.6513

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7541	0.0303	1.4627	1.6000e-004		9.1600e-003	9.1600e-003		9.1600e-003	9.1600e-003	0.0000	18.0415	18.0415	2.5900e-003	2.9000e-004	18.1918
Unmitigated	1.7541	0.0303	1.4627	1.6000e-004		9.1600e-003	9.1600e-003		9.1600e-003	9.1600e-003	0.0000	18.0415	18.0415	2.5900e-003	2.9000e-004	18.1918

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	0.2617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.5800e-003	0.0135	5.7500e-003	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.6598	15.6598	3.0000e-004	2.9000e-004	15.7529
Landscaping	0.0440	0.0168	1.4570	8.0000e-005		8.0700e-003	8.0700e-003		8.0700e-003	8.0700e-003	0.0000	2.3816	2.3816	2.2900e-003	0.0000	2.4389
Total	1.7541	0.0303	1.4627	1.7000e-004		9.1600e-003	9.1600e-003		9.1600e-003	9.1600e-003	0.0000	18.0415	18.0415	2.5900e-003	2.9000e-004	18.1918

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6.2 Area by SubCategory**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	0.2617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.5800e-003	0.0135	5.7500e-003	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.6598	15.6598	3.0000e-004	2.9000e-004	15.7529
Landscaping	0.0440	0.0168	1.4570	8.0000e-005		8.0700e-003	8.0700e-003		8.0700e-003	8.0700e-003	0.0000	2.3816	2.3816	2.2900e-003	0.0000	2.4389
Total	1.7541	0.0303	1.4627	1.7000e-004		9.1600e-003	9.1600e-003		9.1600e-003	9.1600e-003	0.0000	18.0415	18.0415	2.5900e-003	2.9000e-004	18.1918

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	17.3141	0.0168	0.0101	20.7418
Unmitigated	17.3141	0.0168	0.0101	20.7418

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	12.7702 / 8.05077	17.3141	0.0168	0.0101	20.7418
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		17.3141	0.0168	0.0101	20.7418

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	12.7702 / 8.05077	17.3141	0.0168	0.0101	20.7418
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		17.3141	0.0168	0.0101	20.7418

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.3017	1.0816	0.0000	45.3416
Unmitigated	18.3017	1.0816	0.0000	45.3416

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	90.16	18.3017	1.0816	0.0000	45.3416
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		18.3017	1.0816	0.0000	45.3416

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	90.16	18.3017	1.0816	0.0000	45.3416
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		18.3017	1.0816	0.0000	45.3416

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
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

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

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	239.00	Space	2.15	95,600.00	0
Parking Lot	6.00	Space	0.00	2,400.00	0
Condo/Townhouse	24.00	Dwelling Unit	0.00	46,684.00	69
Condo/Townhouse	172.00	Dwelling Unit	3.80	322,174.00	492

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - PG&E 2020 290 Rate

Land Use - Project Land Uses

Construction Phase - Operational Emissions Run

Off-road Equipment - Operational Emissions

Vehicle Trips - weekday 7.32, sat 7.14, sun 6.09

Woodstoves - all gas

Water And Wastewater - 100% aerobic

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	29.40	62.72
tblFireplaces	NumberWood	33.32	0.00
tblLandUse	LandUseSquareFeet	172,000.00	322,174.00
tblLandUse	LandUseSquareFeet	24,000.00	46,684.00
tblLandUse	LotAcreage	0.05	0.00
tblLandUse	LotAcreage	10.75	3.80
tblLandUse	LotAcreage	1.50	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	WorkerTripNumber	0.00	18.00
tblVehicleTrips	ST_TR	5.67	7.14
tblVehicleTrips	SU_TR	4.84	6.09
tblVehicleTrips	WD_TR	5.81	7.32

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tbWater	AerobicPercent	87.46	100.00
tbWater	AerobicPercent	87.46	100.00
tbWater	AerobicPercent	87.46	100.00
tbWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbWater	SepticTankPercent	10.33	0.00
tbWater	SepticTankPercent	10.33	0.00
tbWater	SepticTankPercent	10.33	0.00
tbWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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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	0.0000	0.0000
		Highest	0.0000	0.0000

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	1.7538	0.0303	1.4595	1.6000e-004		9.1700e-003	9.1700e-003		9.1700e-003	9.1700e-003	0.0000	18.0415	18.0415	2.5800e-003	2.9000e-004	18.1914
Energy	0.0198	0.1691	0.0720	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	399.7142	399.7142	0.0241	7.8100e-003	402.6447
Mobile	0.2087	0.9014	2.4030	0.0104	1.1980	6.9400e-003	1.2049	0.3206	6.4500e-003	0.3271	0.0000	952.7738	952.7738	0.0274	0.0000	953.4589
Waste						0.0000	0.0000		0.0000	0.0000	18.3017	0.0000	18.3017	1.0816	0.0000	45.3416
Water						0.0000	0.0000		0.0000	0.0000	4.5181	12.7960	17.3141	0.0168	0.0101	20.7418
Total	1.9823	1.1007	3.9344	0.0116	1.1980	0.0298	1.2278	0.3206	0.0293	0.3499	22.8198	1,383.3256	1,406.1453	1.1526	0.0182	1,440.3784

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2.2 Overall Operational

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	1.7538	0.0303	1.4595	1.6000e-004		9.1700e-003	9.1700e-003		9.1700e-003	9.1700e-003	0.0000	18.0415	18.0415	2.5800e-003	2.9000e-004	18.1914
Energy	0.0198	0.1691	0.0720	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	399.7142	399.7142	0.0241	7.8100e-003	402.6447
Mobile	0.2087	0.9014	2.4030	0.0104	1.1980	6.9400e-003	1.2049	0.3206	6.4500e-003	0.3271	0.0000	952.7738	952.7738	0.0274	0.0000	953.4589
Waste						0.0000	0.0000		0.0000	0.0000	18.3017	0.0000	18.3017	1.0816	0.0000	45.3416
Water						0.0000	0.0000		0.0000	0.0000	4.5181	12.7960	17.3141	0.0168	0.0101	20.7418
Total	1.9823	1.1007	3.9344	0.0116	1.1980	0.0298	1.2278	0.3206	0.0293	0.3499	22.8198	1,383.3256	1,406.1453	1.1526	0.0182	1,440.3784

	ROG	NOx	CO	SO2	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	1/29/2021	1/29/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 2.15

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 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					0.0000	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
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
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	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591
Total	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591

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3.2 Site Preparation - 2021

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					0.0000	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
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction 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	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591
Total	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591

4.0 Operational Detail - Mobile

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

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	0.2087	0.9014	2.4030	0.0104	1.1980	6.9400e-003	1.2049	0.3206	6.4500e-003	0.3271	0.0000	952.7738	952.7738	0.0274	0.0000	953.4589
Unmitigated	0.2087	0.9014	2.4030	0.0104	1.1980	6.9400e-003	1.2049	0.3206	6.4500e-003	0.3271	0.0000	952.7738	952.7738	0.0274	0.0000	953.4589

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	175.68	171.36	146.16	394,587	394,587
Condo/Townhouse	1,259.04	1,228.08	1047.48	2,827,870	2,827,870
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	1,434.72	1,399.44	1,193.64	3,222,456	3,222,456

4.3 Trip Type Information

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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
Condo/Townhouse	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651
Enclosed Parking with Elevator	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651
Parking Lot	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

	ROG	NOx	CO	SO2	Fugitive 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	203.8846	203.8846	0.0204	4.2200e-003	205.6513
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	203.8846	203.8846	0.0204	4.2200e-003	205.6513
NaturalGas Mitigated	0.0198	0.1691	0.0720	1.0800e-003			0.0137	0.0137		0.0137	0.0137	195.8297	195.8297	3.7500e-003	3.5900e-003	196.9934
NaturalGas Unmitigated	0.0198	0.1691	0.0720	1.0800e-003			0.0137	0.0137		0.0137	0.0137	195.8297	195.8297	3.7500e-003	3.5900e-003	196.9934

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					
Condo/Townhouse	3.22036e+006	0.0174	0.1484	0.0631	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.8506	171.8506	3.2900e-003	3.1500e-003	172.8718
Condo/Townhouse	449352	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
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
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		0.0198	0.1691	0.0720	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	195.8297	195.8297	3.7500e-003	3.5900e-003	196.9934

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5.2 Energy by Land Use - NaturalGas

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					
Condo/Townhouse	3.22036e+006	0.0174	0.1484	0.0631	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.8506	171.8506	3.2900e-003	3.1500e-003	172.8718
Condo/Townhouse	449352	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
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
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		0.0198	0.1691	0.0720	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	195.8297	195.8297	3.7500e-003	3.5900e-003	196.9934

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	121090	15.9284	1.5900e-003	3.3000e-004	16.0665
Condo/Townhouse	867814	114.1538	0.0114	2.3600e-003	115.1430
Enclosed Parking with Elevator	560216	73.6918	7.3700e-003	1.5200e-003	74.3304
Parking Lot	840	0.1105	1.0000e-005	0.0000	0.1115
Total		203.8846	0.0204	4.2100e-003	205.6513

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	121090	15.9284	1.5900e-003	3.3000e-004	16.0665
Condo/Townhouse	867814	114.1538	0.0114	2.3600e-003	115.1430
Enclosed Parking with Elevator	560216	73.6918	7.3700e-003	1.5200e-003	74.3304
Parking Lot	840	0.1105	1.0000e-005	0.0000	0.1115
Total		203.8846	0.0204	4.2100e-003	205.6513

6.0 Area Detail**6.1 Mitigation Measures Area**

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

	ROG	NOx	CO	SO2	Fugitive 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	1.7538	0.0303	1.4595	1.6000e-004		9.1700e-003	9.1700e-003		9.1700e-003	9.1700e-003	0.0000	18.0415	18.0415	2.5800e-003	2.9000e-004	18.1914
Unmitigated	1.7538	0.0303	1.4595	1.6000e-004		9.1700e-003	9.1700e-003		9.1700e-003	9.1700e-003	0.0000	18.0415	18.0415	2.5800e-003	2.9000e-004	18.1914

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	0.2617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.5800e-003	0.0135	5.7500e-003	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.6598	15.6598	3.0000e-004	2.9000e-004	15.7529
Landscaping	0.0436	0.0168	1.4537	8.0000e-005		8.0800e-003	8.0800e-003		8.0800e-003	8.0800e-003	0.0000	2.3816	2.3816	2.2800e-003	0.0000	2.4385
Total	1.7538	0.0303	1.4595	1.7000e-004		9.1700e-003	9.1700e-003		9.1700e-003	9.1700e-003	0.0000	18.0415	18.0415	2.5800e-003	2.9000e-004	18.1914

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6.2 Area by SubCategory

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	0.2617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.5800e-003	0.0135	5.7500e-003	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.6598	15.6598	3.0000e-004	2.9000e-004	15.7529
Landscaping	0.0436	0.0168	1.4537	8.0000e-005		8.0800e-003	8.0800e-003		8.0800e-003	8.0800e-003	0.0000	2.3816	2.3816	2.2800e-003	0.0000	2.4385
Total	1.7538	0.0303	1.4595	1.7000e-004		9.1700e-003	9.1700e-003		9.1700e-003	9.1700e-003	0.0000	18.0415	18.0415	2.5800e-003	2.9000e-004	18.1914

7.0 Water Detail

7.1 Mitigation Measures Water

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	17.3141	0.0168	0.0101	20.7418
Unmitigated	17.3141	0.0168	0.0101	20.7418

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	12.7702 / 8.05077	17.3141	0.0168	0.0101	20.7418
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		17.3141	0.0168	0.0101	20.7418

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	12.7702 / 8.05077	17.3141	0.0168	0.0101	20.7418
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		17.3141	0.0168	0.0101	20.7418

8.0 Waste Detail

8.1 Mitigation Measures Waste

5150 ECR All Phases AQ Operation Emissions - Santa Clara County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.3017	1.0816	0.0000	45.3416
Unmitigated	18.3017	1.0816	0.0000	45.3416

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	90.16	18.3017	1.0816	0.0000	45.3416
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		18.3017	1.0816	0.0000	45.3416

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	90.16	18.3017	1.0816	0.0000	45.3416
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		18.3017	1.0816	0.0000	45.3416

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

5150 ECR, Existing Land Use AQ - Santa Clara County, Annual

5150 ECR, Existing Land Use AQ
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	77.00	1000sqft	3.80	77,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 Rate
 Land Use - 77,000-sf office building on 3.8 acres site
 Construction Phase - no construction
 Off-road Equipment - no equipment
 Vehicle Trips - 550 trips / 77k = 7.14, 1.58, 0.68
 Water And Wastewater - 100% aerobic

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblLandUse	LotAcreage	1.77	3.80
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	WorkerTripNumber	0.00	18.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

5150 ECR, Existing Land Use AQ - Santa Clara County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.0000	0.0000
		Highest	0.0000	0.0000

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	0.3409	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Energy	6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	247.8596	247.8596	0.0194	4.9700e-003	249.8243
Mobile	0.1304	0.5055	1.5479	5.7900e-003	0.5734	4.5100e-003	0.5779	0.1535	4.1900e-003	0.1577	0.0000	530.9010	530.9010	0.0164	0.0000	531.3106
Waste						0.0000	0.0000		0.0000	0.0000	14.5362	0.0000	14.5362	0.8591	0.0000	36.0128
Water						0.0000	0.0000		0.0000	0.0000	4.8420	13.6027	18.4447	0.0180	0.0108	22.1170
Total	0.4781	0.5673	1.6005	6.1600e-003	0.5734	9.2100e-003	0.5826	0.1535	8.8900e-003	0.1624	19.3781	792.3647	811.7428	0.9128	0.0158	839.2662

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2.2 Overall Operational

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	0.3409	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Energy	6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	247.8596	247.8596	0.0194	4.9700e-003	249.8243
Mobile	0.1304	0.5055	1.5479	5.7900e-003	0.5734	4.5100e-003	0.5779	0.1535	4.1900e-003	0.1577	0.0000	530.9010	530.9010	0.0164	0.0000	531.3106
Waste						0.0000	0.0000		0.0000	0.0000	14.5362	0.0000	14.5362	0.8591	0.0000	36.0128
Water						0.0000	0.0000		0.0000	0.0000	4.8420	13.6027	18.4447	0.0180	0.0108	22.1170
Total	0.4781	0.5673	1.6005	6.1600e-003	0.5734	9.2100e-003	0.5826	0.1535	8.8900e-003	0.1624	19.3781	792.3647	811.7428	0.9128	0.0158	839.2662

	ROG	NOx	CO	SO2	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	1/29/2021	1/29/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

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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 (Architectural Coating – sqft)

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	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 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					0.0000	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
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
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	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591
Total	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591

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3.2 Site Preparation - 2021

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					0.0000	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
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction 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	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591
Total	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0591	0.0591	0.0000	0.0000	0.0591

4.0 Operational Detail - Mobile

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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	0.1304	0.5055	1.5479	5.7900e-003	0.5734	4.5100e-003	0.5779	0.1535	4.1900e-003	0.1577	0.0000	530.9010	530.9010	0.0164	0.0000	531.3106
Unmitigated	0.1304	0.5055	1.5479	5.7900e-003	0.5734	4.5100e-003	0.5779	0.1535	4.1900e-003	0.1577	0.0000	530.9010	530.9010	0.0164	0.0000	531.3106

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	849.31	189.42	80.85	1,542,012	1,542,012
Total	849.31	189.42	80.85	1,542,012	1,542,012

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704

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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	180.5950	180.5950	0.0181	3.7400e-003	182.1600
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	180.5950	180.5950	0.0181	3.7400e-003	182.1600
NaturalGas Mitigated	6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.2646	67.2646	1.2900e-003	1.2300e-003	67.6643
NaturalGas Unmitigated	6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.2646	67.2646	1.2900e-003	1.2300e-003	67.6643

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	1.26049e+006	6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.2646	67.2646	1.2900e-003	1.2300e-003	67.6643
Total		6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.2646	67.2646	1.2900e-003	1.2300e-003	67.6643

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					
General Office Building	1.26049e+006	6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.2646	67.2646	1.2900e-003	1.2300e-003	67.6643
Total		6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.2646	67.2646	1.2900e-003	1.2300e-003	67.6643

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	1.37291e+006	180.5950	0.0181	3.7400e-003	182.1600
Total		180.5950	0.0181	3.7400e-003	182.1600

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	1.37291e+006	180.5950	0.0181	3.7400e-003	182.1600
Total		180.5950	0.0181	3.7400e-003	182.1600

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3409	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Unmitigated	0.3409	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0402					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3007					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Total	0.3409	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003

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6.2 Area by SubCategory

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	0.0402					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3007					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Total	0.3409	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	18.4447	0.0180	0.0108	22.1170
Unmitigated	18.4447	0.0180	0.0108	22.1170

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	13.6855 / 8.38789	18.4447	0.0180	0.0108	22.1170
Total		18.4447	0.0180	0.0108	22.1170

5150 ECR, Existing Land Use AQ - Santa Clara County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	13.6855 / 8.38789	18.4447	0.0180	0.0108	22.1170
Total		18.4447	0.0180	0.0108	22.1170

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.5362	0.8591	0.0000	36.0128
Unmitigated	14.5362	0.8591	0.0000	36.0128

