

PUBLIC UTILITIES COMMISSION MIXED-USE DEVELOPMENT AIR QUALITY & GREENHOUSE GAS ASSESSMENT

South San Francisco, California

March 19, 2019

Prepared for:

**Brian Baker
VP of Development
AGI Avant, Inc.
100 Bush Street, Suite 1450
San Francisco, CA 94104**

Prepared by:

**James Reyff
Bill Popenuck
Casey Divine**

ILLINGWORTH & RODKIN, INC.
/// Acoustics • Air Quality ///

**429 East Cotati Avenue
Cotati, CA 94931
(707) 794-0400**

Project: 18-189

Introduction

The purpose of this report is to address air quality impacts and compute greenhouse gas (GHG) emissions associated with a new mixed-use project located west of Mission Road between Grand Avenue and Oak Avenue in South San Francisco, California. The air quality impacts and GHG emissions would be associated with the construction of the new buildings 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 project site is currently vacant and is located within the City's El Camino Real/Chestnut Avenue Area Plan. It is bounded by Mission Road to the east, a proposed extension of Oak Avenue to the South, and El Camino Real and Kaiser Hospital to the west. Colma Creek runs southeast through the site. The project proposes to construct 809 residential units in three, eight-story mixed-use multi-family buildings with one-level of below grade parking on the 5.9-acre site. Building A would consist of 162 affordable housing units, 131 market rate units, and 477 parking spaces. Building B would consist of 288 units, 510 parking spaces, and a 5,500 square-foot (s.f.) child care center open to families outside of the project. Building C would consist of 228 units, 454 parking spaces, and a 13,000 s.f. commercial space that will function to be open to the public and envisioned as a food and beverage themed Market Hall. The project also proposes a combination of on-site and off-site publicly accessibly landscaped parks, totaling 5.7 acres of plazas, playgrounds, exercise courses, and bike paths. The project would be consistent with the El Camino Real/Chestnut Avenue Area Plan. The Area Plan addressed air quality impacts on a plan levels and this study addresses project-level air quality impacts.

Project Design Features – Construction Emissions Control

The project design includes features to minimize air quality impacts that may occur during construction. During any construction period ground disturbance, the applicant will ensure that the project contractor implement measures to control dust and exhaust. The contractor will 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) will be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site will be covered.
3. All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

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

4. All vehicle speeds on unpaved roads will be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times will 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 will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will 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 will respond and take corrective action within 48 hours. The Air District's phone number will also be visible to ensure compliance with applicable regulations.

The practices above are consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines. These controls on construction equipment emissions are intended to reduce emissions of air pollutants and toxic air contaminants.

In addition to the BAAQMD-recommended best management practices, the project construction design features would require that the project develop a plan demonstrating that the off-road equipment used onsite to construct the project would achieve a fleet-wide average reduction in DPM exhaust emissions by 80-percent or greater for Building A, 85-percent or greater for Building B, and 88-percent or greater for Building C. One feasible plan to achieve this reduction would include the following:

- All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously will, at a minimum, meet U.S. EPA standards for Tier 2 engines that include CARB-certified Level 3 Diesel Particulate Filters (DPF)² or equivalent. Equipment that meets U.S. EPA Tier 4 particulate matter emission standards or meets Tier 3 standards with DPF Level 3 diesel particulate matter filters for particulate matter would also meet this requirement. This measure would not apply to alternatively fueled equipment.

Setting

The project is located in San Mateo 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

² See <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}).

Air Pollutants of Concern

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

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

Toxic Air Contaminants

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 2015.³ See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

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

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The project would introduce new sensitive receptors in the form of residences. In addition, the closest sensitive receptors to the project site are the adjacent residences of the multi-family complex north of the project site. There are additional residences surrounding the site at farther distances, as well as Kaiser Hospital to the northwest of the project site opposite Colma Creek.

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.⁴

⁴ USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

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

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

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.⁵ In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have 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.

⁵ California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

Bay Area Air Quality Management District (BAAQMD)

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

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

The BAAQMD California Environmental Quality Act (CEQA) *Air Quality Guidelines*⁶ 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.

South San Francisco General Plan 1999

The South San Francisco General Plan 1999 includes guiding and implementing policies to reduce exposure of the City's sensitive population to exposure of air pollution, toxic air contaminants, and greenhouse gases. The following guiding and implementing policies are applicable to the proposed project:

GUIDING POLICIES: AIR QUALITY AND GREENHOUSE GAS EMISSIONS

- 7.3-G-1 Continue to work toward improving air quality and meeting all national and State ambient air quality standards and by reducing the generation of air pollutants both from stationary and mobile sources, where feasible.
- 7.3-G-2 Mitigate the community of South San Francisco's impact on climate change by reducing greenhouse gas emissions consistent with state guidance.
- 7.3-G-3 Reduce energy use in the built environment.
- 7.3-G-4 Encourage land use and transportation strategies that promote use of alternatives to the automobile for transportation, including bicycling, bus transit, and carpooling.
- 7.3-G-5 Promote clean and alternative fuel combustion in mobile equipment and vehicles.

⁶ Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

- 7.3-G-6 Minimize conflicts between sensitive receptors and emissions generators by distancing them from one another.

IMPLEMENTING POLICIES: AIR QUALITY AND GREENHOUSE GAS EMISSIONS

- 7.3-1-1 Cooperate with the Bay Area Air Quality Management District to achieve emissions reductions for nonattainment pollutants and their precursors, including carbon monoxide, ozone, and PM-10, by implementation of air pollution control measures as required by State and federal statutes.
- 7.3-1-2 Use the City's development review process and the California Environmental Quality Act (CEQA) regulations to evaluate and mitigate the local and cumulative effects of new development on air quality and GHG emissions.
- 7.3-1-3 Adopt the standard construction dust abatement measures included in BAAQMD's CEQA Guidelines.
- 7.3-1-4 Require new residential development and remodeled existing homes to install clean-burning fireplaces and wood stoves.
- 7.3-1-5 In cooperation with local conservation groups, institute an active urban forest management program that consists of planting new trees and maintaining existing ones.
- 7.3-1-6 Periodically update the inventory of community-wide GHG emissions and evaluate appropriate GHG emissions reduction targets, consistent with current State objectives, statewide guidance, and regulations.
- 7.3-1-7 Adopt and implement the City of South San Francisco's CAP, which will identify a GHG emissions reduction target and measures and actions to achieve the reduction target.
- 7.3-1-8 Evaluate and regularly report to City Council, or its designee, on the implementation status of the CAP and update the CAP as necessary should the City find that adopted strategies are not achieving anticipated reductions, or to otherwise incorporate new opportunities.
- 7.3-1-9 Promote land uses that facilitate alternative transit use, including high-density housing, mixed uses, and affordable housing served by alternative transit infrastructure.

South San Francisco Climate Action Plan

The purpose of the City of South San Francisco's Climate Action Plan (CAP) is to demonstrate the City of South San Francisco's commitment to reduce GHG emissions while protecting the unique resources of the community. The CAP is intended to build upon existing environmental

preservation, public health, and energy-saving efforts. The Cap provides goals, policies, and programs to reduce GHG emissions, adapt to climate change, and support the goals of AB 32 and SB 375. On February 13, 2014, the City adopted the CAP which follows both the State and BAAQMD CEQA guidelines of reaching a target reduction of 15% below baseline 2005 GHG emissions levels by 2020.

El Camino Real/Chestnut Avenue Area Plan and Associated General Plan Amendment and Zoning Ordinance Amendment

The proposed project is part of the El Camino Real/Chestnut Avenue Area Plan and Associated General Plan Amendment and Zoning Ordinance Amendment (Area Plan). A draft environmental impact report (DEIR) that evaluated the effects of this Area Plan, including air quality impacts that were described in Chapter 3.2, was prepared and adopted. That DEIR evaluated impacts at a plan level. The DEIR found that new development under the proposed Area Plan would not increase vehicle miles traveled (VMT) at a faster rate than population and would not be inconsistent with air quality control measures in the 2010 Bay Area Clean Air Plan. The proposed project is consistent with land uses and zoning proposed in the Area Plan.

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

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 has not published a 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. Buildings A - C would be constructed one after another; Building C would be constructed from 2020 – 2021, Building B would be constructed from 2022 – 2023, and Building A would be constructed from 2024– 2025. It is assumed that once a building is constructed, it would be occupied as the next building is beginning construction.

A construction build-out scenario, including equipment list and schedule, was based on CalEEMod default information for a project of this type and size. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. The proposed project land uses were input into CalEEMod, which included:

Building C: 228 dwelling units and entered as “Apartments Mid Rise”, 454 spaces entered as “Enclosed Parking with Elevator”, 13,000 s.f. entered as “Strip Mall”, and 1.72 acres entered as “City Park”. In addition, 34,765 cubic yards (cy) of soil exported during the grading phase was entered into the model. Construction was assumed to begin January 2020 and last 15 months. There were an estimated 320 construction workdays.

Building B: 288 dwelling units and entered as “Apartments Mid Rise”, 510 spaces entered as “Enclosed Parking with Elevator”, 5,500 s.f. entered as “Day-Care Center”, and 1.72 acres entered as “City Park”. In addition, 34,765 cy of soil exported during the grading phase was entered into the model. Construction was assumed to begin January 2022 and last 15 months. There were an estimated 320 construction workdays.

Building A: 293 dwelling units and entered as “Apartments Mid Rise”, 477 spaces entered as “Enclosed Parking with Elevator”, and 1.72 acres entered as “City Park”. In addition, 34,765 cy of soil exported during the grading phase was entered into the model. Construction was assumed to begin January 2024 and last 15 months. There were an estimated 320 construction 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. The project would include construction emissions control features that would implement BAAQMD-recommended best management practices.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future residents, employees, and customers. 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 project would be constructed and begin operating in phases, as Buildings A – C would be construction one after another; Building C would be operational by 2022, Building B would be operational by 2024, and Building A would be operational by 2026. Emissions associated with build-out later than 2022, 2024, and 2026 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 trip generation values for the multi-family residential, shopping center, and daycare.⁷ The weekday trip rate used for the residential portion of the project was 5.48 trips per dwelling unit, which changed the Saturday trip rate to 5.27 and the Sunday trip rate to 4.83. The weekday trip rate used for the strip mall was 115.46 per thousand square feet, which changed the Saturday trip rate to 109.52 and the Sunday trip rate to 53.22. The weekday trip rate used for the daycare was 47.64 per thousand square feet, which changed the Saturday trip rate to 4.00 and the Sunday trip rate to 3.75. Note that these trip generation rates do not include effects for internalization or the project's proposed TDM program that would reduce traffic trips.

⁷ Fehr & Peers Transportation Consultants, "CEQA Transportation Impact Analysis Assessment for the SFPUC Site", December 2018.

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.⁸

Other Inputs

Wood-burning stoves and fireplaces are not allowed in new developments in the Bay Area; however, it was assumed that residential units could contain gas-powered fireplaces. Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions. There is no development or land uses currently on the project site; therefore, the existing land uses emissions would not exist.

Table 2 and Table 3 show average daily emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust during construction and operations of the project phases. As indicated in Table 2 and Table 3, predicted the construction and operational period emissions would not exceed the BAAQMD significance thresholds. This would be considered a *less-than-significant* impact.

Table 2. Criteria Pollutant Construction and Operational Emissions (tons/year)

Year	Scenario	ROG	NO _x	PM ₁₀	PM _{2.5}
2020	Building C Construction	0.4	4.5	0.6	0.3
2021	Building C Construction	2.8	0.4	0.0	0.0
2022	Building C Operation and Building B Construction	2.8	5.5	2.5	0.8
2023	Building C Operation and Building B Construction	6.0	2.1	1.9	0.6
2024	Building B + C Operation and Building A Construction	5.5	5.9	3.9	1.2
2025	Building B + C Operation and Building A Construction	7.9	3.2	3.4	1.0
2026	Full Buildout Building A+ B + C Operation	7.3	4.0	4.7	1.3
BAAQMD Thresholds (tons/year)		10 tons	10 tons	15 tons	10 tons
Exceed Threshold?		No	No	No	No

⁸ Pacific Gas & Electric, 2015. *Greenhouse Gas Emission Factors: Guidance for PG&E Customers*. November.

Table 3. Criteria Pollutant Construction and Operational Emissions (pounds/day)

Year	Scenario	ROG	NO _x	PM ₁₀	PM _{2.5}
2020	Building C Construction	2.4	24.5	3.5	1.8
2021	Building C Construction	15.4	2.0	0.3	0.1
2022	Building C Operation and Building B Construction	15.4	30.1	13.8	4.5
2023	Building C Operation and Building B Construction	32.9	11.5	10.5	3.0
2024	Building B + C Operation and Building A Construction	30.2	32.4	21.6	6.6
2025	Building B + C Operation and Building A Construction	43.1	17.5	18.4	5.3
2026	Full Buildout Building A+ B + C Operation	40.0	21.7	25.8	7.3
BAAQMD Thresholds (pounds/day)		54 lbs.	54 lbs.	82 lbs.	54 lbs.
Exceed Threshold?		No	No	No	No

Impact 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

As discussed under Impact 1, the project would have emissions less than the BAAQMD thresholds. Therefore, the project would not contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below State and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the standard. The highest measured level over any 8-hour averaging period during the last 3 years in the Bay Area is less than 3.0 parts per million (ppm), compared to the ambient air quality standard of 9.0 ppm. Intersections affected by the project would have traffic volumes less than the BAAQMD screening criteria and, thus, would not cause a violation of an ambient air quality standard or have a considerable contribution to cumulative violations of these standards.⁹ The project would not cause the violation of an air quality standard or worsen an existing violation of an air quality standard. This would be a *less-than-significant* impact.

Impact 3: 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.

⁹ For a land-use project type, the BAAQMD CEQA Air Quality Guidelines state that a proposed project would result in a less-than-significant impact to localized carbon monoxide concentrations if the project would not increase traffic at affected intersections with more than 44,000 vehicles per hour.

The project would introduce new residents that are sensitive receptors. There are several sources of TACs and localized air pollutants in the vicinity of the project. The impacts of these sources upon the project were assessed. 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 construction impacts caused by the project. 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 methodology for computing community risks impacts is contained in *Attachment 1*.

Operational Community Health Risk Impacts

Community health risk assessments typically look at all substantial sources of TACs located within 1,000 feet of project site. These sources include highways, busy surface streets and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on Highway 82 (i.e. El Camion Real), Mission Road, Chestnut Avenue, Grand Avenue, and Arroyo Drive are busy roadways that are sources of TACs. A review of BAAQMD's stationary source Google Earth map tool identified six sources with the potential to affect the project site. Figure 1 shows the sources affecting the project site. Details of the modeling and community risk calculations are included in *Attachment 3*. Concentrations and community risk impacts from these sources upon the project are reported in Table 4.

Figure 1. Project Site and 1,000-Foot Radius for Identifying TAC Sources



Highways – Highway 82 (i.e. El Camino Real)

BAAQMD provides a *Highway Screening Analysis Google Earth Map* tool to identify estimated risk and hazard impacts from highways throughout the Bay Area. Cumulative risk, hazard, and PM_{2.5} impacts at various distances from the highway are estimated for different segments of the highways. The tool uses the average annual daily traffic (AADT) count, fleet mix, and other modeling parameters specific to that segment of the highway. Impacts from Link 33 (6ft elevation) for Highway 82 (i.e. El Camino Real), in which the project site was approximately 250 feet north of Highway 82, were identified using this tool.