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	71.61	14.5362	0.8591	0.0000	36.0128
Total		14.5362	0.8591	0.0000	36.0128

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	71.61	14.5362	0.8591	0.0000	36.0128
Total		14.5362	0.8591	0.0000	36.0128

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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5150 ECR, Existing Land Use AQ - Santa Clara County, Annual

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

5150 ECR Phase 1 (Townhomes) AQ - Santa Clara County, Annual

5150 ECR Phase 1 (Townhomes) AQ
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	6.00	Space	0.00	2,400.00	0
Condo/Townhouse	24.00	Dwelling Unit	0.55	46,684.00	69
Other Asphalt Surfaces	1.11	Acre	1.11	48,351.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2022
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

5150 ECR Phase 1 (Townhomes) AQ - Santa Clara County, Annual

Project Characteristics - PG&E 2020 290 rate

Land Use - 24 townhomes, 46,684-sf, 6 surface parking spaces, estimate of drive-way work

Construction Phase - Default Construction Schedule + Default Trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default trenching assumption

Trips and VMT - Estimate Paving Demo Hauling: 52 single trips (402 total trips)

Demolition - Current Use: 77,000-sf of office, assuming demolition would occur during Phase I

Vehicle Trips - Traffic Consultant Rate: 7.32 weekday, 7.14 sat, 6.10 sun

Woodstoves - All gas

Water And Wastewater - 100% aerobic

5150 ECR Phase 1 (Townhomes) AQ - Santa Clara County, Annual

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	3.60	7.68
tblFireplaces	NumberWood	4.08	0.00
tblLandUse	LandUseSquareFeet	24,000.00	46,684.00
tblLandUse	LotAcreage	0.05	0.00
tblLandUse	LotAcreage	1.50	0.55
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripNumber	350.00	402.00
tblVehicleTrips	ST_TR	5.67	7.14
tblVehicleTrips	SU_TR	4.84	6.10
tblVehicleTrips	WD_TR	5.81	7.32
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

5150 ECR Phase 1 (Townhomes) AQ - Santa Clara County, Annual

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	0.5708	1.8464	1.6702	3.3700e-003	0.0974	0.0850	0.1824	0.0256	0.0815	0.1071	0.0000	288.0501	288.0501	0.0446	0.0000	289.1657
Maximum	0.5708	1.8464	1.6702	3.3700e-003	0.0974	0.0850	0.1824	0.0256	0.0815	0.1071	0.0000	288.0501	288.0501	0.0446	0.0000	289.1657

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	0.5708	1.8464	1.6702	3.3700e-003	0.0974	0.0850	0.1824	0.0256	0.0815	0.1071	0.0000	288.0499	288.0499	0.0446	0.0000	289.1655
Maximum	0.5708	1.8464	1.6702	3.3700e-003	0.0974	0.0850	0.1824	0.0256	0.0815	0.1071	0.0000	288.0499	288.0499	0.0446	0.0000	289.1655

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.6672	0.6672
2	4-1-2021	6-30-2021	0.5461	0.5461
3	7-1-2021	9-30-2021	0.5521	0.5521
		Highest	0.6672	0.6672

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	0.2250	2.8900e-003	0.1788	1.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627
Energy	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	40.0181	40.0181	2.0600e-003	7.7000e-004	40.2996
Mobile	0.0396	0.1679	0.4605	1.5900e-003	0.1468	1.3500e-003	0.1481	0.0393	1.2600e-003	0.0406	0.0000	145.7260	145.7260	4.9200e-003	0.0000	145.8491
Waste						0.0000	0.0000		0.0000	0.0000	2.2410	0.0000	2.2410	0.1324	0.0000	5.5520
Water						0.0000	0.0000		0.0000	0.0000	0.5532	1.5669	2.1201	2.0600e-003	1.2400e-003	2.5398
Total	0.2671	0.1915	0.6481	1.7300e-003	0.1468	4.0700e-003	0.1508	0.0393	3.9800e-003	0.0433	2.7943	188.5609	191.3552	0.1418	2.0300e-003	195.5032

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2.2 Overall Operational

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	0.2250	2.8900e-003	0.1788	1.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627
Energy	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	40.0181	40.0181	2.0600e-003	7.7000e-004	40.2996
Mobile	0.0396	0.1679	0.4605	1.5900e-003	0.1468	1.3500e-003	0.1481	0.0393	1.2600e-003	0.0406	0.0000	145.7260	145.7260	4.9200e-003	0.0000	145.8491
Waste						0.0000	0.0000		0.0000	0.0000	2.2410	0.0000	2.2410	0.1324	0.0000	5.5520
Water						0.0000	0.0000		0.0000	0.0000	0.5532	1.5669	2.1201	2.0600e-003	1.2400e-003	2.5398
Total	0.2671	0.1915	0.6481	1.7300e-003	0.1468	4.0700e-003	0.1508	0.0393	3.9800e-003	0.0433	2.7943	188.5609	191.3552	0.1418	2.0300e-003	195.5032

	ROG	NOx	CO	SO2	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

5150 ECR Phase 1 (Townhomes) AQ - Santa Clara County, Annual

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	2/1/2021	5	2	
3	Grading	Grading	2/2/2021	2/5/2021	5	4	
4	Trenching	Trenching	2/2/2021	2/15/2021	5	10	
5	Building Construction	Building Construction	2/6/2021	11/12/2021	5	200	
6	Paving	Paving	11/13/2021	11/26/2021	5	10	
7	Architectural Coating	Architectural Coating	11/27/2021	12/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 1.11

Residential Indoor: 94,535; Residential Outdoor: 31,512; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,045 (Architectural Coating – sqft)

OffRoad Equipment

5150 ECR Phase 1 (Townhomes) AQ - Santa Clara County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Excavators	1	7.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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

5150 ECR Phase 1 (Townhomes) AQ - Santa Clara County, Annual

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	5	13.00	0.00	402.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	39.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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					0.0379	0.0000	0.0379	5.7400e-003	0.0000	5.7400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	0.0199	0.1970	0.1449	2.4000e-004	0.0379	0.0104	0.0483	5.7400e-003	9.7100e-003	0.0155	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060

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3.2 Demolition - 2021

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	1.5800e-003	0.0538	0.0117	1.6000e-004	3.4100e-003	1.7000e-004	3.5800e-003	9.4000e-004	1.6000e-004	1.1000e-003	0.0000	15.1360	15.1360	6.9000e-004	0.0000	15.1531
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	2.8000e-004	2.9700e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8535	0.8535	2.0000e-005	0.0000	0.8540
Total	1.9800e-003	0.0540	0.0147	1.7000e-004	4.4400e-003	1.8000e-004	4.6200e-003	1.2100e-003	1.7000e-004	1.3800e-003	0.0000	15.9895	15.9895	7.1000e-004	0.0000	16.0071

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					0.0379	0.0000	0.0379	5.7400e-003	0.0000	5.7400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	0.0199	0.1970	0.1449	2.4000e-004	0.0379	0.0104	0.0483	5.7400e-003	9.7100e-003	0.0155	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060

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3.2 Demolition - 2021

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	1.5800e-003	0.0538	0.0117	1.6000e-004	3.4100e-003	1.7000e-004	3.5800e-003	9.4000e-004	1.6000e-004	1.1000e-003	0.0000	15.1360	15.1360	6.9000e-004	0.0000	15.1531
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	2.8000e-004	2.9700e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8535	0.8535	2.0000e-005	0.0000	0.8540
Total	1.9800e-003	0.0540	0.0147	1.7000e-004	4.4400e-003	1.8000e-004	4.6200e-003	1.2100e-003	1.7000e-004	1.3800e-003	0.0000	15.9895	15.9895	7.1000e-004	0.0000	16.0071

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	1.5600e-003	0.0174	7.5600e-003	2.0000e-005	5.8000e-003	7.7000e-004	6.5700e-003	2.9500e-003	7.0000e-004	3.6500e-003	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241

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3.3 Site Preparation - 2021

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-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0525	0.0525	0.0000	0.0000	0.0526
Total	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0525	0.0525	0.0000	0.0000	0.0526

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	1.5600e-003	0.0174	7.5600e-003	2.0000e-005	5.8000e-003	7.7000e-004	6.5700e-003	2.9500e-003	7.0000e-004	3.6500e-003	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241

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3.3 Site Preparation - 2021

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-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0525	0.0525	0.0000	0.0000	0.0526
Total	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0525	0.0525	0.0000	0.0000	0.0526

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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5800e-003	0.0287	0.0127	3.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	2.5800e-003	0.0287	0.0127	3.0000e-005	9.8300e-003	1.2800e-003	0.0111	5.0500e-003	1.1700e-003	6.2200e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968

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3.4 Grading - 2021

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	3.0000e-005	3.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1051	0.1051	0.0000	0.0000	0.1051
Total	5.0000e-005	3.0000e-005	3.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1051	0.1051	0.0000	0.0000	0.1051

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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5800e-003	0.0287	0.0127	3.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	2.5800e-003	0.0287	0.0127	3.0000e-005	9.8300e-003	1.2800e-003	0.0111	5.0500e-003	1.1700e-003	6.2200e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968

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3.4 Grading - 2021

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	3.0000e-005	3.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1051	0.1051	0.0000	0.0000	0.1051
Total	5.0000e-005	3.0000e-005	3.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1051	0.1051	0.0000	0.0000	0.1051

3.5 Trenching - 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	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1846	3.1846	1.0300e-003	0.0000	3.2103
Total	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1846	3.1846	1.0300e-003	0.0000	3.2103

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3.5 Trenching - 2021

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	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642
Total	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1846	3.1846	1.0300e-003	0.0000	3.2103
Total	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1846	3.1846	1.0300e-003	0.0000	3.2103

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3.5 Trenching - 2021

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	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642
Total	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642

3.6 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	0.1813	1.3636	1.2899	2.2000e-003		0.0684	0.0684		0.0661	0.0661	0.0000	181.5476	181.5476	0.0324	0.0000	182.3579
Total	0.1813	1.3636	1.2899	2.2000e-003		0.0684	0.0684		0.0661	0.0661	0.0000	181.5476	181.5476	0.0324	0.0000	182.3579

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3.6 Building Construction - 2021

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	3.5900e-003	0.1130	0.0301	3.0000e-004	7.2400e-003	2.5000e-004	7.4900e-003	2.0900e-003	2.4000e-004	2.3300e-003	0.0000	28.4932	28.4932	1.2400e-003	0.0000	28.5243
Worker	0.0120	8.3200e-003	0.0892	2.8000e-004	0.0309	1.9000e-004	0.0311	8.2300e-003	1.8000e-004	8.4100e-003	0.0000	25.6051	25.6051	5.8000e-004	0.0000	25.6197
Total	0.0156	0.1214	0.1193	5.8000e-004	0.0382	4.4000e-004	0.0386	0.0103	4.2000e-004	0.0107	0.0000	54.0984	54.0984	1.8200e-003	0.0000	54.1440

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	0.1813	1.3636	1.2899	2.2000e-003		0.0684	0.0684		0.0661	0.0661	0.0000	181.5474	181.5474	0.0324	0.0000	182.3577
Total	0.1813	1.3636	1.2899	2.2000e-003		0.0684	0.0684		0.0661	0.0661	0.0000	181.5474	181.5474	0.0324	0.0000	182.3577

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3.6 Building Construction - 2021

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	3.5900e-003	0.1130	0.0301	3.0000e-004	7.2400e-003	2.5000e-004	7.4900e-003	2.0900e-003	2.4000e-004	2.3300e-003	0.0000	28.4932	28.4932	1.2400e-003	0.0000	28.5243
Worker	0.0120	8.3200e-003	0.0892	2.8000e-004	0.0309	1.9000e-004	0.0311	8.2300e-003	1.8000e-004	8.4100e-003	0.0000	25.6051	25.6051	5.8000e-004	0.0000	25.6197
Total	0.0156	0.1214	0.1193	5.8000e-004	0.0382	4.4000e-004	0.0386	0.0103	4.2000e-004	0.0107	0.0000	54.0984	54.0984	1.8200e-003	0.0000	54.1440

3.7 Paving - 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	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.3200e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291

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3.7 Paving - 2021

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	1.4000e-004	1.4900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4268	0.4268	1.0000e-005	0.0000	0.4270
Total	2.0000e-004	1.4000e-004	1.4900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4268	0.4268	1.0000e-005	0.0000	0.4270

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	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.3200e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291

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3.7 Paving - 2021

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	1.4000e-004	1.4900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4268	0.4268	1.0000e-005	0.0000	0.4270
Total	2.0000e-004	1.4000e-004	1.4900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4268	0.4268	1.0000e-005	0.0000	0.4270

3.8 Architectural Coating - 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					
Archit. Coating	0.3392					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	0.3403	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788

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3.8 Architectural Coating - 2021

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	9.0000e-005	9.2000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2626	0.2626	1.0000e-005	0.0000	0.2628
Total	1.2000e-004	9.0000e-005	9.2000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2626	0.2626	1.0000e-005	0.0000	0.2628

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	0.3392					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	0.3403	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788

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3.8 Architectural Coating - 2021

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	9.0000e-005	9.2000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2626	0.2626	1.0000e-005	0.0000	0.2628
Total	1.2000e-004	9.0000e-005	9.2000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2626	0.2626	1.0000e-005	0.0000	0.2628

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0396	0.1679	0.4605	1.5900e-003	0.1468	1.3500e-003	0.1481	0.0393	1.2600e-003	0.0406	0.0000	145.7260	145.7260	4.9200e-003	0.0000	145.8491
Unmitigated	0.0396	0.1679	0.4605	1.5900e-003	0.1468	1.3500e-003	0.1481	0.0393	1.2600e-003	0.0406	0.0000	145.7260	145.7260	4.9200e-003	0.0000	145.8491

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	175.68	171.36	146.40	394,666	394,666
Parking Lot	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	175.68	171.36	146.40	394,666	394,666

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
Parking Lot	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
Other Asphalt Surfaces	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

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	16.0389	16.0389	1.6000e-003	3.3000e-004	16.1779
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.0389	16.0389	1.6000e-003	3.3000e-004	16.1779
NaturalGas Mitigated	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
NaturalGas Unmitigated	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	449352	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
Other Asphalt Surfaces	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		2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216

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					
Condo/Townhouse	449352	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
Other Asphalt Surfaces	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		2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	121090	15.9284	1.5900e-003	3.3000e-004	16.0665
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	840	0.1105	1.0000e-005	0.0000	0.1115
Total		16.0389	1.6000e-003	3.3000e-004	16.1779

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	121090	15.9284	1.5900e-003	3.3000e-004	16.0665
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	840	0.1105	1.0000e-005	0.0000	0.1115
Total		16.0389	1.6000e-003	3.3000e-004	16.1779

6.0 Area Detail

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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	0.2250	2.8900e-003	0.1788	1.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627
Unmitigated	0.2250	2.8900e-003	0.1788	1.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627

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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	0.0339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1856					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	8.3000e-004	3.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9588	0.9588	2.0000e-005	2.0000e-005	0.9645
Landscaping	5.3900e-003	2.0600e-003	0.1785	1.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	0.2912	0.2912	2.8000e-004	0.0000	0.2983
Total	0.2250	2.8900e-003	0.1788	2.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627

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6.2 Area by SubCategory

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	0.0339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1856					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	8.3000e-004	3.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9588	0.9588	2.0000e-005	2.0000e-005	0.9645
Landscaping	5.3900e-003	2.0600e-003	0.1785	1.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	0.2912	0.2912	2.8000e-004	0.0000	0.2983
Total	0.2250	2.8900e-003	0.1788	2.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.1201	2.0600e-003	1.2400e-003	2.5398
Unmitigated	2.1201	2.0600e-003	1.2400e-003	2.5398

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.5637 / 0.985809	2.1201	2.0600e-003	1.2400e-003	2.5398
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.1201	2.0600e-003	1.2400e-003	2.5398

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.5637 / 0.985809	2.1201	2.0600e-003	1.2400e-003	2.5398
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.1201	2.0600e-003	1.2400e-003	2.5398

8.0 Waste Detail**8.1 Mitigation Measures Waste**

5150 ECR Phase 1 (Townhomes) AQ - Santa Clara County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.2410	0.1324	0.0000	5.5520
Unmitigated	2.2410	0.1324	0.0000	5.5520

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.04	2.2410	0.1324	0.0000	5.5520
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		2.2410	0.1324	0.0000	5.5520

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.04	2.2410	0.1324	0.0000	5.5520
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		2.2410	0.1324	0.0000	5.5520

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

5150 ECR Phase 1 (Townhomes) TAC - Santa Clara County, Annual

5150 ECR Phase 1 (Townhomes) TAC
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.11	Acre	1.11	48,351.60	0
Parking Lot	6.00	Space	0.00	2,400.00	0
Condo/Townhouse	24.00	Dwelling Unit	0.55	46,684.00	69

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2022
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

5150 ECR Phase 1 (Townhomes) TAC - Santa Clara County, Annual

Project Characteristics - PG&E 2020 290 rate

Land Use - 24 townhomes, 46,684-sf, 6 surface parking spaces, estimate of drive-way work

Construction Phase - Default Construction Schedule + Default Trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default trenching assumption

Trips and VMT - Estimate Paving Demo Hauling: 52 single trips (402 total trips)

Demolition - Current Use: 77,000-sf of office, assuming demolition would occur during Phase I

Vehicle Trips - Traffic Consultant Rate: 7.32 weekday, 7.14 sat, 6.10 sun

Woodstoves - All gas

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPS, Tier 4

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	3.60	7.68
tblFireplaces	NumberWood	4.08	0.00
tblLandUse	LandUseSquareFeet	24,000.00	46,684.00
tblLandUse	LotAcreage	0.05	0.00
tblLandUse	LotAcreage	1.50	0.55
tblProjectCharacteristics	CO2IntensityFactor	641.35	290

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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	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripNumber	350.00	402.00
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	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
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblVehicleTrips	ST_TR	5.67	7.14
tblVehicleTrips	SU_TR	4.84	6.10
tblVehicleTrips	WD_TR	5.81	7.32
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00

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tbWater	AerobicPercent	87.46	100.00
tbWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbWater	SepticTankPercent	10.33	0.00
tbWater	SepticTankPercent	10.33	0.00
tbWater	SepticTankPercent	10.33	0.00
tbWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

5150 ECR Phase 1 (Townhomes) TAC - Santa Clara County, Annual

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	0.5593	1.7625	1.5795	2.7600e-003	0.0578	0.0845	0.1423	0.0149	0.0810	0.0960	0.0000	231.5625	231.5625	0.0433	0.0000	232.6444
Maximum	0.5593	1.7625	1.5795	2.7600e-003	0.0578	0.0845	0.1423	0.0149	0.0810	0.0960	0.0000	231.5625	231.5625	0.0433	0.0000	232.6444

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	0.3621	0.3870	0.5664	2.7600e-003	0.0284	1.3000e-003	0.0297	4.2700e-003	1.2900e-003	5.5600e-003	0.0000	79.2829	79.2829	0.0207	0.0000	79.7993
Maximum	0.3621	0.3870	0.5664	2.7600e-003	0.0284	1.3000e-003	0.0297	4.2700e-003	1.2900e-003	5.5600e-003	0.0000	79.2829	79.2829	0.0207	0.0000	79.7993

	ROG	NOx	CO	SO2	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	35.26	78.04	64.14	0.00	50.91	98.46	79.14	71.38	98.41	94.21	0.00	65.76	65.76	52.28	0.00	65.70

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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	0.6189	0.1864
2	4-1-2021	6-30-2021	0.5276	0.0775
3	7-1-2021	9-30-2021	0.5334	0.0783
		Highest	0.6189	0.1864

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	0.2250	2.8900e-003	0.1788	1.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627
Energy	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	40.0181	40.0181	2.0600e-003	7.7000e-004	40.2996
Mobile	0.0396	0.1679	0.4605	1.5900e-003	0.1468	1.3500e-003	0.1481	0.0393	1.2600e-003	0.0406	0.0000	145.7260	145.7260	4.9200e-003	0.0000	145.8491
Waste						0.0000	0.0000		0.0000	0.0000	2.2410	0.0000	2.2410	0.1324	0.0000	5.5520
Water						0.0000	0.0000		0.0000	0.0000	0.5532	1.5669	2.1201	2.0600e-003	1.2400e-003	2.5398
Total	0.2671	0.1915	0.6481	1.7300e-003	0.1468	4.0700e-003	0.1508	0.0393	3.9800e-003	0.0433	2.7943	188.5609	191.3552	0.1418	2.0300e-003	195.5032

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2.2 Overall Operational

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	0.2250	2.8900e-003	0.1788	1.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627
Energy	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	40.0181	40.0181	2.0600e-003	7.7000e-004	40.2996
Mobile	0.0396	0.1679	0.4605	1.5900e-003	0.1468	1.3500e-003	0.1481	0.0393	1.2600e-003	0.0406	0.0000	145.7260	145.7260	4.9200e-003	0.0000	145.8491
Waste						0.0000	0.0000		0.0000	0.0000	2.2410	0.0000	2.2410	0.1324	0.0000	5.5520
Water						0.0000	0.0000		0.0000	0.0000	0.5532	1.5669	2.1201	2.0600e-003	1.2400e-003	2.5398
Total	0.2671	0.1915	0.6481	1.7300e-003	0.1468	4.0700e-003	0.1508	0.0393	3.9800e-003	0.0433	2.7943	188.5609	191.3552	0.1418	2.0300e-003	195.5032

	ROG	NOx	CO	SO2	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

5150 ECR Phase 1 (Townhomes) TAC - Santa Clara County, Annual

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	2/1/2021	5	2	
3	Grading	Grading	2/2/2021	2/5/2021	5	4	
4	Trenching	Trenching	2/2/2021	2/15/2021	5	10	
5	Building Construction	Building Construction	2/6/2021	11/12/2021	5	200	
6	Paving	Paving	11/13/2021	11/26/2021	5	10	
7	Architectural Coating	Architectural Coating	11/27/2021	12/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 1.11

Residential Indoor: 94,535; Residential Outdoor: 31,512; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,045 (Architectural Coating – sqft)

OffRoad Equipment

5150 ECR Phase 1 (Townhomes) TAC - Santa Clara County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Excavators	1	7.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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

5150 ECR Phase 1 (Townhomes) TAC - Santa Clara County, Annual

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	5	13.00	0.00	402.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	39.00	11.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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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					0.0379	0.0000	0.0379	5.7400e-003	0.0000	5.7400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	0.0199	0.1970	0.1449	2.4000e-004	0.0379	0.0104	0.0483	5.7400e-003	9.7100e-003	0.0155	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060

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	4.1000e-004	0.0199	3.2600e-003	3.0000e-005	1.7000e-004	2.0000e-005	1.9000e-004	5.0000e-005	2.0000e-005	6.0000e-005	0.0000	2.5831	2.5831	2.6000e-004	0.0000	2.5897
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	6.0000e-005	7.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022
Total	5.4000e-004	0.0200	4.0300e-003	3.0000e-005	2.7000e-004	2.0000e-005	2.9000e-004	8.0000e-005	2.0000e-005	9.0000e-005	0.0000	2.6852	2.6852	2.6000e-004	0.0000	2.6919

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3.2 Demolition - 2021

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					0.0171	0.0000	0.0171	1.2900e-003	0.0000	1.2900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6300e-003	0.0854	0.1542	2.4000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	4.6300e-003	0.0854	0.1542	2.4000e-004	0.0171	3.7000e-004	0.0174	1.2900e-003	3.7000e-004	1.6600e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060

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	4.1000e-004	0.0199	3.2600e-003	3.0000e-005	1.7000e-004	2.0000e-005	1.9000e-004	5.0000e-005	2.0000e-005	6.0000e-005	0.0000	2.5831	2.5831	2.6000e-004	0.0000	2.5897
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	6.0000e-005	7.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022
Total	5.4000e-004	0.0200	4.0300e-003	3.0000e-005	2.7000e-004	2.0000e-005	2.9000e-004	8.0000e-005	2.0000e-005	9.0000e-005	0.0000	2.6852	2.6852	2.6000e-004	0.0000	2.6919

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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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	1.5600e-003	0.0174	7.5600e-003	2.0000e-005	5.8000e-003	7.7000e-004	6.5700e-003	2.9500e-003	7.0000e-004	3.6500e-003	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241

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	1.0000e-005	0.0000	5.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	6.2800e-003	6.2800e-003	0.0000	0.0000	6.2900e-003
Total	1.0000e-005	0.0000	5.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	6.2800e-003	6.2800e-003	0.0000	0.0000	6.2900e-003

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3.3 Site Preparation - 2021

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					2.6100e-003	0.0000	2.6100e-003	6.6000e-004	0.0000	6.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	5.0700e-003	9.8200e-003	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	3.0000e-004	5.0700e-003	9.8200e-003	2.0000e-005	2.6100e-003	3.0000e-005	2.6400e-003	6.6000e-004	3.0000e-005	6.9000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241

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	1.0000e-005	0.0000	5.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	6.2800e-003	6.2800e-003	0.0000	0.0000	6.2900e-003
Total	1.0000e-005	0.0000	5.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	6.2800e-003	6.2800e-003	0.0000	0.0000	6.2900e-003

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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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5800e-003	0.0287	0.0127	3.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	2.5800e-003	0.0287	0.0127	3.0000e-005	9.8300e-003	1.2800e-003	0.0111	5.0500e-003	1.1700e-003	6.2200e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968

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-005	1.0000e-005	9.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126
Total	2.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126

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3.4 Grading - 2021

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					4.4200e-003	0.0000	4.4200e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9000e-004	8.3600e-003	0.0162	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	4.9000e-004	8.3600e-003	0.0162	3.0000e-005	4.4200e-003	5.0000e-005	4.4700e-003	1.1400e-003	5.0000e-005	1.1900e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968

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-005	1.0000e-005	9.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126
Total	2.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126

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3.5 Trenching - 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	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052
Total	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052

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	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197
Total	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197

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3.5 Trenching - 2021

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	5.8000e-004	0.0159	0.0274	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052
Total	5.8000e-004	0.0159	0.0274	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052

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	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197
Total	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197

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3.6 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	0.1813	1.3636	1.2899	2.2000e-003		0.0684	0.0684		0.0661	0.0661	0.0000	181.5476	181.5476	0.0324	0.0000	182.3579
Total	0.1813	1.3636	1.2899	2.2000e-003		0.0684	0.0684		0.0661	0.0661	0.0000	181.5476	181.5476	0.0324	0.0000	182.3579

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	1.8600e-003	0.0699	0.0188	9.0000e-005	1.0200e-003	6.0000e-005	1.0800e-003	3.0000e-004	6.0000e-005	3.5000e-004	0.0000	8.7464	8.7464	8.1000e-004	0.0000	8.7666
Worker	3.9500e-003	1.7400e-003	0.0230	3.0000e-005	2.9000e-003	4.0000e-005	2.9400e-003	7.8000e-004	4.0000e-005	8.1000e-004	0.0000	3.0638	3.0638	1.2000e-004	0.0000	3.0668
Total	5.8100e-003	0.0717	0.0419	1.2000e-004	3.9200e-003	1.0000e-004	4.0200e-003	1.0800e-003	1.0000e-004	1.1600e-003	0.0000	11.8102	11.8102	9.3000e-004	0.0000	11.8335

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3.6 Building Construction - 2021

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	7.8100e-003	0.1520	0.2628	2.2000e-003		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	30.5447	30.5447	9.8800e-003	0.0000	30.7917
Total	7.8100e-003	0.1520	0.2628	2.2000e-003		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	30.5447	30.5447	9.8800e-003	0.0000	30.7917

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	1.8600e-003	0.0699	0.0188	9.0000e-005	1.0200e-003	6.0000e-005	1.0800e-003	3.0000e-004	6.0000e-005	3.5000e-004	0.0000	8.7464	8.7464	8.1000e-004	0.0000	8.7666
Worker	3.9500e-003	1.7400e-003	0.0230	3.0000e-005	2.9000e-003	4.0000e-005	2.9400e-003	7.8000e-004	4.0000e-005	8.1000e-004	0.0000	3.0638	3.0638	1.2000e-004	0.0000	3.0668
Total	5.8100e-003	0.0717	0.0419	1.2000e-004	3.9200e-003	1.0000e-004	4.0200e-003	1.0800e-003	1.0000e-004	1.1600e-003	0.0000	11.8102	11.8102	9.3000e-004	0.0000	11.8335

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3.7 Paving - 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	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.3200e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291

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	3.8000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0511	0.0511	0.0000	0.0000	0.0511
Total	7.0000e-005	3.0000e-005	3.8000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0511	0.0511	0.0000	0.0000	0.0511

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3.7 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0700e-003	0.0286	0.0493	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.5200e-003	0.0286	0.0493	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291

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	3.8000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0511	0.0511	0.0000	0.0000	0.0511
Total	7.0000e-005	3.0000e-005	3.8000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0511	0.0511	0.0000	0.0000	0.0511

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3.8 Architectural Coating - 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					
Archit. Coating	0.3392					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	0.3403	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788

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-005	2.0000e-005	2.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0314	0.0314	0.0000	0.0000	0.0315
Total	4.0000e-005	2.0000e-005	2.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0314	0.0314	0.0000	0.0000	0.0315

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3.8 Architectural Coating - 2021

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	0.3392					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	1.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.3392	0.0000	0.0000	1.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0314	0.0314	0.0000	0.0000	0.0315
Total	4.0000e-005	2.0000e-005	2.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0314	0.0314	0.0000	0.0000	0.0315

4.0 Operational Detail - Mobile

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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	0.0396	0.1679	0.4605	1.5900e-003	0.1468	1.3500e-003	0.1481	0.0393	1.2600e-003	0.0406	0.0000	145.7260	145.7260	4.9200e-003	0.0000	145.8491
Unmitigated	0.0396	0.1679	0.4605	1.5900e-003	0.1468	1.3500e-003	0.1481	0.0393	1.2600e-003	0.0406	0.0000	145.7260	145.7260	4.9200e-003	0.0000	145.8491

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	175.68	171.36	146.40	394,666	394,666
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	175.68	171.36	146.40	394,666	394,666

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
Other Asphalt Surfaces	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
Parking Lot	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

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	16.0389	16.0389	1.6000e-003	3.3000e-004	16.1779
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.0389	16.0389	1.6000e-003	3.3000e-004	16.1779
NaturalGas Mitigated	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
NaturalGas Unmitigated	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	449352	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
Other Asphalt Surfaces	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		2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216

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					
Condo/Townhouse	449352	2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216
Other Asphalt Surfaces	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		2.4200e-003	0.0207	8.8100e-003	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.9792	23.9792	4.6000e-004	4.4000e-004	24.1216

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	121090	15.9284	1.5900e-003	3.3000e-004	16.0665
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	840	0.1105	1.0000e-005	0.0000	0.1115
Total		16.0389	1.6000e-003	3.3000e-004	16.1779

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	121090	15.9284	1.5900e-003	3.3000e-004	16.0665
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	840	0.1105	1.0000e-005	0.0000	0.1115
Total		16.0389	1.6000e-003	3.3000e-004	16.1779

6.0 Area Detail

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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	0.2250	2.8900e-003	0.1788	1.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627
Unmitigated	0.2250	2.8900e-003	0.1788	1.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627

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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	0.0339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1856					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	8.3000e-004	3.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9588	0.9588	2.0000e-005	2.0000e-005	0.9645
Landscaping	5.3900e-003	2.0600e-003	0.1785	1.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	0.2912	0.2912	2.8000e-004	0.0000	0.2983
Total	0.2250	2.8900e-003	0.1788	2.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627

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6.2 Area by SubCategory

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	0.0339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1856					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	8.3000e-004	3.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9588	0.9588	2.0000e-005	2.0000e-005	0.9645
Landscaping	5.3900e-003	2.0600e-003	0.1785	1.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	0.2912	0.2912	2.8000e-004	0.0000	0.2983
Total	0.2250	2.8900e-003	0.1788	2.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	1.2500	1.2500	3.0000e-004	2.0000e-005	1.2627

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.1201	2.0600e-003	1.2400e-003	2.5398
Unmitigated	2.1201	2.0600e-003	1.2400e-003	2.5398

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.5637 / 0.985809	2.1201	2.0600e-003	1.2400e-003	2.5398
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.1201	2.0600e-003	1.2400e-003	2.5398

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.5637 / 0.985809	2.1201	2.0600e-003	1.2400e-003	2.5398
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.1201	2.0600e-003	1.2400e-003	2.5398

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.2410	0.1324	0.0000	5.5520
Unmitigated	2.2410	0.1324	0.0000	5.5520

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.04	2.2410	0.1324	0.0000	5.5520
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		2.2410	0.1324	0.0000	5.5520

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.04	2.2410	0.1324	0.0000	5.5520
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		2.2410	0.1324	0.0000	5.5520

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

5150 ECR Phase 2 (Condo #1) AQ - Santa Clara County, Annual

5150 ECR Phase 2 (Condo #1) AQ
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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	122.00	Space	1.10	48,800.00	0
Condo/Townhouse	86.00	Dwelling Unit	5.38	166,728.00	246

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

5150 ECR Phase 2 (Condo #1) AQ - Santa Clara County, Annual

Project Characteristics - PG&E 290 2020 rate

Land Use - 86 Condos and 122 parking spaces

Construction Phase - Construction Default Schedule + Default trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default trenching equipment

Demolition - Demo assumed to occur all in Phase I

Vehicle Trips - 7.32, 7.14, 6.10

Woodstoves - all gas

Water And Wastewater - 100% aerobic

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	7/9/2021	5/28/2021
tblConstructionPhase	PhaseEndDate	5/27/2022	4/15/2022
tblConstructionPhase	PhaseEndDate	6/24/2022	5/13/2022
tblConstructionPhase	PhaseEndDate	7/22/2022	6/9/2022
tblConstructionPhase	PhaseStartDate	6/12/2021	5/1/2021
tblConstructionPhase	PhaseStartDate	7/10/2021	5/29/2021
tblConstructionPhase	PhaseStartDate	5/28/2022	4/16/2022
tblConstructionPhase	PhaseStartDate	6/25/2022	5/13/2022
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	12.90	27.52
tblFireplaces	NumberWood	14.62	0.00
tblLandUse	LandUseSquareFeet	86,000.00	166,728.00