The cancer risk identified using the BAAQMD tool was adjusted using a factor of 1.3744 to account for new Office of Environmental Health Hazard Assessment (OEHHHA) guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict

cancer risk.¹⁰ Concentrations and community risk impacts from Highway 82 (i.e. El Camino Real) upon the project are reported in Table 4.

Local Roadways

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

The calculator uses EMFAC2011 emission rates for the year 2014. Overall, emission rates will decrease by the time the project is constructed and occupied. The project would not be occupied prior to at least 2018. In addition, a new version of the emissions factor model, EMFAC2014 is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for 2018.

The predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.

The four following roadways were identified as having over 10,000 vehicles per day: Mission Road, Chestnut Avenue, Grand Avenue, and Arroyo Drive. The average daily traffic (ADT) on Mission Road estimated to be 14,885 vehicles, the ADT on Chestnut Avenue was estimated to be 42,620 vehicles, the ADT on Grand Avenue was estimated to be 15,020 vehicles, and the ADT on Arroyo Drive was estimated to be 13,005 vehicles. This estimate was based on the peak-hour traffic volumes included in the City of South San Francisco El Camino Real/Chestnut Avenue Area Plan's traffic analysis for cumulative plus project conditions.¹¹ The AM and PM peak-hour volumes were averaged and then multiplied by 10 to estimate the ADT.

The BAAQMD *Roadway Screening Analysis Calculator* for San Mateo County was used for the roadways. Mission Road was identified as a north-south directional roadway with the project site 30 feet west of the roadway. Chestnut Avenue was identified as an east-west directional roadway with the project site 630 feet north of the roadway. Grand Avenue was identified as an east-west directional roadway with the project site 120 feet south of the roadway. Arroyo Drive was identified as an east-west directional roadway with the project site 350 feet north of the roadway. Estimated cancer risk and annual PM_{2.5} concentration values for all roadways are listed in Table 4. Note that BAAQMD has found that non-cancer hazards from all local roadways would be well below the BAAQMD thresholds. Chronic or acute HI for the roadway would be less than 0.01.

¹⁰ Correspondence with Alison Kirk, BAAQMD, November 23, 2015.

¹¹ Kimley-Horn and Associate, Inc., "City of South San Francisco El Camino Real/Chestnut Avenue Area Plan Draft Traffic Impact Analysis", February 2011.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identified the location of four stationary sources and their estimated risk and hazard impacts. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. They provided updated risk levels, emissions and adjustments to account for new OEHHA guidance.¹² The risk values were then adjusted with the appropriate distance multiplier values provided by BAAQMD or the emissions information was used in refined modeling.

Six stationary sources were identified (Plants #4047, #14871, #22000, #108499, #19316, and #111428) with three being generators, two being gasoline dispensing facilities (GDF), and one a hospital with generators, sterilizers, and boilers. The screening risk levels for these stationary sources were provided by BAAQMD and adjusted for distance based on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines* and *Distance Adjustment Multiplier Tool for GDF*. Concentrations and community risk impacts from these sources upon the project are reported in Table 4.

Note that the nearby hospital, Plant #4047, has generators, sterilizers, and boilers. While the generators' risk values were adjusted for distance, the sterilizers' and boilers' risk values were not adjusted for distance. The BAAQMD *Risk and Hazard Emissions Screening Calculator (Beta Version)* was used with the 2018 daily emissions information to calculate the risk impact from this plant. Concentrations and community risk impacts from these sources are reported in Table 4.

Cumulative Community Health Risk at Project Site

Community risk impacts from combined sources upon the project site are reported in Table 4. As shown, the annual cancer risks, annual PM_{2.5} concentrations, and Hazard Indexes are all below their respective single-source and cumulative significance thresholds and would be considered a *less-than-significant* impact.

¹² Correspondence with Areana Flores, BAAQMD, November 21, 2018.

Table 4. Maximum Community Risk Impact to New Project Residences

Source	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
Highway 82 (i.e. El Camino Real) at 250 feet north	4.0	0.04	0.04
Mission Road at 30 feet, ADT 14,855	4.1	0.13	<0.01
Chestnut Avenue at 630 feet, ADT 42,620	3.0	0.09	<0.01
Grand Avenue at 120 feet, ADT 15,020	3.0	0.11	<0.01
Arroyo Drive at 350 feet, ADT 13,005	1.4	0.04	<0.01
Plant #4047 (generators, sterilizers, boilers) at 300 feet	3.0	<0.01	0.03
Plant #14871 (generator) at 120 feet	0.8	<0.01	<0.01
Plant #22000 (generator) at 200 feet	0.2	<0.01	<0.01
Plant #108499 (GDF) at 1,000 feet	0.4	<0.01	<0.01
Plant #19316 (generator) at 1,000 feet	0.1	<0.01	<0.01
Plant #111428 (GDF) at 800 feet	5.1	<0.01	0.02
BAAQMD Single-Source Threshold	>10.0	>0.3	>0.1
Significant?	No	No	No
Cumulative Total	25.1	<0.47	<0.17
BAAQMD Cumulative Source Threshold	>100	>0.8	>10.0
Significant?	No	No	No

Construction Community Health Risk Impacts

Project Construction Activity

Project construction would affect both existing and new (project) sensitive receptors. 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}.¹³ This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

The project design features include construction emissions controls that would reduce emissions from construction equipment, as well as fugitive PM_{2.5} emissions generated from soil disturbances. The effect of these features is included in the modeling of construction community risk impacts.

¹³ DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

Construction Emissions

The CalEEMod model provided total annual fugitive PM_{2.5} dust emissions and PM₁₀ exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles. The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction sites. It was assumed that these emissions from on-road vehicles traveling at or near the sites would occur at the construction site. The proposed project buildings would be constructed over a six year period (2020-2025). Buildings A - C would be constructed one after another; Building C would be constructed from 2020-2021, Building B would be constructed from 2022-2023, and Building A would be constructed from 2024-2025. It is assumed that once the building is completed, it would be occupied as the next building is beginning construction. The annual DPM and fugitive PM_{2.5} dust emissions from construction of the project buildings with project design features to include construction emissions controls are summarized in Table 5.

Table 5. Project Construction Annual DPM and Fugitive PM_{2.5} Dust Emissions

Year	Construction Scenario	DPM		Fugitive PM _{2.5}	
		(tons/year)	(pounds/year)	(tons/year)	(pounds/year)
2020	Building C Construction	0.0192	38.4	0.0271	54.2
2021	Building C Construction	0.0024	4.9	0.0008	1.6
2022	Building B Construction	0.0187	37.4	0.0284	56.8
2023	Building B Construction	0.0026	5.1	0.0010	2.0
2024	Building A Construction	0.0185	37.0	0.0283	56.6
2025	Building A Construction	0.0024	4.8	0.0009	1.8
Total		0.0638	127.6	0.0865	173.0

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM_{2.5} at sensitive receptors in the vicinity of the project construction areas. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.¹⁴ Modeling was used to calculate impacts to off-site residences and sensitive receptors at Kaiser Hospital from construction of Buildings A, B and C. Since there would be new residences in Building C while Buildings B and A are being constructed, and there would be new residences in Building B while Building A is being constructed, impacts to the new residences from ongoing construction at the other building sites were modeled. Additionally, a new day care facility would be constructed at the Building B site. Since this day care facility may be operated while Building A is being constructed, impacts from Building A construction were modeled at the day care facility. It was conservatively assumed that infants under the age of two would be at the day care facility.

¹⁴ Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May.

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 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. Figure 2 shows the construction areas modeled and the on-site and off-site sensitive receptors included in the modeling.

The modeling used a 5-year meteorological data set (2006-2010) from the San José Airport prepared for use with the AERMOD model by the BAAQMD. Annual DPM and PM_{2.5} concentrations from construction activities at the project site during the 2020-2025 period were calculated at the sensitive receptors 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 heights of nearby residents and other sensitive residences at the first and second floor levels. Receptor heights of 1.0 meter (3.3 feet) were used for receptors at the day care facility.

Project Health Impacts

The maximum-modeled annual DPM and PM_{2.5} concentrations, which includes both the DPM and fugitive PM_{2.5} concentrations, were identified at nearby sensitive receptors (as shown in Figure 2) to find the maximally exposed individuals (MEIs). Using the maximum annual modeled DPM concentrations, the maximum increased cancer risks were calculated using BAAQMD recommended methods and exposure parameters described in *Attachment 1*. Non-cancer health hazards and maximum PM_{2.5} concentrations were also calculated and identified. The maximum project construction related cancer risks, PM_{2.5} concentrations, and health hazard indexes (HIs) at nearby sensitive evaluated are summarized in Table 6.

Results of this assessment indicated that the construction MEI was located at the ground-floor level (1.5 meter breathing height) of an apartment building on Antoinette Lane southeast of the Building C site area. The location of this MEI is shown in Figure 2. With the inclusion of the project design features for construction emissions controls, the maximum excess residential cancer risks at this location would not exceed the BAAQMD significance threshold of greater than 10 in one million, the maximum PM_{2.5} concentration thresholds of greater than 0.3 µg/m³, or the health hazard index (HI) of greater than 1.0. *Attachment 4* to this report includes the emission calculations used for the construction area source modeling, modeling results, and the cancer risk calculations.

Cumulative Community Health Risk at Construction MEI

Cumulative TAC impacts are assessed by predicting the combined community risk impacts to the project and nearby sources. Table 7 reports both the project single-source and cumulative-source community risk impacts. As shown in Table 7, the combined cancer risk, PM_{2.5} concentrations,

and Hazard risk values, which include project features to reduce construction emissions, would not exceed the thresholds. The project would have a *less-than-significant* impact with respect to community risk caused by project construction activities.

Figure 2. Project Construction Sites, Locations of On-Site and Off-Site Sensitive Receptors, and Locations of Maximum TAC Impacts

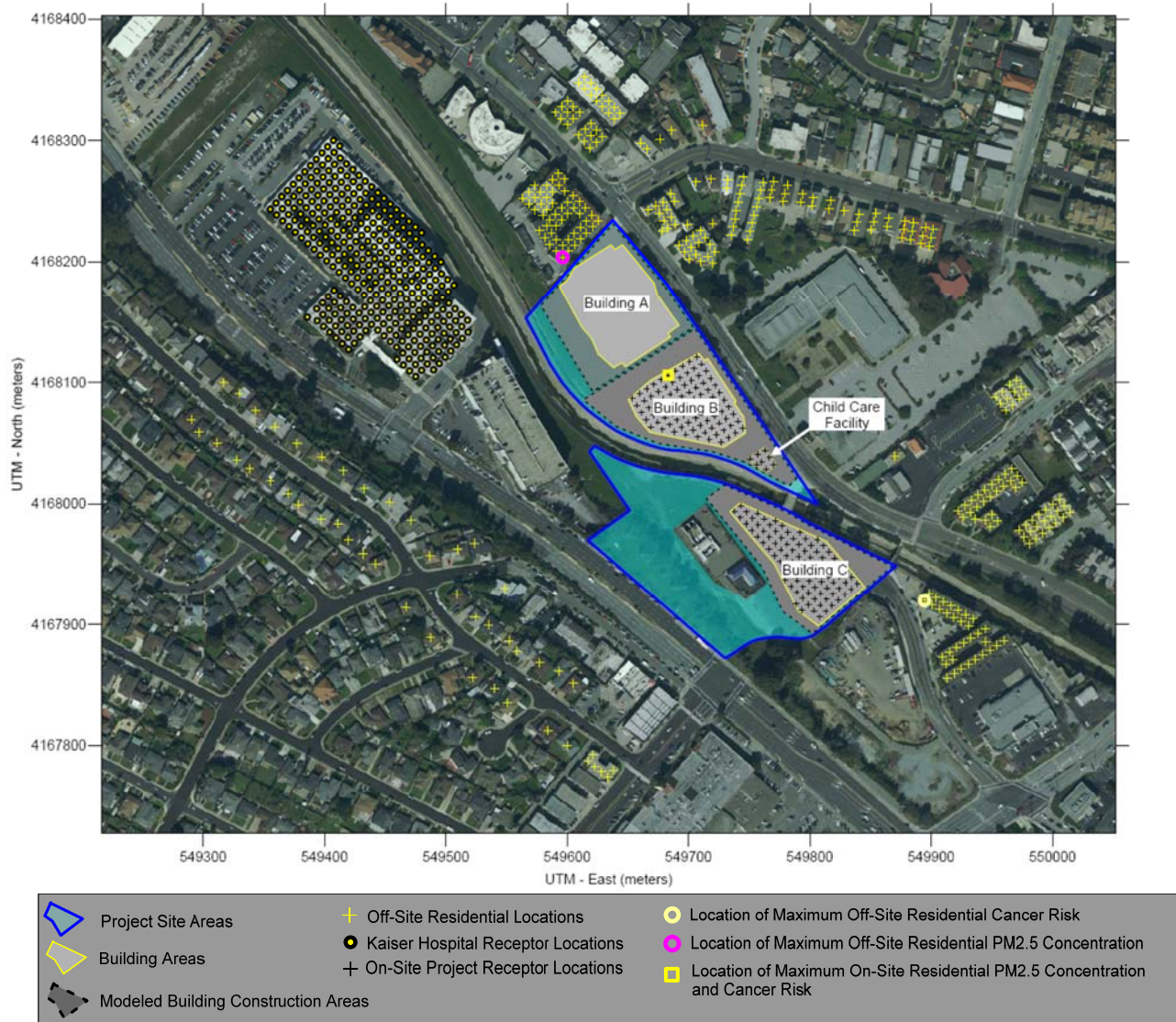


Table 6. Maximum Impacts from Construction at On- and Off-Site Sensitive Receptors

Sensitive Receptor Type	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
Off-Site Residential Receptors	3.8	0.07	<0.01
Kaiser Hospital Sensitive Receptors	1.3	0.02	<0.01
On-Site Residential Receptors – Building C	3.6	0.05	<0.01
On-Site Residential Receptors – Building B	6.1	0.09	<0.01
On-Site Residential Receptors – Daycare Facility	0.9	0.01	<0.01
BAAQMD Single-Source Threshold	>10.0	>0.3	>1.0
<i>Significant?</i>	<i>No</i>	<i>No</i>	<i>No</i>

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

Source	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
Project Construction	3.8	0.07	<0.01
BAAQMD Single-Source Threshold	>10.0	>0.3	>1.0
<i>Significant?</i>	<i>No</i>	<i>No</i>	<i>No</i>
Highway 82 (i.e. El Camino Real) at 480/615 feet north	2.4	0.02	<0.01
Mission Road at 150/200 feet, ADT 14,855	1.7	0.04	<0.01
Chestnut Avenue at 550/1,800 feet, ADT 42,620	3.4	0.06	<0.01
Grand Avenue at 1,000/250 feet, ADT 15,020	0.5	0.06	<0.01
Arroyo Drive at 630/1,000 feet, ADT 13,005	0.9	0.02	<0.01
Plant #4047 (generators, sterilizers, boilers) at 1,000/315 feet	0.7	<0.01	0.03
Plant #14871 (generator) at 780/520 feet	0.1	<0.01	<0.01
Plant #22000 (generator) at 180/1,000 feet	0.2	<0.01	<0.01
Plant #108499 (GDF) at 870/1,000 feet	0.5	0.00	<0.01
Plant #19316 (generator) at 1,000/1,000 feet	0.1	<0.01	<0.01
Plant #111428 (GDF) at 800/1,000 feet	5.1	0.00	0.02
Cumulative Total	19.4	<0.31	<0.15
BAAQMD Cumulative Source Threshold	>100	>0.8	>10.0
<i>Significant?</i>	<i>No</i>	<i>No</i>	<i>No</i>

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 recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate. Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO₂e/year/service population and a bright-line threshold of 660 MT CO₂e/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based on the assumption that the 2020 inventory is reduced to 1990 levels and those will be reduced by 40 percent to meet the 2030 Statewide goals.¹⁵ The 2030 bright-line threshold would be a 40 percent reduction of the previously recommended 1,100-MT CO₂e/year threshold. The BAAQMD has suggested a threshold of 2.8 metric tons per capita but has not published this as a threshold.¹⁶

¹⁵ 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.