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tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	5.67	7.14
tblVehicleTrips	SU_TR	4.84	6.10
tblVehicleTrips	WD_TR	5.81	7.32
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	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2021	7-31-2021	0.7830	0.7830
2	8-1-2021	10-31-2021	0.7084	0.7084
3	11-1-2021	1-31-2022	0.6861	0.6861
4	2-1-2022	4-30-2022	0.5798	0.5798
5	5-1-2022	7-31-2022	1.2578	1.2578
		Highest	1.2578	1.2578

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	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0700e-003	6.0000e-005	4.5265
Energy	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	180.6189	180.6189	0.0111	3.5300e-003	181.9501
Mobile	0.1304	0.4908	1.5318	5.5000e-003	0.5259	4.2800e-003	0.5302	0.1408	3.9900e-003	0.1448	0.0000	504.1883	504.1883	0.0161	0.0000	504.5901
Waste						0.0000	0.0000		0.0000	0.0000	8.0303	0.0000	8.0303	0.4746	0.0000	19.8948
Water						0.0000	0.0000		0.0000	0.0000	1.9824	5.6146	7.5970	7.3800e-003	4.4300e-003	9.1010
Total	0.9314	0.5753	2.2045	6.0200e-003	0.5259	0.0141	0.5399	0.1408	0.0138	0.1545	10.0128	694.9026	704.9154	0.5102	8.0200e-003	720.0624

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2.2 Overall Operational

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	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0700e-003	6.0000e-005	4.5265
Energy	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	180.6189	180.6189	0.0111	3.5300e-003	181.9501
Mobile	0.1304	0.4908	1.5318	5.5000e-003	0.5259	4.2800e-003	0.5302	0.1408	3.9900e-003	0.1448	0.0000	504.1883	504.1883	0.0161	0.0000	504.5901
Waste						0.0000	0.0000		0.0000	0.0000	8.0303	0.0000	8.0303	0.4746	0.0000	19.8948
Water						0.0000	0.0000		0.0000	0.0000	1.9824	5.6146	7.5970	7.3800e-003	4.4300e-003	9.1010
Total	0.9314	0.5753	2.2045	6.0200e-003	0.5259	0.0141	0.5399	0.1408	0.0138	0.1545	10.0128	694.9026	704.9154	0.5102	8.0200e-003	720.0624

	ROG	NOx	CO	SO2	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

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/1/2021	5/28/2021	5	20	
2	Trenching	Trenching	5/1/2021	5/14/2021	5	10	
3	Building Construction	Building Construction	5/29/2021	4/15/2022	5	230	
4	Paving	Paving	4/16/2022	5/13/2022	5	20	
5	Architectural Coating	Architectural Coating	5/13/2022	6/9/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.1

Residential Indoor: 337,624; Residential Outdoor: 112,541; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,928 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Excavators	1	7.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	7.00	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
Trenching	2	5.00	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	82.00	17.00	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	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 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

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3.2 Grading - 2021

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					0.0655	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	26.2643
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	26.2643

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

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3.3 Trenching - 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	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1846	3.1846	1.0300e-003	0.0000	3.2103
Total	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1846	3.1846	1.0300e-003	0.0000	3.2103

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	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642
Total	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642

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3.3 Trenching - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1846	3.1846	1.0300e-003	0.0000	3.2103
Total	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1846	3.1846	1.0300e-003	0.0000	3.2103

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	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642
Total	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642

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3.4 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	0.1473	1.3510	1.2846	2.0900e-003		0.0743	0.0743		0.0699	0.0699	0.0000	179.5189	179.5189	0.0433	0.0000	180.6016
Total	0.1473	1.3510	1.2846	2.0900e-003		0.0743	0.0743		0.0699	0.0699	0.0000	179.5189	179.5189	0.0433	0.0000	180.6016

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	4.3000e-003	0.1354	0.0360	3.6000e-004	8.6700e-003	3.0000e-004	8.9700e-003	2.5100e-003	2.9000e-004	2.7900e-003	0.0000	34.1271	34.1271	1.4900e-003	0.0000	34.1643
Worker	0.0196	0.0136	0.1454	4.6000e-004	0.0504	3.2000e-004	0.0507	0.0134	2.9000e-004	0.0137	0.0000	41.7232	41.7232	9.5000e-004	0.0000	41.7470
Total	0.0239	0.1490	0.1814	8.2000e-004	0.0591	6.2000e-004	0.0597	0.0159	5.8000e-004	0.0165	0.0000	75.8504	75.8504	2.4400e-003	0.0000	75.9113

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3.4 Building Construction - 2021

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	0.1473	1.3510	1.2846	2.0900e-003		0.0743	0.0743		0.0699	0.0699	0.0000	179.5187	179.5187	0.0433	0.0000	180.6014
Total	0.1473	1.3510	1.2846	2.0900e-003		0.0743	0.0743		0.0699	0.0699	0.0000	179.5187	179.5187	0.0433	0.0000	180.6014

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	4.3000e-003	0.1354	0.0360	3.6000e-004	8.6700e-003	3.0000e-004	8.9700e-003	2.5100e-003	2.9000e-004	2.7900e-003	0.0000	34.1271	34.1271	1.4900e-003	0.0000	34.1643
Worker	0.0196	0.0136	0.1454	4.6000e-004	0.0504	3.2000e-004	0.0507	0.0134	2.9000e-004	0.0137	0.0000	41.7232	41.7232	9.5000e-004	0.0000	41.7470
Total	0.0239	0.1490	0.1814	8.2000e-004	0.0591	6.2000e-004	0.0597	0.0159	5.8000e-004	0.0165	0.0000	75.8504	75.8504	2.4400e-003	0.0000	75.9113

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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	0.0640	0.5856	0.6136	1.0100e-003		0.0303	0.0303		0.0285	0.0285	0.0000	86.8970	86.8970	0.0208	0.0000	87.4174
Total	0.0640	0.5856	0.6136	1.0100e-003		0.0303	0.0303		0.0285	0.0285	0.0000	86.8970	86.8970	0.0208	0.0000	87.4174

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	1.9400e-003	0.0619	0.0164	1.7000e-004	4.1900e-003	1.3000e-004	4.3200e-003	1.2100e-003	1.2000e-004	1.3300e-003	0.0000	16.3551	16.3551	6.9000e-004	0.0000	16.3723
Worker	8.8400e-003	5.8800e-003	0.0647	2.2000e-004	0.0244	1.5000e-004	0.0245	6.4900e-003	1.4000e-004	6.6200e-003	0.0000	19.4553	19.4553	4.1000e-004	0.0000	19.4656
Total	0.0108	0.0678	0.0811	3.9000e-004	0.0286	2.8000e-004	0.0289	7.7000e-003	2.6000e-004	7.9500e-003	0.0000	35.8105	35.8105	1.1000e-003	0.0000	35.8380

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3.4 Building Construction - 2022

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	0.0640	0.5856	0.6136	1.0100e-003		0.0303	0.0303		0.0285	0.0285	0.0000	86.8969	86.8969	0.0208	0.0000	87.4173
Total	0.0640	0.5856	0.6136	1.0100e-003		0.0303	0.0303		0.0285	0.0285	0.0000	86.8969	86.8969	0.0208	0.0000	87.4173

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	1.9400e-003	0.0619	0.0164	1.7000e-004	4.1900e-003	1.3000e-004	4.3200e-003	1.2100e-003	1.2000e-004	1.3300e-003	0.0000	16.3551	16.3551	6.9000e-004	0.0000	16.3723
Worker	8.8400e-003	5.8800e-003	0.0647	2.2000e-004	0.0244	1.5000e-004	0.0245	6.4900e-003	1.4000e-004	6.6200e-003	0.0000	19.4553	19.4553	4.1000e-004	0.0000	19.4656
Total	0.0108	0.0678	0.0811	3.9000e-004	0.0286	2.8000e-004	0.0289	7.7000e-003	2.6000e-004	7.9500e-003	0.0000	35.8105	35.8105	1.1000e-003	0.0000	35.8380

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3.5 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

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3.5 Paving - 2022

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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	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

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3.6 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	1.1838					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	1.1859	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	4.6000e-004	3.1000e-004	3.3600e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0123	1.0123	2.0000e-005	0.0000	1.0129
Total	4.6000e-004	3.1000e-004	3.3600e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0123	1.0123	2.0000e-005	0.0000	1.0129

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3.6 Architectural Coating - 2022

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	1.1838					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	1.1859	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

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	3.1000e-004	3.3600e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0123	1.0123	2.0000e-005	0.0000	1.0129
Total	4.6000e-004	3.1000e-004	3.3600e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0123	1.0123	2.0000e-005	0.0000	1.0129

4.0 Operational Detail - Mobile

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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	0.1304	0.4908	1.5318	5.5000e-003	0.5259	4.2800e-003	0.5302	0.1408	3.9900e-003	0.1448	0.0000	504.1883	504.1883	0.0161	0.0000	504.5901
Unmitigated	0.1304	0.4908	1.5318	5.5000e-003	0.5259	4.2800e-003	0.5302	0.1408	3.9900e-003	0.1448	0.0000	504.1883	504.1883	0.0161	0.0000	504.5901

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	629.52	614.04	524.60	1,414,219	1,414,219
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	629.52	614.04	524.60	1,414,219	1,414,219

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720
Enclosed Parking with Elevator	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	94.6936	94.6936	9.4700e-003	1.9600e-003	95.5142
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	94.6936	94.6936	9.4700e-003	1.9600e-003	95.5142
NaturalGas Mitigated	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
NaturalGas Unmitigated	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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					
Condo/Townhouse	1.61018e+006	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
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
Total		8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

Mitigated

	Natural Gas 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					
Condo/Townhouse	1.61018e+006	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
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
Total		8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	433907	57.0769	5.7100e-003	1.1800e-003	57.5715
Enclosed Parking with Elevator	285968	37.6167	3.7600e-003	7.8000e-004	37.9427
Total		94.6936	9.4700e-003	1.9600e-003	95.5142

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	433907	57.0769	5.7100e-003	1.1800e-003	57.5715
Enclosed Parking with Elevator	285968	37.6167	3.7600e-003	7.8000e-004	37.9427
Total		94.6936	9.4700e-003	1.9600e-003	95.5142

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0700e-003	6.0000e-005	4.5265
Unmitigated	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0700e-003	6.0000e-005	4.5265

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	0.1184					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6543					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.5000e-004	2.9700e-003	1.2600e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4356	3.4356	7.0000e-005	6.0000e-005	3.4560
Landscaping	0.0194	7.3700e-003	0.6398	3.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1.0453	1.0453	1.0100e-003	0.0000	1.0705
Total	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0800e-003	6.0000e-005	4.5265

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6.2 Area by SubCategory

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	0.1184					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6543					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.5000e-004	2.9700e-003	1.2600e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4356	3.4356	7.0000e-005	6.0000e-005	3.4560
Landscaping	0.0194	7.3700e-003	0.6398	3.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1.0453	1.0453	1.0100e-003	0.0000	1.0705
Total	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0800e-003	6.0000e-005	4.5265

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.5970	7.3800e-003	4.4300e-003	9.1010
Unmitigated	7.5970	7.3800e-003	4.4300e-003	9.1010

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	5.60325 / 3.53248	7.5970	7.3800e-003	4.4300e-003	9.1010
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.5970	7.3800e-003	4.4300e-003	9.1010

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	5.60325 / 3.53248	7.5970	7.3800e-003	4.4300e-003	9.1010
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.5970	7.3800e-003	4.4300e-003	9.1010

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.0303	0.4746	0.0000	19.8948
Unmitigated	8.0303	0.4746	0.0000	19.8948

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	39.56	8.0303	0.4746	0.0000	19.8948
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		8.0303	0.4746	0.0000	19.8948

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	39.56	8.0303	0.4746	0.0000	19.8948
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		8.0303	0.4746	0.0000	19.8948

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

5150 ECR Phase 2 (Condo #1) TAC - Santa Clara County, Annual

5150 ECR Phase 2 (Condo #1) TAC
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	122.00	Space	1.10	48,800.00	0
Condo/Townhouse	86.00	Dwelling Unit	5.38	166,728.00	246

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2023
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

5150 ECR Phase 2 (Condo #1) TAC - Santa Clara County, Annual

Project Characteristics - PG&E 290 2020 rate

Land Use - 86 Condos and 122 parking spaces

Construction Phase - Construction Default Schedule + Default trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default trenching equipment

Trips and VMT - TAC Trip Length 1 mile

Demolition - Demo assumed to occur all in Phase I

Vehicle Trips - 7.32, 7.14, 6.10

Woodstoves - all gas

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPS, Tier 4, electrical crane/generator set/portable equipment (air compressor, welder)

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
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

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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	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
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
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	12.90	27.52
tblFireplaces	NumberWood	14.62	0.00
tblLandUse	LandUseSquareFeet	86,000.00	166,728.00
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

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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
tblVehicleTrips	ST_TR	5.67	7.14
tblVehicleTrips	SU_TR	4.84	6.10
tblVehicleTrips	WD_TR	5.81	7.32
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	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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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	0.1809	1.7028	1.5285	2.5900e-003	0.0716	0.0870	0.1586	0.0353	0.0815	0.1169	0.0000	224.3577	224.3577	0.0539	0.0000	225.7062
2022	1.2650	0.7515	0.8059	1.3500e-003	3.1100e-003	0.0369	0.0400	8.4000e-004	0.0346	0.0355	0.0000	117.0652	117.0652	0.0280	0.0000	117.7651
Maximum	1.2650	1.7028	1.5285	2.5900e-003	0.0716	0.0870	0.1586	0.0353	0.0815	0.1169	0.0000	224.3577	224.3577	0.0539	0.0000	225.7062

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	0.0368	0.6377	1.0250	2.5900e-003	0.0356	2.2900e-003	0.0379	9.2300e-003	2.2800e-003	0.0115	0.0000	131.5942	131.5942	0.0387	0.0000	132.5613
2022	1.2021	0.3499	0.5625	1.3500e-003	3.1100e-003	1.2200e-003	4.3200e-003	8.4000e-004	1.2100e-003	2.0600e-003	0.0000	69.6236	69.6236	0.0206	0.0000	70.1385
Maximum	1.2021	0.6377	1.0250	2.5900e-003	0.0356	2.2900e-003	0.0379	9.2300e-003	2.2800e-003	0.0115	0.0000	131.5942	131.5942	0.0387	0.0000	132.5613

	ROG	NOx	CO	SO2	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	14.32	59.76	32.00	0.00	48.23	97.17	78.76	72.16	97.00	91.09	0.00	41.06	41.06	27.64	0.00	40.98

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2021	7-31-2021	0.7606	0.2877
2	8-1-2021	10-31-2021	0.6759	0.2332
3	11-1-2021	1-31-2022	0.6525	0.2320
4	2-1-2022	4-30-2022	0.5545	0.2416
5	5-1-2022	7-31-2022	1.2571	1.2323
		Highest	1.2571	1.2323

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0700e-003	6.0000e-005	4.5265
Energy	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	180.6189	180.6189	0.0111	3.5300e-003	181.9501
Mobile	0.1304	0.4908	1.5318	5.5000e-003	0.5259	4.2800e-003	0.5302	0.1408	3.9900e-003	0.1448	0.0000	504.1883	504.1883	0.0161	0.0000	504.5901
Waste						0.0000	0.0000		0.0000	0.0000	8.0303	0.0000	8.0303	0.4746	0.0000	19.8948
Water						0.0000	0.0000		0.0000	0.0000	1.9824	5.6146	7.5970	7.3800e-003	4.4300e-003	9.1010
Total	0.9314	0.5753	2.2045	6.0200e-003	0.5259	0.0141	0.5399	0.1408	0.0138	0.1545	10.0128	694.9026	704.9154	0.5102	8.0200e-003	720.0624

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2.2 Overall Operational

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	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0700e-003	6.0000e-005	4.5265
Energy	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	180.6189	180.6189	0.0111	3.5300e-003	181.9501
Mobile	0.1304	0.4908	1.5318	5.5000e-003	0.5259	4.2800e-003	0.5302	0.1408	3.9900e-003	0.1448	0.0000	504.1883	504.1883	0.0161	0.0000	504.5901
Waste						0.0000	0.0000		0.0000	0.0000	8.0303	0.0000	8.0303	0.4746	0.0000	19.8948
Water						0.0000	0.0000		0.0000	0.0000	1.9824	5.6146	7.5970	7.3800e-003	4.4300e-003	9.1010
Total	0.9314	0.5753	2.2045	6.0200e-003	0.5259	0.0141	0.5399	0.1408	0.0138	0.1545	10.0128	694.9026	704.9154	0.5102	8.0200e-003	720.0624

	ROG	NOx	CO	SO2	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

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/1/2021	5/28/2021	5	20	
2	Trenching	Trenching	5/1/2021	5/14/2021	5	10	
3	Building Construction	Building Construction	5/29/2021	4/15/2022	5	230	
4	Paving	Paving	4/16/2022	5/13/2022	5	20	
5	Architectural Coating	Architectural Coating	5/13/2022	6/9/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.1

Residential Indoor: 337,624; Residential Outdoor: 112,541; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,928 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Trenching	Excavators	1	7.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	7.00	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
Grading	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	82.00	17.00	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	16.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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

3.2 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

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3.2 Grading - 2021

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

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3.2 Grading - 2021

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

3.3 Trenching - 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	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052
Total	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052

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3.3 Trenching - 2021

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	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197
Total	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197