¹⁶ BAAQMD presentation by Dave Vintze, Air Quality Planning Manager at the CLE International 12th Annual SuperConference – December 12, 2016.

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 resident was estimated by multiplying the total number of units by the persons per household rate for South San Francisco found in the California Department of Finance Population and Housing Estimate report.¹⁷ Using the 3.16 persons per household 2018 estimate for South San Francisco, the number of future residents is estimated to be 2,557. The number of future employees at the project site was estimated using the assumption of 2.5 employees per 1,000-sf for child care and commercial/retail land uses. Using this assumption, the number of future employees is 47 employees. The total future project population is 2,604 individuals.

Construction Emissions

GHG emissions associated with construction were computed to be 2,961 MT of CO₂e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable. Best management practices assumed to be incorporated into construction of the proposed project include but are not limited to: using local building materials of at least 10 percent and recycling or reusing at least 50 percent of construction waste or demolition materials.

¹⁷ 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.

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 8, annual emissions resulting from operation of the proposed project are predicted to be 5,375 MT of CO₂e for the year 2030 and the service population emissions for the year 2030 would be 2.3. The 2030 emissions increase does exceed the 2030 bright-line threshold of 660 MT CO₂e/year but does not exceed the 2030 service population emissions “Substantial Progress” efficiency metric of 2.8 MT CO₂e/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 both thresholds. Therefore, the project would have a *less-than-significant* impact regarding GHG emissions.

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

Source Category	Proposed Project in 2030
Area	42
Energy Consumption	1,310
Mobile	3,734
Solid Waste Generation	199
Water Usage	90
Total Emissions	5,375
Significance Threshold	660 MT CO₂e/yr
Service Population Emissions (MT CO ₂ e/year/service population)	2.3
Significance Threshold	2.8 in 2030
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 includes the screening community risk calculations from sources affecting the project and construction MEI.

Attachment 4 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 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 2015.¹⁸ 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.¹⁹ 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.²⁰ 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 the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways).

¹⁸ 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.

¹⁹ CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

²⁰ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

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).

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

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

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)

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

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

SSF PUC ECR Chestnut - Building C - San Mateo County, Annual

SSF PUC ECR Chestnut - Building C

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	454.00	Space	0.00	181,600.00	0
City Park	1.72	Acre	1.72	74,923.20	0
Apartments Mid Rise	228.00	Dwelling Unit	6.00	377,560.00	652
Strip Mall	13.00	1000sqft	0.30	13,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			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

Project Characteristics - PG&E 2020 Rate

Land Use - PD Land Uses, Extra acreage for trenching/below-grade parking

Construction Phase - Default Construction schedule, added trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Trenching Equip added

Grading - Exported material = 34,765cy

Woodstoves - No Wood Burning, All gas

Water And Wastewater - WTP Treatment 100% Aerobic

Vehicle Trips - Apts = 5.48, 5.27, 4.83, Mall = 115.46, 109.52, 53.22

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	34.20	72.96
tblFireplaces	NumberWood	38.76	0.00
tblGrading	MaterialExported	0.00	34,765.00
tblLandUse	LandUseSquareFeet	228,000.00	377,560.00
tblLandUse	LotAcreage	4.09	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	6.39	5.27
tblVehicleTrips	ST_TR	42.04	109.52
tblVehicleTrips	SU_TR	5.86	4.83
tblVehicleTrips	SU_TR	20.43	53.22
tblVehicleTrips	WD_TR	6.65	5.48
tblVehicleTrips	WD_TR	44.32	115.46
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	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

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					
2020	0.4333	4.4685	3.5067	9.6300e-003	0.4754	0.1678	0.6433	0.1696	0.1572	0.3268	0.0000	895.7443	895.7443	0.1278	0.0000	898.9390
2021	2.8054	0.3713	0.3989	8.8000e-004	0.0291	0.0167	0.0458	7.8400e-003	0.0156	0.0234	0.0000	79.8054	79.8054	0.0135	0.0000	80.1417
Maximum	2.8054	4.4685	3.5067	9.6300e-003	0.4754	0.1678	0.6433	0.1696	0.1572	0.3268	0.0000	895.7443	895.7443	0.1278	0.0000	898.9390

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					
2020	0.4333	4.4685	3.5067	9.6300e-003	0.4754	0.1678	0.6433	0.1696	0.1572	0.3268	0.0000	895.7440	895.7440	0.1278	0.0000	898.9386
2021	2.8054	0.3713	0.3989	8.8000e-004	0.0291	0.0167	0.0458	7.8400e-003	0.0156	0.0234	0.0000	79.8054	79.8054	0.0135	0.0000	80.1417
Maximum	2.8054	4.4685	3.5067	9.6300e-003	0.4754	0.1678	0.6433	0.1696	0.1572	0.3268	0.0000	895.7440	895.7440	0.1278	0.0000	898.9386

[illegible]

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	1.8703	1.8703
2	4-1-2020	6-30-2020	0.9963	0.9963
3	7-1-2020	9-30-2020	1.0073	1.0073
4	10-1-2020	12-31-2020	1.0181	1.0181
5	1-1-2021	3-31-2021	3.1862	3.1862
		Highest	3.1862	3.1862

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	1.8666	0.0275	1.7024	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8600e-003	1.7000e-004	12.0034
Energy	0.0111	0.0947	0.0415	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	393.9426	393.9426	0.0306	7.8900e-003	397.0584
Mobile	0.5637	1.6480	5.9499	0.0197	1.8402	0.0169	1.8571	0.4945	0.0158	0.5103	0.0000	1,804.9987	1,804.9987	0.0667	0.0000	1,806.6670
Waste						0.0000	0.0000		0.0000	0.0000	24.0910	0.0000	24.0910	1.4237	0.0000	59.6844
Water						0.0000	0.0000		0.0000	0.0000	5.5965	16.7858	22.3823	0.0209	0.0125	26.6361
Total	2.4414	1.7701	7.6938	0.0205	1.8402	0.0346	1.8747	0.4945	0.0334	0.5280	29.6874	2,227.6091	2,257.2966	1.5448	0.0206	2,302.0492

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	1.8666	0.0275	1.7024	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8600e-003	1.7000e-004	12.0034
Energy	0.0111	0.0947	0.0415	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	393.9426	393.9426	0.0306	7.8900e-003	397.0584
Mobile	0.5637	1.6480	5.9499	0.0197	1.8402	0.0169	1.8571	0.4945	0.0158	0.5103	0.0000	1,804.9987	1,804.9987	0.0667	0.0000	1,806.6670
Waste						0.0000	0.0000		0.0000	0.0000	24.0910	0.0000	24.0910	1.4237	0.0000	59.6844
Water						0.0000	0.0000		0.0000	0.0000	5.5965	16.7858	22.3823	0.0209	0.0125	26.6361
Total	2.4414	1.7701	7.6938	0.0205	1.8402	0.0346	1.8747	0.4945	0.0334	0.5280	29.6874	2,227.6091	2,257.2966	1.5448	0.0206	2,302.0492

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	2/11/2020	5	10	
3	Grading	Grading	2/12/2020	3/10/2020	5	20	
4	Trenching	Trenching	2/12/2020	2/25/2020	5	10	
5	Building Construction	Building Construction	3/11/2020	1/26/2021	5	230	
6	Paving	Paving	1/27/2021	2/23/2021	5	20	
7	Architectural Coating	Architectural Coating	2/24/2021	3/23/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 764,559; Residential Outdoor: 254,853; Non-Residential Indoor: 19,500; Non-Residential Outdoor: 6,500; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,346.00	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	276.00	69.00	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	55.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386

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	4.1000e-004	2.8000e-004	2.9200e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9833	0.9833	2.0000e-005	0.0000	0.9838

Total	4.1000e-004	2.8000e-004	2.9200e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9833	0.9833	2.0000e-005	0.0000	0.9838
-------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	--------	--------	--------	-------------	--------	--------

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385

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	4.1000e-004	2.8000e-004	2.9200e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9833	0.9833	2.0000e-005	0.0000	0.9838
Total	4.1000e-004	2.8000e-004	2.9200e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9833	0.9833	2.0000e-005	0.0000	0.9838

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

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	2.5000e-004	1.7000e-004	1.7500e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5900	0.5900	1.0000e-005	0.0000	0.5903
Total	2.5000e-004	1.7000e-004	1.7500e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5900	0.5900	1.0000e-005	0.0000	0.5903

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

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	2.5000e-004	1.7000e-004	1.7500e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5900	0.5900	1.0000e-005	0.0000	0.5903
Total	2.5000e-004	1.7000e-004	1.7500e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5900	0.5900	1.0000e-005	0.0000	0.5903

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0675	0.0000	0.0675	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2639	0.1605	3.0000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	26.0588	26.0588	8.4300e-003	0.0000	26.2694
Total	0.0243	0.2639	0.1605	3.0000e-004	0.0675	0.0127	0.0802	0.0340	0.0117	0.0457	0.0000	26.0588	26.0588	8.4300e-003	0.0000	26.2694

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	0.0192	0.7013	0.2924	1.7700e-003	0.0364	2.1800e-003	0.0385	9.9900e-003	2.0900e-003	0.0121	0.0000	181.5138	181.5138	0.0227	0.0000	182.0801
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	4.1000e-004	2.8000e-004	2.9200e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9833	0.9833	2.0000e-005	0.0000	0.9838
Total	0.0197	0.7015	0.2953	1.7800e-003	0.0375	2.1900e-003	0.0397	0.0103	2.1000e-003	0.0124	0.0000	182.4970	182.4970	0.0227	0.0000	183.0639

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					0.0675	0.0000	0.0675	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2639	0.1605	3.0000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	26.0587	26.0587	8.4300e-003	0.0000	26.2694
Total	0.0243	0.2639	0.1605	3.0000e-004	0.0675	0.0127	0.0802	0.0340	0.0117	0.0457	0.0000	26.0587	26.0587	8.4300e-003	0.0000	26.2694

Mitigated Construction Off-Site

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	4.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1639	0.1639	0.0000	0.0000	0.1640
Total	7.0000e-005	5.0000e-005	4.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1639	0.1639	0.0000	0.0000	0.1640

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2700e-003	0.0226	0.0277	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.6328	3.6328	1.1700e-003	0.0000	3.6621
Total	2.2700e-003	0.0226	0.0277	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.6328	3.6328	1.1700e-003	0.0000	3.6621

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	5.0000e-005	4.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1639	0.1639	0.0000	0.0000	0.1640
Total	7.0000e-005	5.0000e-005	4.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1639	0.1639	0.0000	0.0000	0.1640

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2247	2.0337	1.7859	2.8500e-003		0.1184	0.1184		0.1113	0.1113	0.0000	245.5066	245.5066	0.0599	0.0000	247.0040
Total	0.2247	2.0337	1.7859	2.8500e-003		0.1184	0.1184		0.1113	0.1113	0.0000	245.5066	245.5066	0.0599	0.0000	247.0040

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	0.0284	0.8481	0.3376	1.9500e-003	0.0477	4.2300e-003	0.0519	0.0138	4.0400e-003	0.0178	0.0000	193.8165	193.8165	0.0168	0.0000	194.2375
Worker	0.0798	0.0541	0.5693	2.1200e-003	0.2303	1.4500e-003	0.2318	0.0613	1.3300e-003	0.0626	0.0000	191.7816	191.7816	3.7400e-003	0.0000	191.8751
Total	0.1081	0.9022	0.9070	4.0700e-003	0.2780	5.6800e-003	0.2837	0.0751	5.3700e-003	0.0805	0.0000	385.5981	385.5981	0.0206	0.0000	386.1126

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	0.2247	2.0337	1.7859	2.8500e-003		0.1184	0.1184		0.1113	0.1113	0.0000	245.5063	245.5063	0.0599	0.0000	247.0037
Total	0.2247	2.0337	1.7859	2.8500e-003		0.1184	0.1184		0.1113	0.1113	0.0000	245.5063	245.5063	0.0599	0.0000	247.0037

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	0.0284	0.8481	0.3376	1.9500e-003	0.0477	4.2300e-003	0.0519	0.0138	4.0400e-003	0.0178	0.0000	193.8165	193.8165	0.0168	0.0000	194.2375
Worker	0.0798	0.0541	0.5693	2.1200e-003	0.2303	1.4500e-003	0.2318	0.0613	1.3300e-003	0.0626	0.0000	191.7816	191.7816	3.7400e-003	0.0000	191.8751
Total	0.1081	0.9022	0.9070	4.0700e-003	0.2780	5.6800e-003	0.2837	0.0751	5.3700e-003	0.0805	0.0000	385.5981	385.5981	0.0206	0.0000	386.1126

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	0.0171	0.1569	0.1492	2.4000e-004		8.6300e-003	8.6300e-003		8.1100e-003	8.1100e-003	0.0000	20.8474	20.8474	5.0300e-003	0.0000	20.9731

Total	0.0171	0.1569	0.1492	2.4000e-004		8.6300e-003	8.6300e-003		8.1100e-003	8.1100e-003	0.0000	20.8474	20.8474	5.0300e-003	0.0000	20.9731
-------	--------	--------	--------	-------------	--	-------------	-------------	--	-------------	-------------	--------	---------	---------	-------------	--------	---------

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	1.9800e-003	0.0647	0.0278	1.6000e-004	4.0500e-003	1.5000e-004	4.2000e-003	1.1700e-003	1.4000e-004	1.3100e-003	0.0000	16.2518	16.2518	1.4000e-003	0.0000	16.2869
Worker	6.3300e-003	4.1200e-003	0.0446	1.7000e-004	0.0196	1.2000e-004	0.0197	5.2000e-003	1.1000e-004	5.3100e-003	0.0000	15.7041	15.7041	2.9000e-004	0.0000	15.7112
Total	8.3100e-003	0.0688	0.0724	3.3000e-004	0.0236	2.7000e-004	0.0239	6.3700e-003	2.5000e-004	6.6200e-003	0.0000	31.9559	31.9559	1.6900e-003	0.0000	31.9981

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	0.0171	0.1569	0.1492	2.4000e-004		8.6300e-003	8.6300e-003		8.1100e-003	8.1100e-003	0.0000	20.8473	20.8473	5.0300e-003	0.0000	20.9731
Total	0.0171	0.1569	0.1492	2.4000e-004		8.6300e-003	8.6300e-003		8.1100e-003	8.1100e-003	0.0000	20.8473	20.8473	5.0300e-003	0.0000	20.9731