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	5.8000e-004	0.0159	0.0274	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052
Total	5.8000e-004	0.0159	0.0274	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052

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3.3 Trenching - 2021

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	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197
Total	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197

3.4 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	0.1473	1.3510	1.2846	2.0900e-003		0.0743	0.0743		0.0699	0.0699	0.0000	179.5189	179.5189	0.0433	0.0000	180.6016
Total	0.1473	1.3510	1.2846	2.0900e-003		0.0743	0.0743		0.0699	0.0699	0.0000	179.5189	179.5189	0.0433	0.0000	180.6016

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3.4 Building Construction - 2021

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	2.2200e-003	0.0838	0.0226	1.1000e-004	1.2200e-003	7.0000e-005	1.2900e-003	3.6000e-004	7.0000e-005	4.2000e-004	0.0000	10.4757	10.4757	9.7000e-004	0.0000	10.5000
Worker	6.4300e-003	2.8400e-003	0.0376	6.0000e-005	4.7200e-003	6.0000e-005	4.7900e-003	1.2600e-003	6.0000e-005	1.3200e-003	0.0000	4.9925	4.9925	2.0000e-004	0.0000	4.9974
Total	8.6500e-003	0.0866	0.0601	1.7000e-004	5.9400e-003	1.3000e-004	6.0800e-003	1.6200e-003	1.3000e-004	1.7400e-003	0.0000	15.4682	15.4682	1.1700e-003	0.0000	15.4974

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	0.0222	0.4318	0.7465	2.0900e-003		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	86.7554	86.7554	0.0281	0.0000	87.4568
Total	0.0222	0.4318	0.7465	2.0900e-003		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	86.7554	86.7554	0.0281	0.0000	87.4568

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3.4 Building Construction - 2021

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	2.2200e-003	0.0838	0.0226	1.1000e-004	1.2200e-003	7.0000e-005	1.2900e-003	3.6000e-004	7.0000e-005	4.2000e-004	0.0000	10.4757	10.4757	9.7000e-004	0.0000	10.5000
Worker	6.4300e-003	2.8400e-003	0.0376	6.0000e-005	4.7200e-003	6.0000e-005	4.7900e-003	1.2600e-003	6.0000e-005	1.3200e-003	0.0000	4.9925	4.9925	2.0000e-004	0.0000	4.9974
Total	8.6500e-003	0.0866	0.0601	1.7000e-004	5.9400e-003	1.3000e-004	6.0800e-003	1.6200e-003	1.3000e-004	1.7400e-003	0.0000	15.4682	15.4682	1.1700e-003	0.0000	15.4974

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	0.0640	0.5856	0.6136	1.0100e-003		0.0303	0.0303		0.0285	0.0285	0.0000	86.8970	86.8970	0.0208	0.0000	87.4174
Total	0.0640	0.5856	0.6136	1.0100e-003		0.0303	0.0303		0.0285	0.0285	0.0000	86.8970	86.8970	0.0208	0.0000	87.4174

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3.4 Building Construction - 2022

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	1.0000e-003	0.0392	0.0102	5.0000e-005	5.9000e-004	3.0000e-005	6.2000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	5.0230	5.0230	4.4000e-004	0.0000	5.0341
Worker	2.8600e-003	1.2200e-003	0.0165	3.0000e-005	2.2900e-003	3.0000e-005	2.3200e-003	6.1000e-004	3.0000e-005	6.4000e-004	0.0000	2.3295	2.3295	8.0000e-005	0.0000	2.3316
Total	3.8600e-003	0.0404	0.0266	8.0000e-005	2.8800e-003	6.0000e-005	2.9400e-003	7.8000e-004	6.0000e-005	8.4000e-004	0.0000	7.3525	7.3525	5.2000e-004	0.0000	7.3657

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	0.0107	0.2089	0.3612	1.0100e-003		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	42.0087	42.0087	0.0136	0.0000	42.3483
Total	0.0107	0.2089	0.3612	1.0100e-003		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	42.0087	42.0087	0.0136	0.0000	42.3483

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3.4 Building Construction - 2022

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	1.0000e-003	0.0392	0.0102	5.0000e-005	5.9000e-004	3.0000e-005	6.2000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	5.0230	5.0230	4.4000e-004	0.0000	5.0341
Worker	2.8600e-003	1.2200e-003	0.0165	3.0000e-005	2.2900e-003	3.0000e-005	2.3200e-003	6.1000e-004	3.0000e-005	6.4000e-004	0.0000	2.3295	2.3295	8.0000e-005	0.0000	2.3316
Total	3.8600e-003	0.0404	0.0266	8.0000e-005	2.8800e-003	6.0000e-005	2.9400e-003	7.8000e-004	6.0000e-005	8.4000e-004	0.0000	7.3525	7.3525	5.2000e-004	0.0000	7.3657

3.5 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

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3.5 Paving - 2022

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

	ROG	NOx	CO	SO2	Fugitive 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

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3.5 Paving - 2022

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	1.1000e-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

3.6 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	1.1838					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	1.1859	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

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3.6 Architectural Coating - 2022

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	6.0000e-005	8.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	1.5000e-004	6.0000e-005	8.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1304	0.4908	1.5318	5.5000e-003	0.5259	4.2800e-003	0.5302	0.1408	3.9900e-003	0.1448	0.0000	504.1883	504.1883	0.0161	0.0000	504.5901
Unmitigated	0.1304	0.4908	1.5318	5.5000e-003	0.5259	4.2800e-003	0.5302	0.1408	3.9900e-003	0.1448	0.0000	504.1883	504.1883	0.0161	0.0000	504.5901

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	629.52	614.04	524.60	1,414,219	1,414,219
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	629.52	614.04	524.60	1,414,219	1,414,219

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	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
Condo/Townhouse	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720
Enclosed Parking with Elevator	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720

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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	94.6936	94.6936	9.4700e-003	1.9600e-003	95.5142
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	94.6936	94.6936	9.4700e-003	1.9600e-003	95.5142
NaturalGas Mitigated	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
NaturalGas Unmitigated	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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					
Condo/Townhouse	1.61018e+006	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
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
Total		8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

Mitigated

	Natural Gas 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					
Condo/Townhouse	1.61018e+006	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
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
Total		8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	433907	57.0769	5.7100e-003	1.1800e-003	57.5715
Enclosed Parking with Elevator	285968	37.6167	3.7600e-003	7.8000e-004	37.9427
Total		94.6936	9.4700e-003	1.9600e-003	95.5142

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	433907	57.0769	5.7100e-003	1.1800e-003	57.5715
Enclosed Parking with Elevator	285968	37.6167	3.7600e-003	7.8000e-004	37.9427
Total		94.6936	9.4700e-003	1.9600e-003	95.5142

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0700e-003	6.0000e-005	4.5265
Unmitigated	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0700e-003	6.0000e-005	4.5265

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	0.1184					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6543					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.5000e-004	2.9700e-003	1.2600e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4356	3.4356	7.0000e-005	6.0000e-005	3.4560
Landscaping	0.0194	7.3700e-003	0.6398	3.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1.0453	1.0453	1.0100e-003	0.0000	1.0705
Total	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0800e-003	6.0000e-005	4.5265

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6.2 Area by SubCategory

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	0.1184					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6543					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.5000e-004	2.9700e-003	1.2600e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4356	3.4356	7.0000e-005	6.0000e-005	3.4560
Landscaping	0.0194	7.3700e-003	0.6398	3.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1.0453	1.0453	1.0100e-003	0.0000	1.0705
Total	0.7924	0.0103	0.6411	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0800e-003	6.0000e-005	4.5265

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.5970	7.3800e-003	4.4300e-003	9.1010
Unmitigated	7.5970	7.3800e-003	4.4300e-003	9.1010

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	5.60325 / 3.53248	7.5970	7.3800e-003	4.4300e-003	9.1010
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.5970	7.3800e-003	4.4300e-003	9.1010

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	5.60325 / 3.53248	7.5970	7.3800e-003	4.4300e-003	9.1010
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.5970	7.3800e-003	4.4300e-003	9.1010

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.0303	0.4746	0.0000	19.8948
Unmitigated	8.0303	0.4746	0.0000	19.8948

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	39.56	8.0303	0.4746	0.0000	19.8948
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		8.0303	0.4746	0.0000	19.8948

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	39.56	8.0303	0.4746	0.0000	19.8948
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		8.0303	0.4746	0.0000	19.8948

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

5150 ECR Phase 3 (Condos #2) AQ - Santa Clara County, Annual

5150 ECR Phase 3 (Condos #2) AQ
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	117.00	Space	1.05	46,800.00	0
Condo/Townhouse	86.00	Dwelling Unit	5.38	155,446.00	246

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2024
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

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Project Characteristics - PG&E 2020 290 Rate

Land Use - 86 condos, 117 parking spaces

Construction Phase - Default Construction Schedule + Default trenching assumption

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Trenching Equipment

Vehicle Trips - 7.32, 7.14, 6.10

Woodstoves - all gas

Energy Use -

Water And Wastewater - 100% aerobic

Trips and VMT -

Construction Off-road Equipment Mitigation - BMPS, tier 4

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

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
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
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	12.90	27.52
tblFireplaces	NumberWood	14.62	0.00
tblLandUse	LandUseSquareFeet	86,000.00	155,446.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	5.67	7.14
tblVehicleTrips	SU_TR	4.84	6.10
tblVehicleTrips	WD_TR	5.81	7.32
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

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tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

5150 ECR Phase 3 (Condos #2) AQ - Santa Clara County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-1-2021	2-28-2022	0.8320	0.4955
2	3-1-2022	5-31-2022	0.6379	0.4449
3	6-1-2022	8-31-2022	0.6372	0.4441
4	9-1-2022	9-30-2022	0.2078	0.1448
		Highest	0.8320	0.4955

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	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4807	4.4807	1.0700e-003	6.0000e-005	4.5263
Energy	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	179.0773	179.0773	0.0110	3.5000e-003	180.3951
Mobile	0.1223	0.4717	1.4319	5.3200e-003	0.5258	4.1500e-003	0.5300	0.1408	3.8600e-003	0.1446	0.0000	488.0797	488.0797	0.0152	0.0000	488.4585
Waste						0.0000	0.0000		0.0000	0.0000	8.0303	0.0000	8.0303	0.4746	0.0000	19.8948
Water						0.0000	0.0000		0.0000	0.0000	1.9824	5.6146	7.5970	7.3800e-003	4.4300e-003	9.1010
Total	0.8711	0.5562	2.1041	5.8400e-003	0.5258	0.0139	0.5398	0.1408	0.0136	0.1544	10.0128	677.2523	687.2650	0.5091	7.9900e-003	702.3757

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2.2 Overall Operational

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	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4807	4.4807	1.0700e-003	6.0000e-005	4.5263
Energy	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	179.0773	179.0773	0.0110	3.5000e-003	180.3951
Mobile	0.1223	0.4717	1.4319	5.3200e-003	0.5258	4.1500e-003	0.5300	0.1408	3.8600e-003	0.1446	0.0000	488.0797	488.0797	0.0152	0.0000	488.4585
Waste						0.0000	0.0000		0.0000	0.0000	8.0303	0.0000	8.0303	0.4746	0.0000	19.8948
Water						0.0000	0.0000		0.0000	0.0000	1.9824	5.6146	7.5970	7.3800e-003	4.4300e-003	9.1010
Total	0.8711	0.5562	2.1041	5.8400e-003	0.5258	0.0139	0.5398	0.1408	0.0136	0.1544	10.0128	677.2523	687.2650	0.5091	7.9900e-003	702.3757

	ROG	NOx	CO	SO2	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

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	12/1/2021	12/28/2021	5	20	
2	Trenching	Trenching	12/1/2021	12/14/2021	5	10	
3	Building Construction	Building Construction	12/15/2021	11/1/2022	5	230	
4	Paving	Paving	11/2/2022	11/29/2022	5	20	
5	Architectural Coating	Architectural Coating	11/30/2022	12/27/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.05

Residential Indoor: 314,778; Residential Outdoor: 104,926; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,808 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Trenching	Excavators	1	7.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	7.00	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
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	82.00	17.00	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	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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

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3.2 Grading - 2021

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

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3.2 Grading - 2021

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

3.3 Trenching - 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	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052
Total	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052

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3.3 Trenching - 2021

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	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642
Total	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642

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	5.8000e-004	0.0159	0.0274	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052
Total	5.8000e-004	0.0159	0.0274	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052

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3.3 Trenching - 2021

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	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642
Total	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1641	0.1641	0.0000	0.0000	0.1642

3.4 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	0.0124	0.1133	0.1077	1.7000e-004		6.2300e-003	6.2300e-003		5.8600e-003	5.8600e-003	0.0000	15.0564	15.0564	3.6300e-003	0.0000	15.1472
Total	0.0124	0.1133	0.1077	1.7000e-004		6.2300e-003	6.2300e-003		5.8600e-003	5.8600e-003	0.0000	15.0564	15.0564	3.6300e-003	0.0000	15.1472

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3.4 Building Construction - 2021

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	3.6000e-004	0.0114	3.0200e-003	3.0000e-005	7.3000e-004	3.0000e-005	7.5000e-004	2.1000e-004	2.0000e-005	2.3000e-004	0.0000	2.8623	2.8623	1.2000e-004	0.0000	2.8654
Worker	1.6400e-003	1.1400e-003	0.0122	4.0000e-005	4.2300e-003	3.0000e-005	4.2500e-003	1.1200e-003	2.0000e-005	1.1500e-003	0.0000	3.4994	3.4994	8.0000e-005	0.0000	3.5014
Total	2.0000e-003	0.0125	0.0152	7.0000e-005	4.9600e-003	6.0000e-005	5.0000e-003	1.3300e-003	4.0000e-005	1.3800e-003	0.0000	6.3616	6.3616	2.0000e-004	0.0000	6.3668

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	3.4700e-003	0.0709	0.1162	1.7000e-004		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	15.0564	15.0564	3.6300e-003	0.0000	15.1472
Total	3.4700e-003	0.0709	0.1162	1.7000e-004		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	15.0564	15.0564	3.6300e-003	0.0000	15.1472

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3.4 Building Construction - 2021

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	3.6000e-004	0.0114	3.0200e-003	3.0000e-005	7.3000e-004	3.0000e-005	7.5000e-004	2.1000e-004	2.0000e-005	2.3000e-004	0.0000	2.8623	2.8623	1.2000e-004	0.0000	2.8654
Worker	1.6400e-003	1.1400e-003	0.0122	4.0000e-005	4.2300e-003	3.0000e-005	4.2500e-003	1.1200e-003	2.0000e-005	1.1500e-003	0.0000	3.4994	3.4994	8.0000e-005	0.0000	3.5014
Total	2.0000e-003	0.0125	0.0152	7.0000e-005	4.9600e-003	6.0000e-005	5.0000e-003	1.3300e-003	4.0000e-005	1.3800e-003	0.0000	6.3616	6.3616	2.0000e-004	0.0000	6.3668

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	0.1851	1.6943	1.7754	2.9200e-003		0.0878	0.0878		0.0826	0.0826	0.0000	251.4219	251.4219	0.0602	0.0000	252.9277
Total	0.1851	1.6943	1.7754	2.9200e-003		0.0878	0.0878		0.0826	0.0826	0.0000	251.4219	251.4219	0.0602	0.0000	252.9277

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3.4 Building Construction - 2022

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	5.6100e-003	0.1792	0.0475	4.9000e-004	0.0121	3.7000e-004	0.0125	3.5100e-003	3.5000e-004	3.8600e-003	0.0000	47.3209	47.3209	1.9900e-003	0.0000	47.3706
Worker	0.0256	0.0170	0.1871	6.2000e-004	0.0706	4.3000e-004	0.0710	0.0188	4.0000e-004	0.0192	0.0000	56.2908	56.2908	1.1900e-003	0.0000	56.3206
Total	0.0312	0.1962	0.2346	1.1100e-003	0.0827	8.0000e-004	0.0835	0.0223	7.5000e-004	0.0230	0.0000	103.6116	103.6116	3.1800e-003	0.0000	103.6911

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	0.0579	1.1840	1.9393	2.9200e-003		9.1800e-003	9.1800e-003		9.1800e-003	9.1800e-003	0.0000	251.4216	251.4216	0.0602	0.0000	252.9274
Total	0.0579	1.1840	1.9393	2.9200e-003		9.1800e-003	9.1800e-003		9.1800e-003	9.1800e-003	0.0000	251.4216	251.4216	0.0602	0.0000	252.9274

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3.4 Building Construction - 2022

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	5.6100e-003	0.1792	0.0475	4.9000e-004	0.0121	3.7000e-004	0.0125	3.5100e-003	3.5000e-004	3.8600e-003	0.0000	47.3209	47.3209	1.9900e-003	0.0000	47.3706
Worker	0.0256	0.0170	0.1871	6.2000e-004	0.0706	4.3000e-004	0.0710	0.0188	4.0000e-004	0.0192	0.0000	56.2908	56.2908	1.1900e-003	0.0000	56.3206
Total	0.0312	0.1962	0.2346	1.1100e-003	0.0827	8.0000e-004	0.0835	0.0223	7.5000e-004	0.0230	0.0000	103.6116	103.6116	3.1800e-003	0.0000	103.6911

3.5 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

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3.5 Paving - 2022

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

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3.5 Paving - 2022

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

3.6 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	1.1040					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	1.1061	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