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	1.9800e-003	0.0647	0.0278	1.6000e-004	4.0500e-003	1.5000e-004	4.2000e-003	1.1700e-003	1.4000e-004	1.3100e-003	0.0000	16.2518	16.2518	1.4000e-003	0.0000	16.2869
Worker	6.3300e-003	4.1200e-003	0.0446	1.7000e-004	0.0196	1.2000e-004	0.0197	5.2000e-003	1.1000e-004	5.3100e-003	0.0000	15.7041	15.7041	2.9000e-004	0.0000	15.7112
Total	8.3100e-003	0.0688	0.0724	3.3000e-004	0.0236	2.7000e-004	0.0239	6.3700e-003	2.5000e-004	6.6200e-003	0.0000	31.9559	31.9559	1.6900e-003	0.0000	31.9981

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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

Worker	3.8000e-004	2.5000e-004	2.7000e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9483	0.9483	2.0000e-005	0.0000	0.9488
Total	3.8000e-004	2.5000e-004	2.7000e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9483	0.9483	2.0000e-005	0.0000	0.9488

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	2.7635					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	2.7657	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

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-003	9.1000e-004	9.8800e-003	4.0000e-005	4.3300e-003	3.0000e-005	4.3600e-003	1.1500e-003	2.0000e-005	1.1800e-003	0.0000	3.4772	3.4772	6.0000e-005	0.0000	3.4787
Total	1.4000e-003	9.1000e-004	9.8800e-003	4.0000e-005	4.3300e-003	3.0000e-005	4.3600e-003	1.1500e-003	2.0000e-005	1.1800e-003	0.0000	3.4772	3.4772	6.0000e-005	0.0000	3.4787

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	2.7635					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	2.7657	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

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-003	9.1000e-004	9.8800e-003	4.0000e-005	4.3300e-003	3.0000e-005	4.3600e-003	1.1500e-003	2.0000e-005	1.1800e-003	0.0000	3.4772	3.4772	6.0000e-005	0.0000	3.4787
Total	1.4000e-003	9.1000e-004	9.8800e-003	4.0000e-005	4.3300e-003	3.0000e-005	4.3600e-003	1.1500e-003	2.0000e-005	1.1800e-003	0.0000	3.4772	3.4772	6.0000e-005	0.0000	3.4787

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5637	1.6480	5.9499	0.0197	1.8402	0.0169	1.8571	0.4945	0.0158	0.5103	0.0000	1,804.9987	1,804.9987	0.0667	0.0000	1,806.6670
Unmitigated	0.5637	1.6480	5.9499	0.0197	1.8402	0.0169	1.8571	0.4945	0.0158	0.5103	0.0000	1,804.9987	1,804.9987	0.0667	0.0000	1,806.6670

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,249.44	1,201.56	1101.24	2,821,020	2,821,020
City Park	3.25	39.13	28.79	25,672	25,672
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	1,500.98	1,423.76	691.86	2,116,560	2,116,560
Total	2,753.67	2,664.45	1,821.89	4,963,252	4,963,252

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-S	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.476244	0.050164	0.262181	0.139658	0.017521	0.006864	0.023236	0.006525	0.004137	0.003158	0.009064	0.000471	0.000777
City Park	0.476244	0.050164	0.262181	0.139658	0.017521	0.006864	0.023236	0.006525	0.004137	0.003158	0.009064	0.000471	0.000777

Enclosed Parking with Elevator	0.476244	0.050164	0.262181	0.139658	0.017521	0.006864	0.023236	0.006525	0.004137	0.003158	0.009064	0.000471	0.000777
Strip Mall	0.476244	0.050164	0.262181	0.139658	0.017521	0.006864	0.023236	0.006525	0.004137	0.003158	0.009064	0.000471	0.000777

Historical Energy Use: N

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	284.5288	284.5288	0.0285	5.8900e-003	286.9944
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	284.5288	284.5288	0.0285	5.8900e-003	286.9944
NaturalGas Mitigated	0.0111	0.0947	0.0415	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4139	109.4139	2.1000e-003	2.0100e-003	110.0640
NaturalGas Unmitigated	0.0111	0.0947	0.0415	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4139	109.4139	2.1000e-003	2.0100e-003	110.0640

Unmitigated

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
Strip Mall	59800	3.2000e-004	2.9300e-003	2.4600e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1912	3.1912	6.0000e-005	6.0000e-005	3.2101
Total		0.0111	0.0947	0.0415	6.1000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4139	109.4139	2.1000e-003	2.0100e-003	110.0640

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.99054e+006	0.0107	0.0917	0.0390	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003	0.0000	106.2227	106.2227	2.0400e-003	1.9500e-003	106.8539
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	59800	3.2000e-004	2.9300e-003	2.4600e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1912	3.1912	6.0000e-005	6.0000e-005	3.2101
Total		0.0111	0.0947	0.0415	6.1000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4139	109.4139	2.1000e-003	2.0100e-003	110.0640

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	962614	126.6239	0.0127	2.6200e-003	127.7212
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.06418e+006	139.9836	0.0140	2.9000e-003	141.1966

Strip Mall	136240	17.9213	1.7900e-003	3.7000e-004	18.0766
Total		284.5288	0.0285	5.8900e-003	286.9944

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	962614	126.6239	0.0127	2.6200e-003	127.7212
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.06418e+006	139.9836	0.0140	2.9000e-003	141.1966
Strip Mall	136240	17.9213	1.7900e-003	3.7000e-004	18.0766
Total		284.5288	0.0285	5.8900e-003	286.9944

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8666	0.0275	1.7024	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8600e-003	1.7000e-004	12.0034

Unmitigated	1.8666	0.0275	1.7024	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8600e-003	1.7000e-004	12.0034
-------------	--------	--------	--------	-------------	--	--------	--------	--	--------	--------	--------	---------	---------	-------------	-------------	---------

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	0.2764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5378					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.2000e-004	7.8600e-003	3.3500e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.1083	9.1083	1.7000e-004	1.7000e-004	9.1624
Landscaping	0.0516	0.0196	1.6991	9.0000e-005		9.3800e-003	9.3800e-003		9.3800e-003	9.3800e-003	0.0000	2.7737	2.7737	2.6900e-003	0.0000	2.8410
Total	1.8666	0.0274	1.7024	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8600e-003	1.7000e-004	12.0034

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	0.2764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5378					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.2000e-004	7.8600e-003	3.3500e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.1083	9.1083	1.7000e-004	1.7000e-004	9.1624
Landscaping	0.0516	0.0196	1.6991	9.0000e-005		9.3800e-003	9.3800e-003		9.3800e-003	9.3800e-003	0.0000	2.7737	2.7737	2.6900e-003	0.0000	2.8410

Total	1.8666	0.0274	1.7024	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8600e-003	1.7000e-004	12.0034
-------	--------	--------	--------	-------------	--	--------	--------	--	--------	--------	--------	---------	---------	-------------	-------------	---------

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	22.3823	0.0209	0.0125	26.6361
Unmitigated	22.3823	0.0209	0.0125	26.6361

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	14.8551 / 9.36518	20.1409	0.0196	0.0117	24.1282
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.962943 / 0.590191	1.2978	1.2700e-003	7.6000e-004	1.5562

Total		22.3823	0.0209	0.0125	26.6361
-------	--	---------	--------	--------	---------

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	14.8551 / 9.36518	20.1409	0.0196	0.0117	24.1282
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.962943 / 0.590191	1.2978	1.2700e-003	7.6000e-004	1.5562
Total		22.3823	0.0209	0.0125	26.6361

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	24.0910	1.4237	0.0000	59.6844
Unmitigated	24.0910	1.4237	0.0000	59.6844

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	104.88	21.2897	1.2582	0.0000	52.7443
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	13.65	2.7708	0.1638	0.0000	6.8646
Total		24.0910	1.4237	0.0000	59.6844

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	104.88	21.2897	1.2582	0.0000	52.7443
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	13.65	2.7708	0.1638	0.0000	6.8646
Total		24.0910	1.4237	0.0000	59.6844

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

SSF PUC ECR Chestnut - Building B - San Mateo County, Annual

SSF PUC ECR Chestnut - Building B

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Day-Care Center	5.50	1000sqft	0.13	5,500.00	0
Enclosed Parking with Elevator	510.00	Space	0.00	204,000.00	0
City Park	1.72	Acre	1.72	74,923.20	0
Apartments Mid Rise	288.00	Dwelling Unit	7.58	491,020.00	824

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			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

Project Characteristics - PG&E 2020 Rate

Land Use - PD Land Uses, Extra acreage for trenching/below-grade parking

Construction Phase - Default Construction schedule, added trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Trenching Equip added

Grading - Exported material = 34,765cy

Woodstoves - No Wood Burning, All gas

Water And Wastewater - WTP Treatment 100% Aerobic

Vehicle Trips - Apts = 5.48, 5.27, 4.83, Daycare = 47.64, 4.00, 3.75

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	43.20	92.16
tblFireplaces	NumberWood	48.96	0.00
tblGrading	MaterialExported	0.00	34,765.00
tblLandUse	LandUseSquareFeet	288,000.00	491,020.00
tblLandUse	LotAcreage	4.59	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	6.39	5.27
tblVehicleTrips	ST_TR	6.21	4.00
tblVehicleTrips	SU_TR	5.86	4.83
tblVehicleTrips	SU_TR	5.83	3.75
tblVehicleTrips	WD_TR	6.65	5.48
tblVehicleTrips	WD_TR	74.06	47.64
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3681	3.7266	3.4574	9.8600e-003	0.5205	0.1208	0.6412	0.1817	0.1131	0.2948	0.0000	919.6400	919.6400	0.1277	0.0000	922.8318
2023	3.5668	0.3235	0.4236	9.8000e-004	0.0371	0.0131	0.0501	9.9800e-003	0.0122	0.0222	0.0000	88.9397	88.9397	0.0142	0.0000	89.2953
Maximum	3.5668	3.7266	3.4574	9.8600e-003	0.5205	0.1208	0.6412	0.1817	0.1131	0.2948	0.0000	919.6400	919.6400	0.1277	0.0000	922.8318

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3681	3.7266	3.4574	9.8600e-003	0.5205	0.1208	0.6412	0.1817	0.1131	0.2948	0.0000	919.6397	919.6397	0.1277	0.0000	922.8314
2023	3.5668	0.3235	0.4236	9.8000e-004	0.0371	0.0131	0.0501	9.9800e-003	0.0122	0.0222	0.0000	88.9396	88.9396	0.0142	0.0000	89.2953
Maximum	3.5668	3.7266	3.4574	9.8600e-003	0.5205	0.1208	0.6412	0.1817	0.1131	0.2948	0.0000	919.6397	919.6397	0.1277	0.0000	922.8314

[illegible]

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	1.5191	1.5191
2	4-1-2022	6-30-2022	0.8518	0.8518
3	7-1-2022	9-30-2022	0.8612	0.8612
4	10-1-2022	12-31-2022	0.8713	0.8713
5	1-1-2023	3-31-2023	3.8836	3.8836
		Highest	3.8836	3.8836

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	2.3717	0.0346	2.1465	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.6000e-003	2.1000e-004	15.1603
Energy	0.0141	0.1203	0.0530	7.7000e-004		9.7000e-003	9.7000e-003		9.7000e-003	9.7000e-003	0.0000	459.4186	459.4186	0.0347	9.1800e-003	463.0211
Mobile	0.3613	1.0050	3.9733	0.0142	1.4153	0.0114	1.4267	0.3804	0.0106	0.3910	0.0000	1,302.1815	1,302.1815	0.0467	0.0000	1,303.3486
Waste						0.0000	0.0000		0.0000	0.0000	28.3741	0.0000	28.3741	1.6769	0.0000	70.2956
Water						0.0000	0.0000		0.0000	0.0000	6.7223	20.1930	26.9153	0.0252	0.0150	32.0252
Total	2.7471	1.1599	6.1729	0.0152	1.4153	0.0338	1.4490	0.3804	0.0330	0.4133	35.0964	1,796.8005	1,831.8969	1.7870	0.0244	1,883.8507

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	2.3717	0.0346	2.1465	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.6000e-003	2.1000e-004	15.1603
Energy	0.0141	0.1203	0.0530	7.7000e-004		9.7000e-003	9.7000e-003		9.7000e-003	9.7000e-003	0.0000	459.4186	459.4186	0.0347	9.1800e-003	463.0211
Mobile	0.3613	1.0050	3.9733	0.0142	1.4153	0.0114	1.4267	0.3804	0.0106	0.3910	0.0000	1,302.1815	1,302.1815	0.0467	0.0000	1,303.3486
Waste						0.0000	0.0000		0.0000	0.0000	28.3741	0.0000	28.3741	1.6769	0.0000	70.2956
Water						0.0000	0.0000		0.0000	0.0000	6.7223	20.1930	26.9153	0.0252	0.0150	32.0252
Total	2.7471	1.1599	6.1729	0.0152	1.4153	0.0338	1.4490	0.3804	0.0330	0.4133	35.0964	1,796.8005	1,831.8969	1.7870	0.0244	1,883.8507

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/11/2022	5	10	
3	Grading	Grading	2/12/2022	3/11/2022	5	20	
4	Trenching	Trenching	2/12/2022	2/25/2022	5	10	
5	Building Construction	Building Construction	3/12/2022	1/27/2023	5	230	
6	Paving	Paving	1/28/2023	2/24/2023	5	20	
7	Architectural Coating	Architectural Coating	2/25/2023	3/24/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 994,316; Residential Outdoor: 331,439; Non-Residential Indoor: 8,250; Non-Residential Outdoor: 2,750; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,346.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	327.00	77.00	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	65.00	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

3.1 Mitigation Measures Construction

3.2 Demolition - 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	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

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	3.6000e-004	2.2000e-004	2.5100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9136	0.9136	2.0000e-005	0.0000	0.9140

Total	3.6000e-004	2.2000e-004	2.5100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9136	0.9136	2.0000e-005	0.0000	0.9140
-------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	--------	--------	--------	-------------	--------	--------

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	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

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	3.6000e-004	2.2000e-004	2.5100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9136	0.9136	2.0000e-005	0.0000	0.9140
Total	3.6000e-004	2.2000e-004	2.5100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9136	0.9136	2.0000e-005	0.0000	0.9140

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.3000e-004	1.5000e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5482	0.5482	1.0000e-005	0.0000	0.5484
Total	2.2000e-004	1.3000e-004	1.5000e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5482	0.5482	1.0000e-005	0.0000	0.5484

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0903	8.0600e-003	0.0984	0.0497	7.4200e-003	0.0571	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

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	2.2000e-004	1.3000e-004	1.5000e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5482	0.5482	1.0000e-005	0.0000	0.5484
Total	2.2000e-004	1.3000e-004	1.5000e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5482	0.5482	1.0000e-005	0.0000	0.5484

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0675	0.0000	0.0675	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654
Total	0.0195	0.2086	0.1527	3.0000e-004	0.0675	9.4100e-003	0.0769	0.0340	8.6600e-003	0.0426	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654