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3.6 Architectural Coating - 2022

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	3.1000e-004	3.3600e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0123	1.0123	2.0000e-005	0.0000	1.0129
Total	4.6000e-004	3.1000e-004	3.3600e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0123	1.0123	2.0000e-005	0.0000	1.0129

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	1.1040					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	1.1046	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

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3.6 Architectural Coating - 2022

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	3.1000e-004	3.3600e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0123	1.0123	2.0000e-005	0.0000	1.0129
Total	4.6000e-004	3.1000e-004	3.3600e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0123	1.0123	2.0000e-005	0.0000	1.0129

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1223	0.4717	1.4319	5.3200e-003	0.5258	4.1500e-003	0.5300	0.1408	3.8600e-003	0.1446	0.0000	488.0797	488.0797	0.0152	0.0000	488.4585
Unmitigated	0.1223	0.4717	1.4319	5.3200e-003	0.5258	4.1500e-003	0.5300	0.1408	3.8600e-003	0.1446	0.0000	488.0797	488.0797	0.0152	0.0000	488.4585

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	629.52	614.04	524.60	1,414,219	1,414,219
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	629.52	614.04	524.60	1,414,219	1,414,219

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	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
Condo/Townhouse	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704
Enclosed Parking with Elevator	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704

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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	93.1520	93.1520	9.3200e-003	1.9300e-003	93.9592
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	93.1520	93.1520	9.3200e-003	1.9300e-003	93.9592
NaturalGas Mitigated	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
NaturalGas Unmitigated	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	1.61018e+006	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
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
Total		8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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					
Condo/Townhouse	1.61018e+006	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
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
Total		8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	433907	57.0769	5.7100e-003	1.1800e-003	57.5715
Enclosed Parking with Elevator	274248	36.0751	3.6100e-003	7.5000e-004	36.3877
Total		93.1520	9.3200e-003	1.9300e-003	93.9592

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	433907	57.0769	5.7100e-003	1.1800e-003	57.5715
Enclosed Parking with Elevator	274248	36.0751	3.6100e-003	7.5000e-004	36.3877
Total		93.1520	9.3200e-003	1.9300e-003	93.9592

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4807	4.4807	1.0700e-003	6.0000e-005	4.5263
Unmitigated	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4807	4.4807	1.0700e-003	6.0000e-005	4.5263

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	0.1104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.5000e-004	2.9700e-003	1.2600e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4356	3.4356	7.0000e-005	6.0000e-005	3.4560
Landscaping	0.0193	7.3600e-003	0.6394	3.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1.0452	1.0452	1.0100e-003	0.0000	1.0703
Total	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0800e-003	6.0000e-005	4.5263

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6.2 Area by SubCategory

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	0.1104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.5000e-004	2.9700e-003	1.2600e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4356	3.4356	7.0000e-005	6.0000e-005	3.4560
Landscaping	0.0193	7.3600e-003	0.6394	3.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1.0452	1.0452	1.0100e-003	0.0000	1.0703
Total	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0800e-003	6.0000e-005	4.5263

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.5970	7.3800e-003	4.4300e-003	9.1010
Unmitigated	7.5970	7.3800e-003	4.4300e-003	9.1010

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	5.60325 / 3.53248	7.5970	7.3800e-003	4.4300e-003	9.1010
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.5970	7.3800e-003	4.4300e-003	9.1010

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	5.60325 / 3.53248	7.5970	7.3800e-003	4.4300e-003	9.1010
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.5970	7.3800e-003	4.4300e-003	9.1010

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.0303	0.4746	0.0000	19.8948
Unmitigated	8.0303	0.4746	0.0000	19.8948

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	39.56	8.0303	0.4746	0.0000	19.8948
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		8.0303	0.4746	0.0000	19.8948

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	39.56	8.0303	0.4746	0.0000	19.8948
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		8.0303	0.4746	0.0000	19.8948

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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	117.00	Space	1.05	46,800.00	0
Condo/Townhouse	86.00	Dwelling Unit	5.38	155,446.00	246

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2024
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

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Project Characteristics - PG&E 2020 290 Rate

Land Use - 86 condos, 117 parking spaces

Construction Phase - Default Construction Schedule + Default trenching assumption

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Default Trenching Equipment

Trips and VMT - TAC Trip length 1 mile

Vehicle Trips - 7.32, 7.14, 6.10

Woodstoves - all gas

Energy Use -

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPS, tier 4, electrical equipment

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
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

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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	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
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
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	12.90	27.52
tblFireplaces	NumberWood	14.62	0.00
tblLandUse	LandUseSquareFeet	86,000.00	155,446.00
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

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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
tblVehicleTrips	ST_TR	5.67	7.14
tblVehicleTrips	SU_TR	4.84	6.10
tblVehicleTrips	WD_TR	5.81	7.32
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	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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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	0.0380	0.3857	0.2966	5.2000e-004	0.0662	0.0188	0.0849	0.0339	0.0174	0.0513	0.0000	45.7244	45.7244	0.0132	0.0000	46.0542
2022	1.3136	1.9367	2.0181	3.4100e-003	8.5500e-003	0.0945	0.1030	2.3300e-003	0.0888	0.0911	0.0000	295.5109	295.5109	0.0684	0.0000	297.2211
Maximum	1.3136	1.9367	2.0181	3.4100e-003	0.0662	0.0945	0.1030	0.0339	0.0888	0.0911	0.0000	295.5109	295.5109	0.0684	0.0000	297.2211

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	8.5500e-003	0.1628	0.2860	5.2000e-004	0.0301	6.9000e-004	0.0308	7.7500e-003	6.9000e-004	8.4400e-003	0.0000	37.9442	37.9442	0.0119	0.0000	38.2420
2022	1.1499	0.8220	1.2968	3.4100e-003	8.5500e-003	2.8100e-003	0.0114	2.3300e-003	2.8000e-003	5.1300e-003	0.0000	163.0808	163.0808	0.0473	0.0000	164.2637
Maximum	1.1499	0.8220	1.2968	3.4100e-003	0.0301	2.8100e-003	0.0308	7.7500e-003	2.8000e-003	8.4400e-003	0.0000	163.0808	163.0808	0.0473	0.0000	164.2637

	ROG	NOx	CO	SO2	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	14.30	57.60	31.62	0.00	48.25	96.91	77.56	72.14	96.71	90.47	0.00	41.09	41.09	27.41	0.00	41.01

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-1-2021	2-28-2022	0.8045	0.3163
2	3-1-2022	5-31-2022	0.6083	0.2316
3	6-1-2022	8-31-2022	0.6086	0.2319
4	9-1-2022	9-30-2022	0.1985	0.0756
		Highest	0.8045	0.3163

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	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4807	4.4807	1.0700e-003	6.0000e-005	4.5263
Energy	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	179.0773	179.0773	0.0110	3.5000e-003	180.3951
Mobile	0.1223	0.4717	1.4319	5.3200e-003	0.5258	4.1500e-003	0.5300	0.1408	3.8600e-003	0.1446	0.0000	488.0797	488.0797	0.0152	0.0000	488.4585
Waste						0.0000	0.0000		0.0000	0.0000	8.0303	0.0000	8.0303	0.4746	0.0000	19.8948
Water						0.0000	0.0000		0.0000	0.0000	1.9824	5.6146	7.5970	7.3800e-003	4.4300e-003	9.1010
Total	0.8711	0.5562	2.1041	5.8400e-003	0.5258	0.0139	0.5398	0.1408	0.0136	0.1544	10.0128	677.2523	687.2650	0.5091	7.9900e-003	702.3757

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2.2 Overall Operational

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	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4807	4.4807	1.0700e-003	6.0000e-005	4.5263
Energy	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	179.0773	179.0773	0.0110	3.5000e-003	180.3951
Mobile	0.1223	0.4717	1.4319	5.3200e-003	0.5258	4.1500e-003	0.5300	0.1408	3.8600e-003	0.1446	0.0000	488.0797	488.0797	0.0152	0.0000	488.4585
Waste						0.0000	0.0000		0.0000	0.0000	8.0303	0.0000	8.0303	0.4746	0.0000	19.8948
Water						0.0000	0.0000		0.0000	0.0000	1.9824	5.6146	7.5970	7.3800e-003	4.4300e-003	9.1010
Total	0.8711	0.5562	2.1041	5.8400e-003	0.5258	0.0139	0.5398	0.1408	0.0136	0.1544	10.0128	677.2523	687.2650	0.5091	7.9900e-003	702.3757

	ROG	NOx	CO	SO2	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

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	12/1/2021	12/28/2021	5	20	
2	Trenching	Trenching	12/1/2021	12/14/2021	5	10	
3	Building Construction	Building Construction	12/15/2021	11/1/2022	5	230	
4	Paving	Paving	11/2/2022	11/29/2022	5	20	
5	Architectural Coating	Architectural Coating	11/30/2022	12/27/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.05

Residential Indoor: 314,778; Residential Outdoor: 104,926; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,808 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Trenching	Excavators	1	7.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	7.00	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
Grading	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	82.00	17.00	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	16.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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

3.2 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

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3.2 Grading - 2021

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

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3.2 Grading - 2021

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

3.3 Trenching - 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	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052
Total	1.8200e-003	0.0177	0.0242	4.0000e-005		9.5000e-004	9.5000e-004		8.7000e-004	8.7000e-004	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052

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3.3 Trenching - 2021

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	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197
Total	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197

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	5.8000e-004	0.0159	0.0274	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052
Total	5.8000e-004	0.0159	0.0274	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.1795	3.1795	1.0300e-003	0.0000	3.2052

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3.3 Trenching - 2021

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	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197
Total	3.0000e-005	1.0000e-005	1.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0196	0.0196	0.0000	0.0000	0.0197

3.4 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	0.0124	0.1133	0.1077	1.7000e-004		6.2300e-003	6.2300e-003		5.8600e-003	5.8600e-003	0.0000	15.0564	15.0564	3.6300e-003	0.0000	15.1472
Total	0.0124	0.1133	0.1077	1.7000e-004		6.2300e-003	6.2300e-003		5.8600e-003	5.8600e-003	0.0000	15.0564	15.0564	3.6300e-003	0.0000	15.1472

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3.4 Building Construction - 2021

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	1.9000e-004	7.0300e-003	1.8900e-003	1.0000e-005	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.8786	0.8786	8.0000e-005	0.0000	0.8807
Worker	5.4000e-004	2.4000e-004	3.1500e-003	0.0000	4.0000e-004	1.0000e-005	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4187	0.4187	2.0000e-005	0.0000	0.4191
Total	7.3000e-004	7.2700e-003	5.0400e-003	1.0000e-005	5.0000e-004	2.0000e-005	5.1000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.2973	1.2973	1.0000e-004	0.0000	1.2998

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8600e-003	0.0362	0.0626	1.7000e-004		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	7.2763	7.2763	2.3500e-003	0.0000	7.3351
Total	1.8600e-003	0.0362	0.0626	1.7000e-004		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	7.2763	7.2763	2.3500e-003	0.0000	7.3351

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3.4 Building Construction - 2021

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	1.9000e-004	7.0300e-003	1.8900e-003	1.0000e-005	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.8786	0.8786	8.0000e-005	0.0000	0.8807
Worker	5.4000e-004	2.4000e-004	3.1500e-003	0.0000	4.0000e-004	1.0000e-005	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4187	0.4187	2.0000e-005	0.0000	0.4191
Total	7.3000e-004	7.2700e-003	5.0400e-003	1.0000e-005	5.0000e-004	2.0000e-005	5.1000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.2973	1.2973	1.0000e-004	0.0000	1.2998

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	0.1851	1.6943	1.7754	2.9200e-003		0.0878	0.0878		0.0826	0.0826	0.0000	251.4219	251.4219	0.0602	0.0000	252.9277
Total	0.1851	1.6943	1.7754	2.9200e-003		0.0878	0.0878		0.0826	0.0826	0.0000	251.4219	251.4219	0.0602	0.0000	252.9277

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3.4 Building Construction - 2022

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	2.8800e-003	0.1135	0.0295	1.5000e-004	1.7000e-003	9.0000e-005	1.7900e-003	5.0000e-004	8.0000e-005	5.8000e-004	0.0000	14.5333	14.5333	1.2800e-003	0.0000	14.5653
Worker	8.2600e-003	3.5200e-003	0.0476	7.0000e-005	6.6100e-003	9.0000e-005	6.7000e-003	1.7700e-003	8.0000e-005	1.8500e-003	0.0000	6.7400	6.7400	2.4000e-004	0.0000	6.7461
Total	0.0111	0.1170	0.0771	2.2000e-004	8.3100e-003	1.8000e-004	8.4900e-003	2.2700e-003	1.6000e-004	2.4300e-003	0.0000	21.2734	21.2734	1.5200e-003	0.0000	21.3114

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	0.0311	0.6045	1.0451	2.9200e-003		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	121.5451	121.5451	0.0393	0.0000	122.5278
Total	0.0311	0.6045	1.0451	2.9200e-003		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	121.5451	121.5451	0.0393	0.0000	122.5278

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3.4 Building Construction - 2022

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	2.8800e-003	0.1135	0.0295	1.5000e-004	1.7000e-003	9.0000e-005	1.7900e-003	5.0000e-004	8.0000e-005	5.8000e-004	0.0000	14.5333	14.5333	1.2800e-003	0.0000	14.5653
Worker	8.2600e-003	3.5200e-003	0.0476	7.0000e-005	6.6100e-003	9.0000e-005	6.7000e-003	1.7700e-003	8.0000e-005	1.8500e-003	0.0000	6.7400	6.7400	2.4000e-004	0.0000	6.7461
Total	0.0111	0.1170	0.0771	2.2000e-004	8.3100e-003	1.8000e-004	8.4900e-003	2.2700e-003	1.6000e-004	2.4300e-003	0.0000	21.2734	21.2734	1.5200e-003	0.0000	21.3114

3.5 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

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3.5 Paving - 2022

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

	ROG	NOx	CO	SO2	Fugitive 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

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3.5 Paving - 2022

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	1.1000e-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

3.6 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	1.1040					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	1.1061	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

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3.6 Architectural Coating - 2022

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	6.0000e-005	8.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	1.5000e-004	6.0000e-005	8.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1223	0.4717	1.4319	5.3200e-003	0.5258	4.1500e-003	0.5300	0.1408	3.8600e-003	0.1446	0.0000	488.0797	488.0797	0.0152	0.0000	488.4585
Unmitigated	0.1223	0.4717	1.4319	5.3200e-003	0.5258	4.1500e-003	0.5300	0.1408	3.8600e-003	0.1446	0.0000	488.0797	488.0797	0.0152	0.0000	488.4585

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	629.52	614.04	524.60	1,414,219	1,414,219
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	629.52	614.04	524.60	1,414,219	1,414,219

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	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
Condo/Townhouse	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704
Enclosed Parking with Elevator	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704

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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	93.1520	93.1520	9.3200e-003	1.9300e-003	93.9592
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	93.1520	93.1520	9.3200e-003	1.9300e-003	93.9592
NaturalGas Mitigated	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
NaturalGas Unmitigated	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	1.61018e+006	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
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
Total		8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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					
Condo/Townhouse	1.61018e+006	8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359
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
Total		8.6800e-003	0.0742	0.0316	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9253	85.9253	1.6500e-003	1.5800e-003	86.4359

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	433907	57.0769	5.7100e-003	1.1800e-003	57.5715
Enclosed Parking with Elevator	274248	36.0751	3.6100e-003	7.5000e-004	36.3877
Total		93.1520	9.3200e-003	1.9300e-003	93.9592

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	433907	57.0769	5.7100e-003	1.1800e-003	57.5715
Enclosed Parking with Elevator	274248	36.0751	3.6100e-003	7.5000e-004	36.3877
Total		93.1520	9.3200e-003	1.9300e-003	93.9592

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4807	4.4807	1.0700e-003	6.0000e-005	4.5263
Unmitigated	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4807	4.4807	1.0700e-003	6.0000e-005	4.5263

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	0.1104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.5000e-004	2.9700e-003	1.2600e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4356	3.4356	7.0000e-005	6.0000e-005	3.4560
Landscaping	0.0193	7.3600e-003	0.6394	3.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1.0452	1.0452	1.0100e-003	0.0000	1.0703
Total	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0800e-003	6.0000e-005	4.5263

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6.2 Area by SubCategory

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	0.1104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.5000e-004	2.9700e-003	1.2600e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4356	3.4356	7.0000e-005	6.0000e-005	3.4560
Landscaping	0.0193	7.3600e-003	0.6394	3.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1.0452	1.0452	1.0100e-003	0.0000	1.0703
Total	0.7402	0.0103	0.6406	5.0000e-005		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	4.4808	4.4808	1.0800e-003	6.0000e-005	4.5263

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.5970	7.3800e-003	4.4300e-003	9.1010
Unmitigated	7.5970	7.3800e-003	4.4300e-003	9.1010

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	5.60325 / 3.53248	7.5970	7.3800e-003	4.4300e-003	9.1010
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.5970	7.3800e-003	4.4300e-003	9.1010

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	5.60325 / 3.53248	7.5970	7.3800e-003	4.4300e-003	9.1010
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.5970	7.3800e-003	4.4300e-003	9.1010

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.0303	0.4746	0.0000	19.8948
Unmitigated	8.0303	0.4746	0.0000	19.8948