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	0.0175	0.5945	0.3127	1.6900e-003	0.0364	1.7200e-003	0.0381	9.9900e-003	1.6400e-003	0.0116	0.0000	175.4060	175.4060	0.0231	0.0000	175.9826
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	3.6000e-004	2.2000e-004	2.5100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9136	0.9136	2.0000e-005	0.0000	0.9140
Total	0.0178	0.5948	0.3152	1.7000e-003	0.0376	1.7300e-003	0.0393	0.0103	1.6500e-003	0.0120	0.0000	176.3196	176.3196	0.0231	0.0000	176.8966

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					0.0675	0.0000	0.0675	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654
Total	0.0195	0.2086	0.1527	3.0000e-004	0.0675	9.4100e-003	0.0769	0.0340	8.6600e-003	0.0426	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654

Mitigated Construction Off-Site

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1523	0.1523	0.0000	0.0000	0.1523
Total	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1523	0.1523	0.0000	0.0000	0.1523

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	1.8400e-003	0.0173	0.0275	4.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	3.6344	3.6344	1.1800e-003	0.0000	3.6638
Total	1.8400e-003	0.0173	0.0275	4.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	3.6344	3.6344	1.1800e-003	0.0000	3.6638

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	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1523	0.1523	0.0000	0.0000	0.1523
Total	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1523	0.1523	0.0000	0.0000	0.1523

3.6 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	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3115	243.3115	0.0583	0.0000	244.7688
Total	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3115	243.3115	0.0583	0.0000	244.7688

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	0.0243	0.7920	0.3609	2.0800e-003	0.0527	1.7000e-003	0.0544	0.0153	1.6300e-003	0.0169	0.0000	208.8662	208.8662	0.0182	0.0000	209.3203
Worker	0.0827	0.0514	0.5740	2.3100e-003	0.2703	1.6100e-003	0.2719	0.0719	1.4800e-003	0.0734	0.0000	209.1295	209.1295	3.5500e-003	0.0000	209.2184
Total	0.1069	0.8433	0.9349	4.3900e-003	0.3230	3.3100e-003	0.3263	0.0872	3.1100e-003	0.0903	0.0000	417.9957	417.9957	0.0217	0.0000	418.5387

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	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3112	243.3112	0.0583	0.0000	244.7685
Total	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3112	243.3112	0.0583	0.0000	244.7685

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	0.0243	0.7920	0.3609	2.0800e-003	0.0527	1.7000e-003	0.0544	0.0153	1.6300e-003	0.0169	0.0000	208.8662	208.8662	0.0182	0.0000	209.3203
Worker	0.0827	0.0514	0.5740	2.3100e-003	0.2703	1.6100e-003	0.2719	0.0719	1.4800e-003	0.0734	0.0000	209.1295	209.1295	3.5500e-003	0.0000	209.2184
Total	0.1069	0.8433	0.9349	4.3900e-003	0.3230	3.3100e-003	0.3263	0.0872	3.1100e-003	0.0903	0.0000	417.9957	417.9957	0.0217	0.0000	418.5387

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183

Total	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183
-------	--------	--------	--------	-------------	--	-------------	-------------	--	-------------	-------------	--------	---------	---------	-------------	--------	---------

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	1.8300e-003	0.0592	0.0338	1.9000e-004	5.0200e-003	8.0000e-005	5.1000e-003	1.4500e-003	8.0000e-005	1.5300e-003	0.0000	19.3250	19.3250	1.7000e-003	0.0000	19.3675
Worker	7.4800e-003	4.4400e-003	0.0509	2.1000e-004	0.0257	1.5000e-004	0.0259	6.8500e-003	1.4000e-004	6.9900e-003	0.0000	19.1653	19.1653	3.1000e-004	0.0000	19.1730
Total	9.3100e-003	0.0636	0.0847	4.0000e-004	0.0308	2.3000e-004	0.0310	8.3000e-003	2.2000e-004	8.5200e-003	0.0000	38.4903	38.4903	2.0100e-003	0.0000	38.5405

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	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183
Total	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183

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	1.8300e-003	0.0592	0.0338	1.9000e-004	5.0200e-003	8.0000e-005	5.1000e-003	1.4500e-003	8.0000e-005	1.5300e-003	0.0000	19.3250	19.3250	1.7000e-003	0.0000	19.3675
Worker	7.4800e-003	4.4400e-003	0.0509	2.1000e-004	0.0257	1.5000e-004	0.0259	6.8500e-003	1.4000e-004	6.9900e-003	0.0000	19.1653	19.1653	3.1000e-004	0.0000	19.1730
Total	9.3100e-003	0.0636	0.0847	4.0000e-004	0.0308	2.3000e-004	0.0310	8.3000e-003	2.2000e-004	8.5200e-003	0.0000	38.4903	38.4903	2.0100e-003	0.0000	38.5405

3.7 Paving - 2023

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Worker	3.4000e-004	2.0000e-004	2.3300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8791	0.8791	1.0000e-005	0.0000	0.8795
Total	3.4000e-004	2.0000e-004	2.3300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8791	0.8791	1.0000e-005	0.0000	0.8795

3.8 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5277					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	3.5296	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4900e-003	8.8000e-004	0.0101	4.0000e-005	5.1200e-003	3.0000e-005	5.1500e-003	1.3600e-003	3.0000e-005	1.3900e-003	0.0000	3.8096	3.8096	6.0000e-005	0.0000	3.8112
Total	1.4900e-003	8.8000e-004	0.0101	4.0000e-005	5.1200e-003	3.0000e-005	5.1500e-003	1.3600e-003	3.0000e-005	1.3900e-003	0.0000	3.8096	3.8096	6.0000e-005	0.0000	3.8112

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	3.5277					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	3.5296	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

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	1.4900e-003	8.8000e-004	0.0101	4.0000e-005	5.1200e-003	3.0000e-005	5.1500e-003	1.3600e-003	3.0000e-005	1.3900e-003	0.0000	3.8096	3.8096	6.0000e-005	0.0000	3.8112
Total	1.4900e-003	8.8000e-004	0.0101	4.0000e-005	5.1200e-003	3.0000e-005	5.1500e-003	1.3600e-003	3.0000e-005	1.3900e-003	0.0000	3.8096	3.8096	6.0000e-005	0.0000	3.8112

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3613	1.0050	3.9733	0.0142	1.4153	0.0114	1.4267	0.3804	0.0106	0.3910	0.0000	1,302.1815	1,302.1815	0.0467	0.0000	1,303.3486
Unmitigated	0.3613	1.0050	3.9733	0.0142	1.4153	0.0114	1.4267	0.3804	0.0106	0.3910	0.0000	1,302.1815	1,302.1815	0.0467	0.0000	1,303.3486

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,578.24	1,517.76	1391.04	3,563,394	3,563,394
City Park	3.25	39.13	28.79	25,672	25,672
Day-Care Center	262.02	22.00	20.63	227,573	227,573
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,843.51	1,578.89	1,440.46	3,816,639	3,816,639

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
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
Apartments Mid Rise	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
City Park	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808

Day-Care Center	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
Enclosed Parking with Elevator	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808

Historical Energy Use: N

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	320.4086	320.4086	0.0320	6.6300e-003	323.1851
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	320.4086	320.4086	0.0320	6.6300e-003	323.1851
NaturalGas Mitigated	0.0141	0.1203	0.0530	7.7000e-004		9.7000e-003	9.7000e-003		9.7000e-003	9.7000e-003	0.0000	139.0100	139.0100	2.6600e-003	2.5500e-003	139.8361
NaturalGas Unmitigated	0.0141	0.1203	0.0530	7.7000e-004		9.7000e-003	9.7000e-003		9.7000e-003	9.7000e-003	0.0000	139.0100	139.0100	2.6600e-003	2.5500e-003	139.8361

Unmitigated

Day-Care Center	90585	4.9000e-004	4.4400e-003	3.7300e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.8340	4.8340	9.0000e-005	9.0000e-005	4.8627
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		0.0141	0.1203	0.0530	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	139.0100	139.0100	2.6600e-003	2.5500e-003	139.8361

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.51436e+006	0.0136	0.1159	0.0493	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	134.1760	134.1760	2.5700e-003	2.4600e-003	134.9734
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Day-Care Center	90585	4.9000e-004	4.4400e-003	3.7300e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.8340	4.8340	9.0000e-005	9.0000e-005	4.8627
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		0.0141	0.1203	0.0530	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	139.0100	139.0100	2.6600e-003	2.5500e-003	139.8361

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.21593e+006	159.9460	0.0160	3.3100e-003	161.3320
City Park	0	0.0000	0.0000	0.0000	0.0000
Day-Care Center	24420	3.2123	3.2000e-004	7.0000e-005	3.2401

Enclosed Parking with Elevator	1.19544e+006	157.2503	0.0157	3.2500e-003	158.6130
Total		320.4086	0.0320	6.6300e-003	323.1851

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.21593e+006	159.9460	0.0160	3.3100e-003	161.3320
City Park	0	0.0000	0.0000	0.0000	0.0000
Day-Care Center	24420	3.2123	3.2000e-004	7.0000e-005	3.2401
Enclosed Parking with Elevator	1.19544e+006	157.2503	0.0157	3.2500e-003	158.6130
Total		320.4086	0.0320	6.6300e-003	323.1851

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3717	0.0346	2.1465	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.6000e-003	2.1000e-004	15.1603

Unmitigated	2.3717	0.0346	2.1465	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.6000e-003	2.1000e-004	15.1603
-------------	--------	--------	--------	-------------	--	--------	--------	--	--------	--------	--------	---------	---------	-------------	-------------	---------

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	0.3528					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9531					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1600e-003	9.9300e-003	4.2300e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	11.5052	11.5052	2.2000e-004	2.1000e-004	11.5736
Landscaping	0.0647	0.0247	2.1423	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5023	3.5023	3.3800e-003	0.0000	3.5867
Total	2.3717	0.0346	2.1465	1.7000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.6000e-003	2.1000e-004	15.1603

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	0.3528					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9531					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1600e-003	9.9300e-003	4.2300e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	11.5052	11.5052	2.2000e-004	2.1000e-004	11.5736
Landscaping	0.0647	0.0247	2.1423	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5023	3.5023	3.3800e-003	0.0000	3.5867

Total	2.3717	0.0346	2.1465	1.7000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.6000e-003	2.1000e-004	15.1603
-------	--------	--------	--------	-------------	--	--------	--------	--	--------	--------	--------	---------	---------	-------------	-------------	---------

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	26.9153	0.0252	0.0150	32.0252
Unmitigated	26.9153	0.0252	0.0150	32.0252

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	18.7644 / 11.8297	25.4412	0.0247	0.0148	30.4777
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Day-Care Center	0.235893 / 0.606581	0.5306	3.3000e-004	1.9000e-004	0.5958
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

Total		26.9153	0.0252	0.0150	32.0252
-------	--	---------	--------	--------	---------

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	18.7644 / 11.8297	25.4412	0.0247	0.0148	30.4777
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Day-Care Center	0.235893 / 0.606581	0.5306	3.3000e-004	1.9000e-004	0.5958
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		26.9153	0.0252	0.0150	32.0252

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.3741	1.6769	0.0000	70.2956
Unmitigated	28.3741	1.6769	0.0000	70.2956

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	132.48	26.8922	1.5893	0.0000	66.6244
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Day-Care Center	7.15	1.4514	0.0858	0.0000	3.5958
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		28.3741	1.6769	0.0000	70.2956

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	132.48	26.8922	1.5893	0.0000	66.6244
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Day-Care Center	7.15	1.4514	0.0858	0.0000	3.5958
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		28.3741	1.6769	0.0000	70.2956

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

SSF PUC ECR Chestnut - Building A - San Mateo County, Annual

SSF PUC ECR Chestnut - Building A

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	477.00	Space	0.00	190,800.00	0
City Park	1.72	Acre	1.72	74,923.20	0
Apartments Mid Rise	293.00	Dwelling Unit	7.71	369,375.00	838

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 Rate

Land Use - PD Land Uses, Extra acreage for trenching/below-grade parking

Construction Phase - Default Construction schedule, added trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Trenching Equip added

Grading - Exported material = 34,765cy

Woodstoves - No Wood Burning, All gas

Water And Wastewater - WTP Treatment 100% Aerobic

Vehicle Trips - Apts = 5.48, 5.27, 4.83

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	43.95	93.76
tblFireplaces	NumberWood	49.81	0.00
tblGrading	MaterialExported	0.00	34,765.00
tblLandUse	LandUseSquareFeet	293,000.00	369,375.00
tblLandUse	LotAcreage	4.29	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	6.39	5.27
tblVehicleTrips	SU_TR	5.86	4.83
tblVehicleTrips	WD_TR	6.65	5.48
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

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					
2024	0.3167	2.9884	3.3647	9.4800e-003	0.5189	0.0919	0.6107	0.1812	0.0860	0.2672	0.0000	885.8960	885.8960	0.1268	0.0000	889.0665
2025	2.6724	0.2628	0.3895	8.9000e-004	0.0336	9.6800e-003	0.0433	9.0400e-003	9.0500e-003	0.0181	0.0000	80.1319	80.1319	0.0133	0.0000	80.4650
Maximum	2.6724	2.9884	3.3647	9.4800e-003	0.5189	0.0919	0.6107	0.1812	0.0860	0.2672	0.0000	885.8960	885.8960	0.1268	0.0000	889.0665

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.3167	2.9884	3.3647	9.4800e-003	0.5189	0.0919	0.6107	0.1812	0.0860	0.2672	0.0000	885.8956	885.8956	0.1268	0.0000	889.0661
2025	2.6724	0.2628	0.3895	8.9000e-004	0.0336	9.6800e-003	0.0433	9.0400e-003	9.0500e-003	0.0181	0.0000	80.1318	80.1318	0.0133	0.0000	80.4649
Maximum	2.6724	2.9884	3.3647	9.4800e-003	0.5189	0.0919	0.6107	0.1812	0.0860	0.2672	0.0000	885.8956	885.8956	0.1268	0.0000	889.0661

	ROG	NOx	CO	SO2	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	1-1-2024	3-31-2024	1.1606	1.1606
2	4-1-2024	6-30-2024	0.7045	0.7045
3	7-1-2024	9-30-2024	0.7123	0.7123
4	10-1-2024	12-31-2024	0.7204	0.7204
5	1-1-2025	3-31-2025	2.9278	2.9278
		Highest	2.9278	2.9278

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	1.7865	0.0352	2.1822	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6500e-003	2.1000e-004	15.4224
Energy	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	446.3036	446.3036	0.0336	8.9100e-003	449.7994
Mobile	0.3123	0.8765	3.4343	0.0128	1.3540	0.0102	1.3642	0.3639	9.4600e-003	0.3734	0.0000	1,177.3675	1,177.3675	0.0421	0.0000	1,178.4187
Waste						0.0000	0.0000		0.0000	0.0000	27.3896	0.0000	27.3896	1.6187	0.0000	67.8565
Water						0.0000	0.0000		0.0000	0.0000	6.7541	20.0723	26.8264	0.0253	0.0151	31.9585
Total	2.1125	1.0296	5.6667	0.0138	1.3540	0.0326	1.3866	0.3639	0.0319	0.3958	34.1437	1,659.0106	1,693.1543	1.7232	0.0242	1,743.4555