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	39.56	8.0303	0.4746	0.0000	19.8948
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		8.0303	0.4746	0.0000	19.8948

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	39.56	8.0303	0.4746	0.0000	19.8948
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		8.0303	0.4746	0.0000	19.8948

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

Attachment 3: Construction Health Risk Modeling Outputs

5150 El Camino Real, Los Altos, CA

DPM Construction Emissions and Modeling Emission Rates - Unmitigated

Construction Year	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	Const-Area 1	0.0554	CON_DPM_ASPH	110.8	0.03373	4.25E-03	4,410	9.64E-07
	Const-Area 2	0.0291	CON_DPM_TH	58.2	0.01771	2.23E-03	2,315	9.64E-07
		0.0845					6,725	
2021	Const-Area 3	0.0870	CON_DPM_C1	174.0	0.05297	6.67E-03	4,647	1.44E-06
Total		0.1715		343	0.1044	0.0132		

Construction Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

PM2.5 Fugitive Dust Construction Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions			Modeled Area (m ²)	PM2.5 Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2021	Const-Area 1	CON_FUG_ASPH	0.0098	19.5	0.00595	7.49E-04	4,410	1.70E-07
	Const-Area 2	CON_FUG_TH	0.0051	10.3	0.00312	3.94E-04	2,315	1.70E-07
			0.0149				6,725	
2021	Const-Area 3	CON_FUG_C1	0.0353	70.6	0.02149	2.71E-03	4,647	5.83E-07
Total			0.0502	100.4	0.0306	0.0039		

Construction Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

DPM Emissions and Modeling Emission Rates - Unmitigated

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)		
2022	Construction	0.0369	CON_DPM_C1	73.8	0.02247	2.83E-03	4,647	6.09E-07
2022	Construction	0.1133	CON_DPM_C2	226.6	0.06898	8.69E-03	4,015	2.16E-06
Total		0.1502		300.4	0.0914	0.0115		

Construction Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction	Activity	Area Source	PM2.5 Emissions				Modeled Area (m ²)	PM2.5 Emission Rate (g/s/m ²)
			(ton/year)	(lb/yr)	(lb/hr)	(g/s)		
2022	Construction	CON_FUG_C1	0.0008	1.7	0.00051	6.44E-05	4,647	1.39E-08
2022	Construction	CON_FUG_C2	0.0362	72.5	0.02206	2.78E-03	4,015	6.92E-07
Total			0.0371	74.1	0.0226	0.0028		

Construction Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	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	Const-Area 1	0.0011	CON_DPM_ASPH	2.3	0.00069	8.72E-05	23,149	3.77E-09
	Const-Area 2	0.0002	CON_DPM_TH	0.3	0.00010	1.25E-05	3,311	3.77E-09
		0.0013					26,460	
2021	Const-Area 3	0.0023	CON_DPM_C1	4.6	0.00139	1.76E-04	4,647	3.78E-08
Total		0.0036		7	0.0022	0.0003		

Construction Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions			Modeled Area (m ²)	PM2.5 Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2021	Const-Area 1	CON_FUG_ASPH	0.0037	7.5	0.00227	2.87E-04	23,149	1.24E-08
	Const-Area 2	CON_FUG_TH	0.0005	1.1	0.00033	4.10E-05	3,311	1.24E-08
			0.0043				26,460	
2021	Const-Area 3	CON_FUG_C1	0.0092	18.5	0.00562	7.08E-04	4,647	1.52E-07
Total			0.0135	27.0	0.0082	0.0010		

Construction Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Emissions Model		DPM	Area	DPM Emissions			Modeled Area	DPM Emission Rate
Year	Activity	(ton/year)	Source	(lb/yr)	(lb/hr)	(g/s)	(m ²)	(g/s/m ²)
2022	Construction	0.0012	CON_DPM_C1	2.4	0.00074	9.36E-05	4,647	2.01E-08
2022	Construction	0.0035	CON_DPM_C2	7.0	0.00213	2.68E-04	4,015	6.69E-08
Total		0.0047		9.4	0.0029	0.0004		

Construction Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

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

Construction		Area	PM2.5 Emissions				Modeled Area	PM2.5 Emission Rate
Year	Activity	Source	(ton/year)	(lb/yr)	(lb/hr)	(g/s)	(m ²)	g/s/m ²
2022	Construction	CON_FUG_C1	0.0008	1.7	0.00051	6.44E-05	4,647	1.39E-08
2022	Construction	CON_FUG_C2	0.0101	20.2	0.00614	7.73E-04	4,015	1.93E-07
Total			0.0109	21.8	0.0066	0.0008		

Construction Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

**5150 El Camino Real , Los Altos, CA
Construction Health Impacts Summary**

Maximum Impacts at Construction MEI Location - Unmitigated

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration (µg/m ³)
	Exhaust PM10/DPM (µg/m ³)	Fugitive PM2.5 (µg/m ³)	Child	Adult		
	2021	0.6338	0.2154	104.10	1.82	0.127
2022	0.2707	0.0492	44.46	0.78	0.054	0.32
Total	-	-	148.6	2.6	-	-
Maximum	0.6338	0.2154	-	-	0.127	0.85

Maximum Impacts at Construction MEI Location - With Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration (µg/m ³)
	Exhaust PM10/DPM (µg/m ³)	Fugitive PM2.5 (µg/m ³)	Child	Adult		
	2021	0.0095	0.0429	1.56	0.03	0.002
2022	0.0087	0.0161	1.42	0.02	0.002	0.02
Total	-	-	3.0	0.1	-	-
Maximum	0.0095	0.0429	-	-	0.002	0.05

Maximum Impacts at KinderCare Mountain View

Construction Year	Unmitigated Emissions				
	Maximum Concentrations		Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM2.5/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)			
2021	0.4568	0.1971	75.0	0.09	0.65
2022	0.1897	0.0232	31.2	0.04	0.21
Total	-	-	106.2		
Maximum	0.4568	0.1971	-	0.091	0.65

Maximum Impacts at KinderCare Mountain View

Construction Year	Mitigated Emissions				
	Maximum Concentrations		Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM2.5/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)			
2021	0.0087	0.0434	1.4	0.00	0.05
2022	0.0061	0.0091	0.6	0.00	0.02
Total	-	-	2.0		
Maximum	0.0087	0.0434	-	0.002	0.05

Maximum Impacts at Mountain View- Los Altos Montessori Children's Center

Construction Year	Unmitigated Emissions				
	Maximum Concentrations		Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM2.5/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)			
2021	0.0296	0.0094	0.8	0.01	0.04
2022	0.0410	0.0125	1.2	0.01	0.05
Total	-	-	2.0		
Maximum	0.0410	0.0125	-	0.008	0.05

**5150 El Camino Real , Los Altos, CA - Unmitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors-1.5 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-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 - 9	2 - 16	16 - 30
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor			
			Year	Annual			Year	Annual				
0	0.25	-0.25 - 0*		-	10		-	-	-			
1	1	0 - 1	2021	0.6338	10	2021	0.6338	1	1.82	0.2154	0.8492	
2	1	1 - 2	2022	0.2707	10	2022	0.2707	1	0.78	0.0492	0.3199	
3	1	2 - 3		0.0000	3		0.0000	1	0.00			
4	1	3 - 4		0.0000	3		0.0000	1	0.00			
5	1	4 - 5		0.0000	3		0.0000	1	0.00			
6	1	5 - 6		0.0000	3		0.0000	1	0.00			
7	1	6 - 7		0.0000	3		0.0000	1	0.00			
8	1	7 - 8		0.0000	3		0.0000	1	0.00			
9	1	8 - 9		0.0000	3		0.0000	1	0.00			
10	1	9 - 10		0.0000	3		0.0000	1	0.00			
11	1	10 - 11		0.0000	3		0.0000	1	0.00			
12	1	11 - 12		0.0000	3		0.0000	1	0.00			
13	1	12 - 13		0.0000	3		0.0000	1	0.00			
14	1	13 - 14		0.0000	3		0.0000	1	0.00			
15	1	14 - 15		0.0000	3		0.0000	1	0.00			
16	1	15 - 16		0.0000	3		0.0000	1	0.00			
17	1	16-17		0.0000	1		0.0000	1	0.00			
18	1	17-18		0.0000	1		0.0000	1	0.00			
19	1	18-19		0.0000	1		0.0000	1	0.00			
20	1	19-20		0.0000	1		0.0000	1	0.00			
21	1	20-21		0.0000	1		0.0000	1	0.00			
22	1	21-22		0.0000	1		0.0000	1	0.00			
23	1	22-23		0.0000	1		0.0000	1	0.00			
24	1	23-24		0.0000	1		0.0000	1	0.00			
25	1	24-25		0.0000	1		0.0000	1	0.00			
26	1	25-26		0.0000	1		0.0000	1	0.00			
27	1	26-27		0.0000	1		0.0000	1	0.00			
28	1	27-28		0.0000	1		0.0000	1	0.00			
29	1	28-29		0.0000	1		0.0000	1	0.00			
30	1	29-30		0.0000	1		0.0000	1	0.00			
Total Increased Cancer Risk						148.6				2.60		

* Third trimester of pregnancy

**5150 El Camino Real , Los Altos, CA - Mitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors-1.5 meter**

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 - 9	2 - 16	16 - 30
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor			
			Year	Annual			Year	Annual				
0	0.25	-0.25 - 0*	-	-	-	-	-	-	-	-	-	-
1	1	0 - 1	2021	0.0095	10	1.56	2021	0.0095	1	0.03	0.0429	0.0524
2	1	1 - 2	2022	0.0087	10	1.42	2022	0.0087	1	0.02	0.0161	0.0248
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						3.0				0.05		

* Third trimester of pregnancy

**5150 El Camino Real, Los Altos, (-) Unmitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors-4.5 meter**

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 - 9	2 - 16	16 - 30
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor			
			Year	Annual			Year	Annual				
0	0.25	-0.25 - 0*		-	10		-	-	-			
1	1	0 - 1	2021	0.1983	10	2021	0.1983	1	0.57	0.0672	0.265	
2	1	1 - 2	2022	0.0960	10	2022	0.0960	1	0.28	0.0153	0.111	
3	1	2 - 3		0.0000	3		0.0000	1	0.00			
4	1	3 - 4		0.0000	3		0.0000	1	0.00			
5	1	4 - 5		0.0000	3		0.0000	1	0.00			
6	1	5 - 6		0.0000	3		0.0000	1	0.00			
7	1	6 - 7		0.0000	3		0.0000	1	0.00			
8	1	7 - 8		0.0000	3		0.0000	1	0.00			
9	1	8 - 9		0.0000	3		0.0000	1	0.00			
10	1	9 - 10		0.0000	3		0.0000	1	0.00			
11	1	10 - 11		0.0000	3		0.0000	1	0.00			
12	1	11 - 12		0.0000	3		0.0000	1	0.00			
13	1	12 - 13		0.0000	3		0.0000	1	0.00			
14	1	13 - 14		0.0000	3		0.0000	1	0.00			
15	1	14 - 15		0.0000	3		0.0000	1	0.00			
16	1	15 - 16		0.0000	3		0.0000	1	0.00			
17	1	16-17		0.0000	1		0.0000	1	0.00			
18	1	17-18		0.0000	1		0.0000	1	0.00			
19	1	18-19		0.0000	1		0.0000	1	0.00			
20	1	19-20		0.0000	1		0.0000	1	0.00			
21	1	20-21		0.0000	1		0.0000	1	0.00			
22	1	21-22		0.0000	1		0.0000	1	0.00			
23	1	22-23		0.0000	1		0.0000	1	0.00			
24	1	23-24		0.0000	1		0.0000	1	0.00			
25	1	24-25		0.0000	1		0.0000	1	0.00			
26	1	25-26		0.0000	1		0.0000	1	0.00			
27	1	26-27		0.0000	1		0.0000	1	0.00			
28	1	27-28		0.0000	1		0.0000	1	0.00			
29	1	28-29		0.0000	1		0.0000	1	0.00			
30	1	29-30		0.0000	1		0.0000	1	0.00			
Total Increased Cancer Risk						48.3			0.84			

* Third trimester of pregnancy

**KinderCare, Mountain View, CA - Construction Impacts - With Mitigation
 Maximum DPM Cancer Risk Calculations From Construction
 Daycare - 1.0 meters - Infant 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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Child - Exposure Information			Child Cancer Risk (per million)	Maximum	
		DPM Conc (ug/m3)		Age* Sensitivity		Fugitive PM2.5	Total PM2.5
		Year	Annual	Factor			
1	1	2021	0.0087	10	1.4	0.0434	0.052
2	1	2022	0.0061	10	0.6	0.0091	0.015

**Mountain View-Los Altos Montessori Children's Center, Mountain View, CA - Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Daycare - 1.0 meters - Child 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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Child - Exposure Information			Child Cancer Risk (per million)	Maximum	
		DPM Conc (ug/m3)		Age* Sensitivity Factor		Fugitive PM2.5	Total PM2.5
		Year	Annual				
1	1	2021	0.0296	3	0.8	0.0094	0.039
2	1	2022	0.0410	3	1.2	0.0125	0.053

* Students assumed to be from 2 to 9 years of age

**5150 El Camino Real , Los Altos, CA - Unmitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Project Site Receptors-1.5 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-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 - 9	2 - 16	16 - 30
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled DPM Conc (ug/m3)		Age Sensitivity Factor			
			Year	Annual	Factor		Year	Annual	Factor			
0	0.25	-0.25 - 0*		-	10		-	-	-			
1	1	0 - 1	2022	0.9836	10	2022	0.9836	1	2.82	0.6067	1.5904	
2	1	1 - 2		0.0000	10		0.0000	1	0.00			
3	1	2 - 3		0.0000	3		0.0000	1	0.00			
4	1	3 - 4		0.0000	3		0.0000	1	0.00			
5	1	4 - 5		0.0000	3		0.0000	1	0.00			
6	1	5 - 6		0.0000	3		0.0000	1	0.00			
7	1	6 - 7		0.0000	3		0.0000	1	0.00			
8	1	7 - 8		0.0000	3		0.0000	1	0.00			
9	1	8 - 9		0.0000	3		0.0000	1	0.00			
10	1	9 - 10		0.0000	3		0.0000	1	0.00			
11	1	10 - 11		0.0000	3		0.0000	1	0.00			
12	1	11 - 12		0.0000	3		0.0000	1	0.00			
13	1	12 - 13		0.0000	3		0.0000	1	0.00			
14	1	13 - 14		0.0000	3		0.0000	1	0.00			
15	1	14 - 15		0.0000	3		0.0000	1	0.00			
16	1	15 - 16		0.0000	3		0.0000	1	0.00			
17	1	16-17		0.0000	1		0.0000	1	0.00			
18	1	17-18		0.0000	1		0.0000	1	0.00			
19	1	18-19		0.0000	1		0.0000	1	0.00			
20	1	19-20		0.0000	1		0.0000	1	0.00			
21	1	20-21		0.0000	1		0.0000	1	0.00			
22	1	21-22		0.0000	1		0.0000	1	0.00			
23	1	22-23		0.0000	1		0.0000	1	0.00			
24	1	23-24		0.0000	1		0.0000	1	0.00			
25	1	24-25		0.0000	1		0.0000	1	0.00			
26	1	25-26		0.0000	1		0.0000	1	0.00			
27	1	26-27		0.0000	1		0.0000	1	0.00			
28	1	27-28		0.0000	1		0.0000	1	0.00			
29	1	28-29		0.0000	1		0.0000	1	0.00			
30	1	29-30		0.0000	1		0.0000	1	0.00			
Total Increased Cancer Risk						161.6				2.82		

* Third trimester of pregnancy

**5150 El Camino Real , Los Altos, CA - Mitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Project Site Receptors-1.5 meter**

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 - 9	2 - 16	16 - 30
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor	
			Year	Annual			Year	Annual		
0	0.25	-0.25 - 0*	-	-	-	-	-	-	-	
1	1	0 - 1	2022	0.0305	10	5.01	2022	0.0305	1	0.09
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
Total Increased Cancer Risk						5.0				0.09

Fugitive Total
 PM2.5 PM2.5
 0.1774 0.2079

* Third trimester of pregnancy

Attachment 4: El Camino Real (Highway 82) Emissions, Modeling and Health Impact Calculations

5150 El Camino Real, Los Altos, CA

El Camino Real (SR-82)

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

Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Road Width (ft)	Link Width (m)	Release Height (m)	Diesel ADT	Average Speed (mph)
EB-El Camino	Eastbound El Camino Real	E	3	820	56	17.0	3.4	392	variable
WB-ElCamino	Westbound El Camino Real	W	3	820	56	17.0	3.4	392	variable

2024 Hourly Diesel Traffic Volumes Per Direction and DPM Emissions - EB-El Camino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	2.54%	10	0.0083	9	6.76%	27	0.0090	17	6.37%	25	0.0083
2	1.84%	7	0.0103	10	5.53%	22	0.0070	18	6.34%	25	0.0091
3	2.19%	9	0.0111	11	5.34%	21	0.0069	19	4.47%	18	0.0068
4	1.42%	6	0.0072	12	6.20%	24	0.0068	20	2.85%	11	0.0061
5	1.33%	5	0.0086	13	6.02%	24	0.0065	21	3.28%	13	0.0070
6	1.68%	7	0.0062	14	5.99%	24	0.0066	22	3.56%	14	0.0066
7	4.28%	17	0.0060	15	6.00%	24	0.0062	23	2.62%	10	0.0073
8	6.23%	24	0.0081	16	5.64%	22	0.0063	24	1.52%	6	0.0068
Total										392	

2024 Hourly Diesel Traffic Volumes Per Direction and DPM Emissions - WB-ElCamino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	2.54%	10	0.0083	9	6.76%	27	0.0090	17	6.37%	25	0.0083
2	1.84%	7	0.0103	10	5.53%	22	0.0070	18	6.34%	25	0.0091
3	2.19%	9	0.0111	11	5.34%	21	0.0069	19	4.47%	18	0.0068
4	1.42%	6	0.0072	12	6.20%	24	0.0068	20	2.85%	11	0.0061
5	1.33%	5	0.0086	13	6.02%	24	0.0065	21	3.28%	13	0.0070
6	1.68%	7	0.0062	14	5.99%	24	0.0066	22	3.56%	14	0.0066
7	4.28%	17	0.0060	15	6.00%	24	0.0062	23	2.62%	10	0.0073
8	6.23%	24	0.0081	16	5.64%	22	0.0063	24	1.52%	6	0.0068
Total										392	

5150 El Camino Real, Los Altos, CA

El Camino Real (SR-82)

PM2.5 & TOG Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions

Year = 2024

Group Link	Description	Direction	No. Lanes	Link Length (m)	Road Width (ft)	Link Width (m)	Release Height (m)	ADT	Average Speed (mph)
EB-El Camino	Eastbound El Camino Real	E	3	820	56	17.0	1.3	24,182	variable
WB-ElCamino	Westbound El Camino Real	W	3	820	56	17.0	1.3	24,182	variable

2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - EB-El Camino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.08%	261	0.0201	9	7.07%	1710	0.0206	17	7.40%	1790	0.0205
2	0.36%	86	0.0206	10	4.24%	1026	0.0199	18	8.32%	2012	0.0204
3	0.29%	71	0.0210	11	4.59%	1110	0.0197	19	5.82%	1408	0.0195
4	0.17%	41	0.0241	12	5.83%	1410	0.0197	20	4.38%	1060	0.0195
5	0.44%	107	0.0204	13	6.17%	1493	0.0196	21	3.29%	796	0.0196
6	0.80%	194	0.0206	14	6.03%	1459	0.0196	22	3.30%	799	0.0197
7	3.75%	908	0.0198	15	7.09%	1715	0.0196	23	2.48%	599	0.0196
8	7.93%	1918	0.0204	16	7.25%	1752	0.0195	24	1.90%	460	0.0195
Total										24,182	

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

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.08%	261	0.0201	9	7.07%	1710	0.0206	17	7.40%	1790	0.0205
2	0.36%	86	0.0206	10	4.24%	1026	0.0199	18	8.32%	2012	0.0204
3	0.29%	71	0.0210	11	4.59%	1110	0.0197	19	5.82%	1408	0.0195
4	0.17%	41	0.0241	12	5.83%	1410	0.0197	20	4.38%	1060	0.0195
5	0.44%	107	0.0204	13	6.17%	1493	0.0196	21	3.29%	796	0.0196
6	0.80%	194	0.0206	14	6.03%	1459	0.0196	22	3.30%	799	0.0197
7	3.75%	908	0.0198	15	7.09%	1715	0.0196	23	2.48%	599	0.0196
8	7.93%	1918	0.0204	16	7.25%	1752	0.0195	24	1.90%	460	0.0195
Total										24,182	

5150 El Camino Real, Los Altos, CA

El Camino Real (SR-82)

Entrained PM2.5 Road Dust Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions

Year = 2024

Group Link	Description	Direction	No. Lanes	Link Length (m)	Road Width (ft)	Link Width (m)	Release Height (m)	ADT	Average Speed (mph)
EB-El Camino	Eastbound El Camino Real	E	3	820	56	17.0	1.3	24,182	variable
WB-ElCamino	Westbound El Camino Real	W	3	820	56	17.0	1.3	24,182	variable

2024 Hourly Traffic Volumes Per Direction and Road Dust PM2.5 Emissions - EB-El Camino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.08%	261	0.0153	9	7.07%	1710	0.0153	17	7.40%	1790	0.0153
2	0.36%	86	0.0153	10	4.24%	1026	0.0153	18	8.32%	2012	0.0153
3	0.29%	71	0.0153	11	4.59%	1110	0.0153	19	5.82%	1408	0.0153
4	0.17%	41	0.0153	12	5.83%	1410	0.0153	20	4.38%	1060	0.0153
5	0.44%	107	0.0153	13	6.17%	1493	0.0153	21	3.29%	796	0.0153
6	0.80%	194	0.0153	14	6.03%	1459	0.0153	22	3.30%	799	0.0153
7	3.75%	908	0.0153	15	7.09%	1715	0.0153	23	2.48%	599	0.0153
8	7.93%	1918	0.0153	16	7.25%	1752	0.0153	24	1.90%	460	0.0153
Total										24,182	

2024 Hourly Traffic Volumes Per Direction and Road Dust PM2.5 Emissions - WB-ElCamino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.08%	261	0.0153	9	7.07%	1710	0.0153	17	7.40%	1790	0.0153
2	0.36%	86	0.0153	10	4.24%	1026	0.0153	18	8.32%	2012	0.0153
3	0.29%	71	0.0153	11	4.59%	1110	0.0153	19	5.82%	1408	0.0153
4	0.17%	41	0.0153	12	5.83%	1410	0.0153	20	4.38%	1060	0.0153
5	0.44%	107	0.0153	13	6.17%	1493	0.0153	21	3.29%	796	0.0153
6	0.80%	194	0.0153	14	6.03%	1459	0.0153	22	3.30%	799	0.0153
7	3.75%	908	0.0153	15	7.09%	1715	0.0153	23	2.48%	599	0.0153
8	7.93%	1918	0.0153	16	7.25%	1752	0.0153	24	1.90%	460	0.0153
Total										24,182	

5150 El Camino Real, Los Altos, CA

El Camino Real (SR-82) Traffic Data, DPM, PM2.5 & TOG Emission Factors - 35 mph

Analysis Year = 2024

Vehicle Type	2017 Caltrans Number Vehicles (veh/day)	2024 Number Vehicles (veh/day)	2024 Percent Diesel	Number Diesel Vehicles (veh/day)	Vehicle Speed (mph)	Emission Factors				
						Diesel Vehicles DPM (g/VMT)	All Vehicles		Gas Vehicles	
							Total PM2.5 (g/VMT)	Exhaust PM2.5 (g/VMT)	Exhaust TOG (g/VMT)	Running TOG (g/VMT)
LDA	31,911	34,145	1.20%	411	35	0.0054	0.0193	0.0015	0.0117	0.039
LDT	12,127	12,976	0.19%	25	35	0.0093	0.0193	0.0016	0.0178	0.080
MDT	905	968	10.70%	104	35	0.0130	0.0234	0.0028	0.0315	0.173
HDT	257	275	89.40%	246	35	0.0064	0.0633	0.0059	0.0884	0.079
Total	45,200	48,364	-	785	35	-	-	-	-	-
Mix Avg Emission Factor						0.00682	0.01963	0.00160	0.01379	0.05259

Increase From 2017

Vehicles/Direction

Avg Vehicles/Hour/Direction

1.07

24,182

1,008

392

16

Traffic Data Year = 2017

CalTrans AADT & Caltrans Truck AADT		Total Truck	Truck by Axle			
	Total		2	3	4	5
Rte 82, A Mountain View, El Monte Ave	45,200	1,162	905	201	9	46
Rte 82, A Mountain View, Jct. Rte. 237			77.88%	17.34%	0.80%	3.98%

Percent of Total Vehicles

2.57%

2.00%

0.45%

0.02%

0.10%

Traffic Increase per Year (%) = 1.00%

5150 El Camino Real, Los Altos, CA

El Camino Real (SR-82) Traffic Data, DPM, PM2.5 & TOG Emission Factors - 25 mph

Analysis Year = 2024

Vehicle Type	2017 Caltrans Number Vehicles (veh/day)	2024 Number Vehicles (veh/day)	2024 Percent Diesel	Number Diesel Vehicles (veh/day)	Vehicle Speed (mph)	Emission Factors				
						Diesel Vehicles DPM (g/VMT)	All Vehicles		Gas Vehicles	
							Total PM2.5 (g/VMT)	Exhaust PM2.5 (g/VMT)	Exhaust TOG (g/VMT)	Running TOG (g/VMT)
LDA	31,911	34,145	1.20%	411	25	0.0070	0.0201	0.0024	0.0182	0.039
LDT	12,127	12,976	0.19%	25	25	0.0122	0.0202	0.0024	0.0275	0.080
MDT	905	968	10.70%	104	25	0.0189	0.0272	0.0066	0.0511	0.173
HDT	257	275	89.40%	246	25	0.0081	0.0646	0.0072	0.1091	0.079
Total	45,200	48,364	-	785	25	-	-	-	-	-
Mix Avg Emission Factor						0.00910	0.02055	0.00251	0.02140	0.05259

Increase From 2017

Vehicles/Direction

Avg Vehicles/Hour/Direction

1.07

24,182

1,008

392

16

Traffic Data Year = 2017

CalTrans AADT & Caltrans Truck AADT		Total Truck	Truck by Axle			
	Total		2	3	4	5
Rte 82, A Mountain View, El Monte Ave	45,200	1,162	905	201	9	46
Rte 82, A Mountain View, Jct. Rte. 237			77.88%	17.34%	0.80%	3.98%

Percent of Total Vehicles

2.57%

2.00%

0.45%

0.02%

0.10%

Traffic Increase per Year (%) = 1.00%

5150 El Camino Real, Los Altos, CA
El Camino Real (SR-82) Traffic Data and Entrained PM2.5 Road Dust Emission Factors

$$E_{2.5} = [k(sL)^{0.91} \times (W)^{1.02} \times (1-P/4N) \times 453.59]$$

where:

$E_{2.5}$ = PM_{2.5} emission factor (g/VMT)

k = particle size multiplier (g/VMT) [$k_{PM2.5} = k_{PM10} \times (0.0686/0.4572) = 1.0 \times 0.15 = 0.15$ g/VMT]^a

sL = roadway specific silt loading (g/m²)

W = average weight of vehicles on road (Bay Area default = 2.4 tons)^a

P = number of days with at least 0.01 inch of precipitation in the annual averaging period

N = number of days in the annual averaging period (default = 365)

Notes: ^a CARB 2014, Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust (Revised and updated, April 2014)

Road Type	Silt Loading (g/m ²)	Average Weight (tons)	County	No. Days ppt > 0.01"	PM _{2.5} Emission Factor (g/VMT)
Major	0.032	2.4	Santa Clara	64	0.01528

SFBAAB^a

Road Type	Silt Loading (g/m ²)
Collector	0.032
Freeway	0.02
Local	0.32
Major	0.032

SFBAAB^a

County	>0.01 inch precipitation
Alameda	61
Contra Costa	60
Marin	66
Napa	68
San Francisco	67
San Mateo	60
Santa Clara	64
Solano	54
Sonoma	69

**5150 El Camino Real, Los Altos, CA - El Camino Real - 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 136
Receptor Height = 1.5 meters above ground level
Receptor distances = 7 meter spaced grid in residential areas

Meteorological Conditions

BAAQMD San Jose Airport Met Data 2006-2010
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
2006-2010	0.00214	0.3266	1.1430

Meteorological Data Years	PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Road Dust PM2.5	Vehicle PM2.5
2006-2010	0.7599	0.3302	0.4297

**5150 El Camino Real, Los Altos, CA - El Camino Real - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
On-Site 2nd Floor Residential Receptors (4.95 meter receptor heights)**

Emissions Year 2024

Receptor Information

Number of Receptors 136
Receptor Height = 4.95 meters above ground level
Receptor distances = 7 meter spaced grid in residential areas

Meteorological Conditions

BAAQMD San Jose Airport Met Data 2006-2010
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
2006-2010	0.00177	0.2129	0.7451

Meteorological Data Years	PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Road Dust PM2.5	Vehicle PM2.5
2006-2010	0.4952	0.2151	0.2801

**5150 El Camino Real, Los Altos, CA - El Camino Real - TACs & PM2.5
 AERMOD Risk Modeling Parameters and Maximum Concentrations
 On-Site 3rd Floor Residential Receptors (8.2 meter receptor heights)**

Emissions Year 2024

Receptor Information

Number of Receptors 136
 Receptor Height = 8.2 meters above ground level
 Receptor distances = 7 meter spaced grid in residential areas

Meteorological Conditions

BAAQMD San Jose Airport Met Data 2006-2010
 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
2006-2010	0.00104	0.1083	0.3792

Meteorological Data Years	PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Road Dust PM2.5	Vehicle PM2.5
2006-2010	0.2520	0.1094	0.1426

**5150 El Camino Real, Los Altos, CA - El Camino Real 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	Evaporative	Total
					DPM	TOG	TOG				
0	2020	0.25	-0.25 - 0*	10	0.0021	0.3266	1.1430	0.029	0.025	0.005	0.06
1	2020	1	1	10	0.0021	0.3266	1.1430	0.35	0.306	0.063	0.72
2	2021	1	2	10	0.0021	0.3266	1.1430	0.35	0.306	0.063	0.72
3	2022	1	3	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
4	2023	1	4	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
5	2024	1	5	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
6	2025	1	6	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
7	2026	1	7	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
8	2027	1	8	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
9	2028	1	9	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
10	2029	1	10	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
11	2030	1	11	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
12	2031	1	12	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
13	2032	1	13	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
14	2033	1	14	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
15	2034	1	15	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
16	2035	1	16	3	0.0021	0.3266	1.1430	0.06	0.048	0.010	0.11
17	2036	1	17	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
18	2037	1	18	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
19	2038	1	19	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
20	2039	1	20	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
21	2040	1	21	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
22	2041	1	22	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
23	2042	1	23	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
24	2043	1	24	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
25	2044	1	25	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
26	2045	1	26	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
27	2046	1	27	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
28	2047	1	28	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
29	2048	1	29	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
30	2049	1	30	1	0.0021	0.3266	1.1430	0.01	0.005	0.001	0.013
Total Increased Cancer Risk				Total				1.59	1.388	0.286	3.27

* Third trimester of pregnancy

**5150 El Camino Real, Los Altos, CA - El Camino Real Maximum Cancer Risks
On-Site 2nd Floor Residential Receptors (4.95 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	2020	0.25	-0.25 - 0*	10	0.0018	0.2129	0.7451	0.024	0.017	0.003	0.04
1	2020	1	1	10	0.0018	0.2129	0.7451	0.29	0.200	0.041	0.53
2	2021	1	2	10	0.0018	0.2129	0.7451	0.29	0.200	0.041	0.53
3	2022	1	3	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
4	2023	1	4	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
5	2024	1	5	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
6	2025	1	6	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
7	2026	1	7	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
8	2027	1	8	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
9	2028	1	9	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
10	2029	1	10	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
11	2030	1	11	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
12	2031	1	12	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
13	2032	1	13	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
14	2033	1	14	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
15	2034	1	15	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
16	2035	1	16	3	0.0018	0.2129	0.7451	0.05	0.031	0.006	0.08
17	2036	1	17	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
18	2037	1	18	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
19	2038	1	19	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
20	2039	1	20	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
21	2040	1	21	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
22	2041	1	22	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
23	2042	1	23	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
24	2043	1	24	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
25	2044	1	25	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
26	2045	1	26	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
27	2046	1	27	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
28	2047	1	28	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
29	2048	1	29	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
30	2049	1	30	1	0.0018	0.2129	0.7451	0.01	0.003	0.001	0.009
Total Increased Cancer Risk				Total				1.32	0.905	0.187	2.41

* Third trimester of pregnancy

**5150 El Camino Real, Los Altos, CA - El Camino Real Maximum Cancer Risks
On-Site 3rd Floor Residential Receptors (8.2 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	2020	0.25	-0.25 - 0*	10	0.0010	0.1083	0.3792	0.014	0.008	0.002	0.02
1	2020	1	1	10	0.0010	0.1083	0.3792	0.17	0.102	0.021	0.29
2	2021	1	2	10	0.0010	0.1083	0.3792	0.17	0.102	0.021	0.29
3	2022	1	3	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
4	2023	1	4	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
5	2024	1	5	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
6	2025	1	6	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
7	2026	1	7	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
8	2027	1	8	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
9	2028	1	9	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
10	2029	1	10	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
11	2030	1	11	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
12	2031	1	12	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
13	2032	1	13	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
14	2033	1	14	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
15	2034	1	15	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
16	2035	1	16	3	0.0010	0.1083	0.3792	0.03	0.016	0.003	0.05
17	2036	1	17	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
18	2037	1	18	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
19	2038	1	19	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
20	2039	1	20	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
21	2040	1	21	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
22	2041	1	22	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
23	2042	1	23	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
24	2043	1	24	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
25	2044	1	25	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
26	2045	1	26	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
27	2046	1	27	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
28	2047	1	28	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
29	2048	1	29	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
30	2049	1	30	1	0.0010	0.1083	0.3792	0.00	0.002	0.000	0.005
Total Increased Cancer Risk			Total					0.77	0.460	0.095	1.33

* Third trimester of pregnancy