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	1.7865	0.0352	2.1822	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6500e-003	2.1000e-004	15.4224
Energy	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	446.3036	446.3036	0.0336	8.9100e-003	449.7994
Mobile	0.3123	0.8765	3.4343	0.0128	1.3540	0.0102	1.3642	0.3639	9.4600e-003	0.3734	0.0000	1,177.3675	1,177.3675	0.0421	0.0000	1,178.4187
Waste						0.0000	0.0000		0.0000	0.0000	27.3896	0.0000	27.3896	1.6187	0.0000	67.8565
Water						0.0000	0.0000		0.0000	0.0000	6.7541	20.0723	26.8264	0.0253	0.0151	31.9585

Total	2.1125	1.0296	5.6667	0.0138	1.3540	0.0326	1.3866	0.3639	0.0319	0.3958	34.1437	1,659.0106	1,693.1543	1.7232	0.0242	1,743.4555
-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	---------	------------	------------	--------	--------	------------

	ROG	NOx	CO	SO2	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	Demolition	Demolition	1/1/2024	1/26/2024	5	20	
2	Site Preparation	Site Preparation	1/27/2024	2/9/2024	5	10	
3	Grading	Grading	2/10/2024	3/8/2024	5	20	
4	Trenching	Trenching	2/10/2024	2/23/2024	5	10	
5	Building Construction	Building Construction	3/9/2024	1/24/2025	5	230	
6	Paving	Paving	1/25/2025	2/21/2025	5	20	
7	Architectural Coating	Architectural Coating	2/22/2025	3/21/2025	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 747,984; Residential Outdoor: 249,328; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,346.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	323.00	75.00	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	65.00	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

3.1 Mitigation Measures Construction

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9961	33.9961	9.5100e-003	0.0000	34.2338
Total	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9961	33.9961	9.5100e-003	0.0000	34.2338

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	3.3000e-004	1.9000e-004	2.1800e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8450	0.8450	1.0000e-005	0.0000	0.8453
Total	3.3000e-004	1.9000e-004	2.1800e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8450	0.8450	1.0000e-005	0.0000	0.8453

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	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9960	33.9960	9.5100e-003	0.0000	34.2338
Total	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9960	33.9960	9.5100e-003	0.0000	34.2338

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	3.3000e-004	1.9000e-004	2.1800e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8450	0.8450	1.0000e-005	0.0000	0.8453
Total	3.3000e-004	1.9000e-004	2.1800e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8450	0.8450	1.0000e-005	0.0000	0.8453

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6600e-003	5.6600e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638

Total	0.0133	0.1359	0.0917	1.9000e-004	0.0903	6.1500e-003	0.0965	0.0497	5.6600e-003	0.0553	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
-------	--------	--------	--------	-------------	--------	-------------	--------	--------	-------------	--------	--------	---------	---------	-------------	--------	---------

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	1.1000e-004	1.3100e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5070	0.5070	1.0000e-005	0.0000	0.5072
Total	2.0000e-004	1.1000e-004	1.3100e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5070	0.5070	1.0000e-005	0.0000	0.5072

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6500e-003	5.6500e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	0.0133	0.1359	0.0917	1.9000e-004	0.0903	6.1500e-003	0.0965	0.0497	5.6500e-003	0.0553	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638

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	1.1000e-004	1.3100e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5070	0.5070	1.0000e-005	0.0000	0.5072
Total	2.0000e-004	1.1000e-004	1.3100e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5070	0.5070	1.0000e-005	0.0000	0.5072

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0675	0.0000	0.0675	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1703	0.1476	3.0000e-004		7.2400e-003	7.2400e-003		6.6600e-003	6.6600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2747
Total	0.0166	0.1703	0.1476	3.0000e-004	0.0675	7.2400e-003	0.0747	0.0340	6.6600e-003	0.0406	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2747

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	0.0127	0.3974	0.3283	1.5900e-003	0.0364	7.8000e-004	0.0372	0.0100	7.5000e-004	0.0108	0.0000	166.7721	166.7721	0.0235	0.0000	167.3604
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	3.3000e-004	1.9000e-004	2.1800e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8450	0.8450	1.0000e-005	0.0000	0.8453
Total	0.0130	0.3976	0.3305	1.6000e-003	0.0376	7.9000e-004	0.0384	0.0103	7.6000e-004	0.0111	0.0000	167.6171	167.6171	0.0235	0.0000	168.2057

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					0.0675	0.0000	0.0675	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1703	0.1476	3.0000e-004		7.2400e-003	7.2400e-003		6.6600e-003	6.6600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2746
Total	0.0166	0.1703	0.1476	3.0000e-004	0.0675	7.2400e-003	0.0747	0.0340	6.6600e-003	0.0406	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2746

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	0.0127	0.3974	0.3283	1.5900e-003	0.0364	7.8000e-004	0.0372	0.0100	7.5000e-004	0.0108	0.0000	166.7721	166.7721	0.0235	0.0000	167.3604
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	3.3000e-004	1.9000e-004	2.1800e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8450	0.8450	1.0000e-005	0.0000	0.8453

Total	0.0130	0.3976	0.3305	1.6000e-003	0.0376	7.9000e-004	0.0384	0.0103	7.6000e-004	0.0111	0.0000	167.6171	167.6171	0.0235	0.0000	168.2057
-------	--------	--------	--------	-------------	--------	-------------	--------	--------	-------------	--------	--------	----------	----------	--------	--------	----------

3.5 Trenching - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0143	0.0275	4.0000e-005		6.8000e-004	6.8000e-004		6.2000e-004	6.2000e-004	0.0000	3.6380	3.6380	1.1800e-003	0.0000	3.6674
Total	1.6200e-003	0.0143	0.0275	4.0000e-005		6.8000e-004	6.8000e-004		6.2000e-004	6.2000e-004	0.0000	3.6380	3.6380	1.1800e-003	0.0000	3.6674

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	3.6000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1408	0.1408	0.0000	0.0000	0.1409
Total	5.0000e-005	3.0000e-005	3.6000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1408	0.1408	0.0000	0.0000	0.1409

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	1.6200e-003	0.0143	0.0275	4.0000e-005		6.8000e-004	6.8000e-004		6.2000e-004	6.2000e-004	0.0000	3.6380	3.6380	1.1800e-003	0.0000	3.6674
Total	1.6200e-003	0.0143	0.0275	4.0000e-005		6.8000e-004	6.8000e-004		6.2000e-004	6.2000e-004	0.0000	3.6380	3.6380	1.1800e-003	0.0000	3.6674

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	3.6000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1408	0.1408	0.0000	0.0000	0.1409
Total	5.0000e-005	3.0000e-005	3.6000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1408	0.1408	0.0000	0.0000	0.1409

3.6 Building Construction - 2024

Unmitigated Construction On-Site

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

Off-Road	0.1560	1.4250	1.7137	2.8600e-003		0.0650	0.0650		0.0612	0.0612	0.0000	245.7601	245.7601	0.0581	0.0000	247.2129
Total	0.1560	1.4250	1.7137	2.8600e-003		0.0650	0.0650		0.0612	0.0612	0.0000	245.7601	245.7601	0.0581	0.0000	247.2129

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	0.0183	0.5938	0.3548	1.9600e-003	0.0518	8.2000e-004	0.0527	0.0150	7.9000e-004	0.0158	0.0000	197.7359	197.7359	0.0177	0.0000	198.1783
Worker	0.0748	0.0424	0.4980	2.1300e-003	0.2695	1.5600e-003	0.2711	0.0717	1.4400e-003	0.0732	0.0000	192.8638	192.8638	2.9100e-003	0.0000	192.9366
Total	0.0932	0.6362	0.8528	4.0900e-003	0.3214	2.3800e-003	0.3238	0.0867	2.2300e-003	0.0889	0.0000	390.5997	390.5997	0.0206	0.0000	391.1149

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	0.1560	1.4250	1.7137	2.8600e-003		0.0650	0.0650		0.0612	0.0612	0.0000	245.7598	245.7598	0.0581	0.0000	247.2126
Total	0.1560	1.4250	1.7137	2.8600e-003		0.0650	0.0650		0.0612	0.0612	0.0000	245.7598	245.7598	0.0581	0.0000	247.2126

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	0.0183	0.5938	0.3548	1.9600e-003	0.0518	8.2000e-004	0.0527	0.0150	7.9000e-004	0.0158	0.0000	197.7359	197.7359	0.0177	0.0000	198.1783
Worker	0.0748	0.0424	0.4980	2.1300e-003	0.2695	1.5600e-003	0.2711	0.0717	1.4400e-003	0.0732	0.0000	192.8638	192.8638	2.9100e-003	0.0000	192.9366
Total	0.0932	0.6362	0.8528	4.0900e-003	0.3214	2.3800e-003	0.3238	0.0867	2.2300e-003	0.0889	0.0000	390.5997	390.5997	0.0206	0.0000	391.1149

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0123	0.1122	0.1448	2.4000e-004		4.7500e-003	4.7500e-003		4.4700e-003	4.4700e-003	0.0000	20.8728	20.8728	4.9100e-003	0.0000	20.9954
Total	0.0123	0.1122	0.1448	2.4000e-004		4.7500e-003	4.7500e-003		4.4700e-003	4.4700e-003	0.0000	20.8728	20.8728	4.9100e-003	0.0000	20.9954

Unmitigated Construction Off-Site

Vendor	1.5200e-003	0.0490	0.0306	1.6000e-004	4.4000e-003	7.0000e-005	4.4700e-003	1.2700e-003	6.0000e-005	1.3400e-003	0.0000	16.6407	16.6407	1.5100e-003	0.0000	16.6785
Worker	6.1000e-003	3.3000e-003	0.0394	1.7000e-004	0.0229	1.3000e-004	0.0230	6.0900e-003	1.2000e-004	6.2100e-003	0.0000	15.7199	15.7199	2.3000e-004	0.0000	15.7255
Total	7.6200e-003	0.0523	0.0700	3.3000e-004	0.0273	2.0000e-004	0.0275	7.3600e-003	1.8000e-004	7.5500e-003	0.0000	32.3606	32.3606	1.7400e-003	0.0000	32.4041

3.7 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811

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	3.2000e-004	1.7000e-004	2.0300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8111	0.8111	1.0000e-005	0.0000	0.8114
Total	3.2000e-004	1.7000e-004	2.0300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8111	0.8111	1.0000e-005	0.0000	0.8114

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811

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	3.2000e-004	1.7000e-004	2.0300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8111	0.8111	1.0000e-005	0.0000	0.8114
Total	3.2000e-004	1.7000e-004	2.0300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.8111	0.8111	1.0000e-005	0.0000	0.8114

3.8 Architectural Coating - 2025

Unmitigated Construction On-Site

Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	2.6417	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	7.4000e-004	8.8200e-003	4.0000e-005	5.1200e-003	3.0000e-005	5.1500e-003	1.3600e-003	3.0000e-005	1.3900e-003	0.0000	3.5149	3.5149	5.0000e-005	0.0000	3.5162
Total	1.3700e-003	7.4000e-004	8.8200e-003	4.0000e-005	5.1200e-003	3.0000e-005	5.1500e-003	1.3600e-003	3.0000e-005	1.3900e-003	0.0000	3.5149	3.5149	5.0000e-005	0.0000	3.5162

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3123	0.8765	3.4343	0.0128	1.3540	0.0102	1.3642	0.3639	9.4600e-003	0.3734	0.0000	1,177.3675	1,177.3675	0.0421	0.0000	1,178.4187

Unmitigated	0.3123	0.8765	3.4343	0.0128	1.3540	0.0102	1.3642	0.3639	9.4600e-003	0.3734	0.0000	1,177.3675	1,177.3675	0.0421	0.0000	1,178.4187
-------------	--------	--------	--------	--------	--------	--------	--------	--------	-------------	--------	--------	------------	------------	--------	--------	------------

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,605.64	1,544.11	1415.19	3,625,259	3,625,259
City Park	3.25	39.13	28.79	25,672	25,672
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,608.89	1,583.24	1,443.98	3,650,931	3,650,931

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
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.458271	0.050791	0.272788	0.143353	0.016986	0.007324	0.025695	0.006686	0.004346	0.003010	0.009369	0.000540	0.000841
City Park	0.458271	0.050791	0.272788	0.143353	0.016986	0.007324	0.025695	0.006686	0.004346	0.003010	0.009369	0.000540	0.000841
Enclosed Parking with Elevator	0.458271	0.050791	0.272788	0.143353	0.016986	0.007324	0.025695	0.006686	0.004346	0.003010	0.009369	0.000540	0.000841

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	309.7982	309.7982	0.0310	6.4100e-003	312.4827
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	309.7982	309.7982	0.0310	6.4100e-003	312.4827
NaturalGas Mitigated	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167
NaturalGas Unmitigated	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.55802e+006	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167

Mitigated

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

Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.55802e+006	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.23704e+006	162.7229	0.0163	3.3700e-003	164.1329
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.11809e+006	147.0753	0.0147	3.0400e-003	148.3498
Total		309.7982	0.0310	6.4100e-003	312.4827

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.23704e+006	162.7229	0.0163	3.3700e-003	164.1329
City Park	0	0.0000	0.0000	0.0000	0.0000

Enclosed Parking with Elevator	1.11809e+006	147.0753	0.0147	3.0400e-003	148.3498
Total		309.7982	0.0310	6.4100e-003	312.4827

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7865	0.0352	2.1822	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6500e-003	2.1000e-004	15.4224
Unmitigated	1.7865	0.0352	2.1822	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6500e-003	2.1000e-004	15.4224

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	0.2640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1800e-003	0.0101	4.3000e-003	6.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	11.7049	11.7049	2.2000e-004	2.1000e-004	11.7745

Landscaping	0.0657	0.0251	2.1779	1.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	3.5623	3.5623	3.4300e-003	0.0000	3.6479
Total	1.7865	0.0352	2.1822	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6500e-003	2.1000e-004	15.4224

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	0.2640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1800e-003	0.0101	4.3000e-003	6.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	11.7049	11.7049	2.2000e-004	2.1000e-004	11.7745
Landscaping	0.0657	0.0251	2.1779	1.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	3.5623	3.5623	3.4300e-003	0.0000	3.6479
Total	1.7865	0.0352	2.1822	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6500e-003	2.1000e-004	15.4224

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	26.8264	0.0253	0.0151	31.9585
Unmitigated	26.8264	0.0253	0.0151	31.9585

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.0901 / 12.0351	25.8829	0.0252	0.0151	31.0068
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		26.8264	0.0253	0.0151	31.9585

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.0901 / 12.0351	25.8829	0.0252	0.0151	31.0068
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		26.8264	0.0253	0.0151	31.9585

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	27.3896	1.6187	0.0000	67.8565
Unmitigated	27.3896	1.6187	0.0000	67.8565

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	134.78	27.3591	1.6169	0.0000	67.7811
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		27.3896	1.6187	0.0000	67.8565

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	134.78	27.3591	1.6169	0.0000	67.7811
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		27.3896	1.6187	0.0000	67.8565

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

SSF PUC ECR Chestnut - Building C - San Mateo County, Annual

SSF PUC ECR Chestnut - Building C - Construction San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	454.00	Space	0.00	181,600.00	0
City Park	1.72	Acre	1.72	74,923.20	0
Apartments Mid Rise	228.00	Dwelling Unit	6.00	377,560.00	652
Strip Mall	13.00	1000sqft	0.30	13,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			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

Project Characteristics - PG&E 2020 Rate

Land Use - PD Land Uses, Extra acreage for trenching/below-grade parking

Construction Phase - Default Construction schedule, added trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Trenching Equip added

Grading - Exported material = 34,765cy

Woodstoves - No Wood Burning, All gas

Water And Wastewater - WTP Treatment 100% Aerobic

Trips and VMT - 1 Mile Trips

Construction Off-road Equipment Mitigation - BMPs, Tier 2 DPF 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	34.20	72.96
tblFireplaces	NumberWood	38.76	0.00
tblGrading	MaterialExported	0.00	34,765.00
tblLandUse	LandUseSquareFeet	228,000.00	377,560.00
tblLandUse	LotAcreage	4.09	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00

tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	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
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3485	3.5575	2.7063	4.7500e-003	0.1883	0.1614	0.3497	0.0920	0.1511	0.2430	0.0000	422.2741	422.2741	0.0934	0.0000	424.6097
2021	2.7989	0.3400	0.3443	5.7000e-004	2.9200e-003	0.0164	0.0193	7.9000e-004	0.0154	0.0162	0.0000	50.0182	50.0182	0.0122	0.0000	50.3228
Maximum	2.7989	3.5575	2.7063	4.7500e-003	0.1883	0.1614	0.3497	0.0920	0.1511	0.2430	0.0000	422.2741	422.2741	0.0934	0.0000	424.6097

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					
2020	0.1888	3.9851	2.8843	4.7500e-003	0.1015	0.0192	0.1207	0.0271	0.0192	0.0463	0.0000	422.2737	422.2737	0.0934	0.0000	424.6093
2021	2.7872	0.4753	0.3826	5.7000e-004	2.9200e-003	2.4300e-003	5.3500e-003	7.9000e-004	2.4300e-003	3.2200e-003	0.0000	50.0182	50.0182	0.0122	0.0000	50.3228
Maximum	2.7872	3.9851	2.8843	4.7500e-003	0.1015	0.0192	0.1207	0.0271	0.0192	0.0463	0.0000	422.2737	422.2737	0.0934	0.0000	424.6093

	ROG	NOx	CO	SO2	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	5.44	-14.44	-7.09	0.00	45.40	87.82	65.84	69.88	87.03	80.89	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	1-1-2020	3-31-2020	1.3211	1.2611
2	4-1-2020	6-30-2020	0.8529	0.9611
3	7-1-2020	9-30-2020	0.8623	0.9717

4	10-1-2020	12-31-2020	0.8597	0.9691
5	1-1-2021	3-31-2021	3.1453	3.2705
		Highest	3.1453	3.2705

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	2/11/2020	5	10	
3	Grading	Grading	2/12/2020	3/10/2020	5	20	
4	Trenching	Trenching	2/12/2020	2/25/2020	5	10	
5	Building Construction	Building Construction	3/11/2020	1/26/2021	5	230	
6	Paving	Paving	1/27/2021	2/23/2021	5	20	
7	Architectural Coating	Architectural Coating	2/24/2021	3/23/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 764,559; Residential Outdoor: 254,853; Non-Residential Indoor: 19,500; Non-Residential Outdoor: 6,500; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,346.00	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	276.00	69.00	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	55.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Use DPF for Construction Equipment
- Use Soil Stabilizer

- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	6.0000e-005	8.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178
Total	1.3000e-004	6.0000e-005	8.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178

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	0.0126	0.3266	0.2467	3.9000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	0.0126	0.3266	0.2467	3.9000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385

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	1.3000e-004	6.0000e-005	8.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178
Total	1.3000e-004	6.0000e-005	8.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0706	0.0706	0.0000	0.0000	0.0707
Total	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0706	0.0706	0.0000	0.0000	0.0707

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.1686	0.1148	1.9000e-004		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

Total	6.0500e-003	0.1686	0.1148	1.9000e-004	0.0407	7.1000e-004	0.0414	0.0112	7.1000e-004	0.0119	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
-------	-------------	--------	--------	-------------	--------	-------------	--------	--------	-------------	--------	--------	---------	---------	-------------	--------	---------

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0706	0.0706	0.0000	0.0000	0.0707
Total	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0706	0.0706	0.0000	0.0000	0.0707

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0675	0.0000	0.0675	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2639	0.1605	3.0000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	26.0588	26.0588	8.4300e-003	0.0000	26.2694
Total	0.0243	0.2639	0.1605	3.0000e-004	0.0675	0.0127	0.0802	0.0340	0.0117	0.0457	0.0000	26.0588	26.0588	8.4300e-003	0.0000	26.2694

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	4.6000e-003	0.2127	0.0667	2.3000e-004	1.8600e-003	2.6000e-004	2.1200e-003	5.1000e-004	2.5000e-004	7.7000e-004	0.0000	23.0838	23.0838	2.7800e-003	0.0000	23.1533
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	8.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178
Total	4.7300e-003	0.2127	0.0675	2.3000e-004	1.9700e-003	2.6000e-004	2.2300e-003	5.4000e-004	2.5000e-004	8.0000e-004	0.0000	23.2015	23.2015	2.7800e-003	0.0000	23.2711

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					0.0304	0.0000	0.0304	7.6400e-003	0.0000	7.6400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.2628	0.1899	3.0000e-004		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	26.0587	26.0587	8.4300e-003	0.0000	26.2694
Total	0.0101	0.2628	0.1899	3.0000e-004	0.0304	1.1600e-003	0.0315	7.6400e-003	1.1600e-003	8.8000e-003	0.0000	26.0587	26.0587	8.4300e-003	0.0000	26.2694

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	4.6000e-003	0.2127	0.0667	2.3000e-004	1.8600e-003	2.6000e-004	2.1200e-003	5.1000e-004	2.5000e-004	7.7000e-004	0.0000	23.0838	23.0838	2.7800e-003	0.0000	23.1533
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	8.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178
Total	4.7300e-003	0.2127	0.0675	2.3000e-004	1.9700e-003	2.6000e-004	2.2300e-003	5.4000e-004	2.5000e-004	8.0000e-004	0.0000	23.2015	23.2015	2.7800e-003	0.0000	23.2711

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2700e-003	0.0226	0.0277	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.6328	3.6328	1.1700e-003	0.0000	3.6621
Total	2.2700e-003	0.0226	0.0277	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.6328	3.6328	1.1700e-003	0.0000	3.6621

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	1.3000e-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	0.0196

Total	2.0000e-005	1.0000e-005	1.3000e-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	0.0196
-------	-------------	-------------	-------------	--------	-------------	--------	-------------	--------	--------	-------------	--------	--------	--------	--------	--------	--------

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	1.7300e-003	0.0371	0.0313	4.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	3.6328	3.6328	1.1700e-003	0.0000	3.6621
Total	1.7300e-003	0.0371	0.0313	4.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	3.6328	3.6328	1.1700e-003	0.0000	3.6621

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	1.3000e-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	0.0196
Total	2.0000e-005	1.0000e-005	1.3000e-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	0.0196

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2247	2.0337	1.7859	2.8500e-003		0.1184	0.1184		0.1113	0.1113	0.0000	245.5066	245.5066	0.0599	0.0000	247.0040
Total	0.2247	2.0337	1.7859	2.8500e-003		0.1184	0.1184		0.1113	0.1113	0.0000	245.5066	245.5066	0.0599	0.0000	247.0040

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	0.0131	0.4685	0.1805	5.0000e-004	6.6900e-003	8.7000e-004	7.5700e-003	1.9500e-003	8.4000e-004	2.7900e-003	0.0000	50.0006	50.0006	5.3100e-003	0.0000	50.1335
Worker	0.0257	0.0119	0.1576	2.6000e-004	0.0216	2.9000e-004	0.0219	5.7800e-003	2.7000e-004	6.0500e-003	0.0000	22.9520	22.9520	8.2000e-004	0.0000	22.9725
Total	0.0388	0.4804	0.3381	7.6000e-004	0.0283	1.1600e-003	0.0295	7.7300e-003	1.1100e-003	8.8400e-003	0.0000	72.9526	72.9526	6.1300e-003	0.0000	73.1059

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	0.1146	2.4968	1.8946	2.8500e-003		0.0144	0.0144		0.0144	0.0144	0.0000	245.5063	245.5063	0.0599	0.0000	247.0037
Total	0.1146	2.4968	1.8946	2.8500e-003		0.0144	0.0144		0.0144	0.0144	0.0000	245.5063	245.5063	0.0599	0.0000	247.0037

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	0.0131	0.4685	0.1805	5.0000e-004	6.6900e-003	8.7000e-004	7.5700e-003	1.9500e-003	8.4000e-004	2.7900e-003	0.0000	50.0006	50.0006	5.3100e-003	0.0000	50.1335
Worker	0.0257	0.0119	0.1576	2.6000e-004	0.0216	2.9000e-004	0.0219	5.7800e-003	2.7000e-004	6.0500e-003	0.0000	22.9520	22.9520	8.2000e-004	0.0000	22.9725
Total	0.0388	0.4804	0.3381	7.6000e-004	0.0283	1.1600e-003	0.0295	7.7300e-003	1.1100e-003	8.8400e-003	0.0000	72.9526	72.9526	6.1300e-003	0.0000	73.1059

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	0.0171	0.1569	0.1492	2.4000e-004		8.6300e-003	8.6300e-003		8.1100e-003	8.1100e-003	0.0000	20.8474	20.8474	5.0300e-003	0.0000	20.9731
Total	0.0171	0.1569	0.1492	2.4000e-004		8.6300e-003	8.6300e-003		8.1100e-003	8.1100e-003	0.0000	20.8474	20.8474	5.0300e-003	0.0000	20.9731

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.9000e-004	0.0375	0.0149	4.0000e-005	5.7000e-004	4.0000e-005	6.1000e-004	1.7000e-004	4.0000e-005	2.0000e-004	0.0000	4.1832	4.1832	4.2000e-004	0.0000	4.1938
Worker	1.9900e-003	8.9000e-004	0.0121	2.0000e-005	1.8300e-003	2.0000e-005	1.8600e-003	4.9000e-004	2.0000e-005	5.1000e-004	0.0000	1.8809	1.8809	6.0000e-005	0.0000	1.8825
Total	2.9800e-003	0.0384	0.0270	6.0000e-005	2.4000e-003	6.0000e-005	2.4700e-003	6.6000e-004	6.0000e-005	7.1000e-004	0.0000	6.0641	6.0641	4.8000e-004	0.0000	6.0762

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	9.7300e-003	0.2120	0.1609	2.4000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	20.8473	20.8473	5.0300e-003	0.0000	20.9731
Total	9.7300e-003	0.2120	0.1609	2.4000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	20.8473	20.8473	5.0300e-003	0.0000	20.9731

Mitigated Construction Off-Site

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	5.0000e-005	7.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1136	0.1136	0.0000	0.0000	0.1137
Total	1.2000e-004	5.0000e-005	7.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1136	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	9.3100e-003	0.2012	0.1730	2.3000e-004		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.3100e-003	0.2012	0.1730	2.3000e-004		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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	5.0000e-005	7.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1136	0.1136	0.0000	0.0000	0.1137
Total	1.2000e-004	5.0000e-005	7.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1136	0.1136	0.0000	0.0000	0.1137

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	2.7635					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	2.7657	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.0000e-004	2.6800e-003	0.0000	4.1000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4165	0.4165	1.0000e-005	0.0000	0.4168
Total	4.4000e-004	2.0000e-004	2.6800e-003	0.0000	4.1000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4165	0.4165	1.0000e-005	0.0000	0.4168

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	2.7635					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1400e-003	0.0235	0.0183	3.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	2.7646	0.0235	0.0183	3.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.0000e-004	2.6800e-003	0.0000	4.1000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4165	0.4165	1.0000e-005	0.0000	0.4168
Total	4.4000e-004	2.0000e-004	2.6800e-003	0.0000	4.1000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.4165	0.4165	1.0000e-005	0.0000	0.4168

SSF PUC ECR Chestnut - Building B - San Mateo County, Annual

SSF PUC ECR Chestnut - Building B - Construction

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Day-Care Center	5.50	1000sqft	0.13	5,500.00	0
Enclosed Parking with Elevator	510.00	Space	0.00	204,000.00	0
City Park	1.72	Acre	1.72	74,923.20	0
Apartments Mid Rise	288.00	Dwelling Unit	7.58	491,020.00	824

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			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

Project Characteristics - PG&E 2020 Rate

Land Use - PD Land Uses, Extra acreage for trenching/below-grade parking

Construction Phase - Default Construction schedule, added trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Trenching Equip added

Grading - Exported material = 34,765cy

Woodstoves - No Wood Burning, All gas

Water And Wastewater - WTP Treatment 100% Aerobic

Trips and VMT - 1 Mile Trips

Construction Off-road Equipment Mitigation - BMPs, Tier 2 DPF 3 Mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	43.20	92.16
tblFireplaces	NumberWood	48.96	0.00
tblGrading	MaterialExported	0.00	34,765.00
tblLandUse	LandUseSquareFeet	288,000.00	491,020.00
tblLandUse	LotAcreage	4.59	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00

tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	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
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2846	2.9592	2.6184	4.7700e-003	0.1927	0.1167	0.3095	0.0932	0.1093	0.2025	0.0000	424.9856	424.9856	0.0914	0.0000	427.2695
2023	3.5594	0.2989	0.3608	6.1000e-004	3.7100e-003	0.0129	0.0166	1.0100e-003	0.0121	0.0131	0.0000	53.5533	53.5533	0.0127	0.0000	53.8704
Maximum	3.5594	2.9592	2.6184	4.7700e-003	0.1927	0.1167	0.3095	0.0932	0.1093	0.2025	0.0000	424.9856	424.9856	0.0914	0.0000	427.2695

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1858	3.9395	2.8751	4.7700e-003	0.1059	0.0187	0.1246	0.0284	0.0186	0.0470	0.0000	424.9852	424.9852	0.0914	0.0000	427.2692
2023	3.5527	0.5003	0.4044	6.1000e-004	3.7100e-003	2.5600e-003	6.2700e-003	1.0100e-003	2.5600e-003	3.5700e-003	0.0000	53.5533	53.5533	0.0127	0.0000	53.8704
Maximum	3.5527	3.9395	2.8751	4.7700e-003	0.1059	0.0187	0.1246	0.0284	0.0186	0.0470	0.0000	424.9852	424.9852	0.0914	0.0000	427.2692

	ROG	NOx	CO	SO2	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	2.74	-36.27	-10.08	0.00	44.19	83.63	59.87	68.82	82.56	76.55	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	1-1-2022	3-31-2022	1.0644	1.2302
2	4-1-2022	6-30-2022	0.7241	0.9618
3	7-1-2022	9-30-2022	0.7321	0.9724

4	10-1-2022	12-31-2022	0.7294	0.9697
5	1-1-2023	3-31-2023	3.8508	4.0425
		Highest	3.8508	4.0425

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/11/2022	5	10	
3	Grading	Grading	2/12/2022	3/11/2022	5	20	
4	Trenching	Trenching	2/12/2022	2/25/2022	5	10	
5	Building Construction	Building Construction	3/12/2022	1/27/2023	5	230	
6	Paving	Paving	1/28/2023	2/24/2023	5	20	
7	Architectural Coating	Architectural Coating	2/25/2023	3/24/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 994,316; Residential Outdoor: 331,439; Non-Residential Indoor: 8,250; Non-Residential Outdoor: 2,750; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38

Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	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
Demolition	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,346.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	327.00	77.00	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	65.00	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

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Use DPF for Construction Equipment
- Use Soil Stabilizer

- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

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	1.1000e-004	5.0000e-005	6.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1095	0.1095	0.0000	0.0000	0.1096
Total	1.1000e-004	5.0000e-005	6.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1095	0.1095	0.0000	0.0000	0.1096

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	0.0126	0.3266	0.2467	3.9000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0126	0.3266	0.2467	3.9000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

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	1.1000e-004	5.0000e-005	6.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1095	0.1095	0.0000	0.0000	0.1096
Total	1.1000e-004	5.0000e-005	6.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1095	0.1095	0.0000	0.0000	0.1096

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0903	8.0600e-003	0.0984	0.0497	7.4200e-003	0.0571	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	4.0000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0657	0.0657	0.0000	0.0000	0.0658
Total	7.0000e-005	3.0000e-005	4.0000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0657	0.0657	0.0000	0.0000	0.0658

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.1686	0.1148	1.9000e-004		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

Total	6.0500e-003	0.1686	0.1148	1.9000e-004	0.0407	7.1000e-004	0.0414	0.0112	7.1000e-004	0.0119	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
-------	-------------	--------	--------	-------------	--------	-------------	--------	--------	-------------	--------	--------	---------	---------	-------------	--------	---------

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	4.0000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0657	0.0657	0.0000	0.0000	0.0658
Total	7.0000e-005	3.0000e-005	4.0000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0657	0.0657	0.0000	0.0000	0.0658

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0675	0.0000	0.0675	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654
Total	0.0195	0.2086	0.1527	3.0000e-004	0.0675	9.4100e-003	0.0769	0.0340	8.6600e-003	0.0426	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654

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	4.1100e-003	0.1923	0.0701	2.2000e-004	1.8600e-003	2.1000e-004	2.0700e-003	5.2000e-004	2.0000e-004	7.2000e-004	0.0000	22.2696	22.2696	2.5100e-003	0.0000	22.3323
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	1.1000e-004	5.0000e-005	6.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1095	0.1095	0.0000	0.0000	0.1096
Total	4.2200e-003	0.1924	0.0708	2.2000e-004	1.9700e-003	2.1000e-004	2.1800e-003	5.5000e-004	2.0000e-004	7.5000e-004	0.0000	22.3791	22.3791	2.5100e-003	0.0000	22.4419

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					0.0304	0.0000	0.0304	7.6400e-003	0.0000	7.6400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.2628	0.1899	3.0000e-004		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654
Total	0.0101	0.2628	0.1899	3.0000e-004	0.0304	1.1600e-003	0.0315	7.6400e-003	1.1600e-003	8.8000e-003	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654

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	4.1100e-003	0.1923	0.0701	2.2000e-004	1.8600e-003	2.1000e-004	2.0700e-003	5.2000e-004	2.0000e-004	7.2000e-004	0.0000	22.2696	22.2696	2.5100e-003	0.0000	22.3323
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	1.1000e-004	5.0000e-005	6.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1095	0.1095	0.0000	0.0000	0.1096
Total	4.2200e-003	0.1924	0.0708	2.2000e-004	1.9700e-003	2.1000e-004	2.1800e-003	5.5000e-004	2.0000e-004	7.5000e-004	0.0000	22.3791	22.3791	2.5100e-003	0.0000	22.4419

3.5 Trenching - 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	1.8400e-003	0.0173	0.0275	4.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	3.6344	3.6344	1.1800e-003	0.0000	3.6638
Total	1.8400e-003	0.0173	0.0275	4.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	3.6344	3.6344	1.1800e-003	0.0000	3.6638

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	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0183	0.0183	0.0000	0.0000	0.0183

Total	2.0000e-005	1.0000e-005	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0183	0.0183	0.0000	0.0000	0.0183
-------	-------------	-------------	-------------	--------	-------------	--------	-------------	--------	--------	-------------	--------	--------	--------	--------	--------	--------

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	1.7300e-003	0.0371	0.0313	4.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	3.6344	3.6344	1.1800e-003	0.0000	3.6638
Total	1.7300e-003	0.0371	0.0313	4.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	3.6344	3.6344	1.1800e-003	0.0000	3.6638

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	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0183	0.0183	0.0000	0.0000	0.0183
Total	2.0000e-005	1.0000e-005	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0183	0.0183	0.0000	0.0000	0.0183

3.6 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	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3115	243.3115	0.0583	0.0000	244.7688
Total	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3115	243.3115	0.0583	0.0000	244.7688

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	0.0120	0.4678	0.1906	5.3000e-004	7.4000e-003	4.6000e-004	7.8600e-003	2.1600e-003	4.4000e-004	2.6000e-003	0.0000	53.6373	53.6373	5.2400e-003	0.0000	53.7681
Worker	0.0254	0.0109	0.1531	2.8000e-004	0.0253	3.3000e-004	0.0257	6.7800e-003	3.0000e-004	7.0800e-003	0.0000	25.0652	25.0652	7.5000e-004	0.0000	25.0841
Total	0.0374	0.4787	0.3436	8.1000e-004	0.0327	7.9000e-004	0.0335	8.9400e-003	7.4000e-004	9.6800e-003	0.0000	78.7025	78.7025	5.9900e-003	0.0000	78.8522

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	0.1135	2.4732	1.8767	2.8300e-003		0.0142	0.0142		0.0142	0.0142	0.0000	243.3112	243.3112	0.0583	0.0000	244.7685
Total	0.1135	2.4732	1.8767	2.8300e-003		0.0142	0.0142		0.0142	0.0142	0.0000	243.3112	243.3112	0.0583	0.0000	244.7685

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	0.0120	0.4678	0.1906	5.3000e-004	7.4000e-003	4.6000e-004	7.8600e-003	2.1600e-003	4.4000e-004	2.6000e-003	0.0000	53.6373	53.6373	5.2400e-003	0.0000	53.7681
Worker	0.0254	0.0109	0.1531	2.8000e-004	0.0253	3.3000e-004	0.0257	6.7800e-003	3.0000e-004	7.0800e-003	0.0000	25.0652	25.0652	7.5000e-004	0.0000	25.0841
Total	0.0374	0.4787	0.3436	8.1000e-004	0.0327	7.9000e-004	0.0335	8.9400e-003	7.4000e-004	9.6800e-003	0.0000	78.7025	78.7025	5.9900e-003	0.0000	78.8522

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183
Total	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6000e-004	0.0389	0.0178	5.0000e-005	7.0000e-004	3.0000e-005	7.3000e-004	2.1000e-004	3.0000e-005	2.3000e-004	0.0000	4.9319	4.9319	4.6000e-004	0.0000	4.9434
Worker	2.2400e-003	9.3000e-004	0.0134	3.0000e-005	2.4100e-003	3.0000e-005	2.4400e-003	6.5000e-004	3.0000e-005	6.7000e-004	0.0000	2.2985	2.2985	6.0000e-005	0.0000	2.3001
Total	3.2000e-003	0.0399	0.0311	8.0000e-005	3.1100e-003	6.0000e-005	3.1700e-003	8.6000e-004	6.0000e-005	9.0000e-004	0.0000	7.2304	7.2304	5.2000e-004	0.0000	7.2435

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	0.0108	0.2355	0.1787	2.7000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183
Total	0.0108	0.2355	0.1787	2.7000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183

Mitigated Construction Off-Site

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	4.0000e-005	6.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055
Total	1.0000e-004	4.0000e-005	6.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055

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	9.3100e-003	0.2012	0.1730	2.3000e-004		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.3100e-003	0.2012	0.1730	2.3000e-004		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	4.0000e-005	6.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055
Total	1.0000e-004	4.0000e-005	6.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055

3.8 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5277					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	3.5296	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	1.9000e-004	2.6600e-003	1.0000e-005	4.8000e-004	1.0000e-005	4.9000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4569	0.4569	1.0000e-005	0.0000	0.4572
Total	4.5000e-004	1.9000e-004	2.6600e-003	1.0000e-005	4.8000e-004	1.0000e-005	4.9000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4569	0.4569	1.0000e-005	0.0000	0.4572

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	3.5277					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1400e-003	0.0235	0.0183	3.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	3.5289	0.0235	0.0183	3.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	1.9000e-004	2.6600e-003	1.0000e-005	4.8000e-004	1.0000e-005	4.9000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4569	0.4569	1.0000e-005	0.0000	0.4572
Total	4.5000e-004	1.9000e-004	2.6600e-003	1.0000e-005	4.8000e-004	1.0000e-005	4.9000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4569	0.4569	1.0000e-005	0.0000	0.4572

SSF PUC ECR Chestnut - Building A - San Mateo County, Annual

SSF PUC ECR Chestnut - Building A - Construction

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	477.00	Space	0.00	190,800.00	0
City Park	1.72	Acre	1.72	74,923.20	0
Apartments Mid Rise	293.00	Dwelling Unit	7.71	369,375.00	838

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 Rate

Land Use - PD Land Uses, Extra acreage for trenching/below-grade parking

Construction Phase - Default Construction schedule, added trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Trenching Equip added

Grading - Exported material = 34,765cy

Woodstoves - No Wood Burning, All gas

Water And Wastewater - WTP Treatment 100% Aerobic

Trips and VMT - 1 Mile Trip

Construction Off-road Equipment Mitigation - BMPs, Tier 2 DPF 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	43.95	93.76
tblFireplaces	NumberWood	49.81	0.00
tblGrading	MaterialExported	0.00	34,765.00
tblLandUse	LandUseSquareFeet	293,000.00	369,375.00
tblLandUse	LotAcreage	4.29	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00

tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	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
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	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

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					
2024	0.2448	2.5123	2.5652	4.7300e-003	0.1925	0.0894	0.2819	0.0931	0.0837	0.1768	0.0000	420.7693	420.7693	0.0901	0.0000	423.0224
2025	2.6661	0.2428	0.3372	5.7000e-004	3.3500e-003	9.5000e-003	0.0129	9.1000e-004	8.8800e-003	9.8000e-003	0.0000	50.0550	50.0550	0.0120	0.0000	50.3540
Maximum	2.6661	2.5123	2.5652	4.7300e-003	0.1925	0.0894	0.2819	0.0931	0.0837	0.1768	0.0000	420.7693	420.7693	0.0901	0.0000	423.0224

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1799	3.8499	2.8650	4.7300e-003	0.1057	0.0185	0.1242	0.0283	0.0185	0.0468	0.0000	420.7689	420.7689	0.0901	0.0000	423.0220
2025	2.6632	0.4699	0.3807	5.7000e-004	3.3500e-003	2.4200e-003	5.7700e-003	9.1000e-004	2.4100e-003	3.3300e-003	0.0000	50.0550	50.0550	0.0120	0.0000	50.3540
Maximum	2.6632	3.8499	2.8650	4.7300e-003	0.1057	0.0185	0.1242	0.0283	0.0185	0.0468	0.0000	420.7689	420.7689	0.0901	0.0000	423.0220

	ROG	NOx	CO	SO2	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	2.33	-56.80	-11.83	0.00	44.31	78.84	55.90	68.93	77.45	73.16	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	1-1-2024	3-31-2024	0.8813	1.1959
2	4-1-2024	6-30-2024	0.6182	0.9341
3	7-1-2024	9-30-2024	0.6250	0.9444
4	10-1-2024	12-31-2024	0.6230	0.9424
5	1-1-2025	3-31-2025	2.9011	3.1206
		Highest	2.9011	3.1206

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2024	1/26/2024	5	20	
2	Site Preparation	Site Preparation	1/27/2024	2/9/2024	5	10	
3	Grading	Grading	2/10/2024	3/8/2024	5	20	
4	Trenching	Trenching	2/10/2024	2/23/2024	5	10	
5	Building Construction	Building Construction	3/9/2024	1/24/2025	5	230	
6	Paving	Paving	1/25/2025	2/21/2025	5	20	
7	Architectural Coating	Architectural Coating	2/22/2025	3/21/2025	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 747,984; Residential Outdoor: 249,328; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

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

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	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
Demolition	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,346.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	323.00	75.00	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	65.00	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

3.1 Mitigation Measures Construction

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

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9961	33.9961	9.5100e-003	0.0000	34.2338
Total	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9961	33.9961	9.5100e-003	0.0000	34.2338

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-004	4.0000e-005	5.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1014	0.1014	0.0000	0.0000	0.1015
Total	1.0000e-004	4.0000e-005	5.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1014	0.1014	0.0000	0.0000	0.1015

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	0.0126	0.3266	0.2467	3.9000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	33.9960	33.9960	9.5100e-003	0.0000	34.2338
Total	0.0126	0.3266	0.2467	3.9000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	33.9960	33.9960	9.5100e-003	0.0000	34.2338

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-004	4.0000e-005	5.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1014	0.1014	0.0000	0.0000	0.1015
Total	1.0000e-004	4.0000e-005	5.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1014	0.1014	0.0000	0.0000	0.1015

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6600e-003	5.6600e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	0.0133	0.1359	0.0917	1.9000e-004	0.0903	6.1500e-003	0.0965	0.0497	5.6600e-003	0.0553	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638

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	6.0000e-005	2.0000e-005	3.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609
Total	6.0000e-005	2.0000e-005	3.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.1686	0.1148	1.9000e-004		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	6.0500e-003	0.1686	0.1148	1.9000e-004	0.0407	7.1000e-004	0.0414	0.0112	7.1000e-004	0.0119	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638

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	6.0000e-005	2.0000e-005	3.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609
Total	6.0000e-005	2.0000e-005	3.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0675	0.0000	0.0675	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1703	0.1476	3.0000e-004		7.2400e-003	7.2400e-003		6.6600e-003	6.6600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2747
Total	0.0166	0.1703	0.1476	3.0000e-004	0.0675	7.2400e-003	0.0747	0.0340	6.6600e-003	0.0406	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2747

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	3.1900e-003	0.1576	0.0734	2.0000e-004	1.8600e-003	1.2000e-004	1.9800e-003	5.2000e-004	1.2000e-004	6.3000e-004	0.0000	20.9582	20.9582	2.2600e-003	0.0000	21.0147

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-004	4.0000e-005	5.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1014	0.1014	0.0000	0.0000	0.1015
Total	3.2900e-003	0.1576	0.0739	2.0000e-004	1.9700e-003	1.2000e-004	2.0900e-003	5.5000e-004	1.2000e-004	6.6000e-004	0.0000	21.0596	21.0596	2.2600e-003	0.0000	21.1161

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					0.0304	0.0000	0.0304	7.6400e-003	0.0000	7.6400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.2628	0.1899	3.0000e-004		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2746
Total	0.0101	0.2628	0.1899	3.0000e-004	0.0304	1.1600e-003	0.0315	7.6400e-003	1.1600e-003	8.8000e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2746

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	3.1900e-003	0.1576	0.0734	2.0000e-004	1.8600e-003	1.2000e-004	1.9800e-003	5.2000e-004	1.2000e-004	6.3000e-004	0.0000	20.9582	20.9582	2.2600e-003	0.0000	21.0147
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-004	4.0000e-005	5.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1014	0.1014	0.0000	0.0000	0.1015
Total	3.2900e-003	0.1576	0.0739	2.0000e-004	1.9700e-003	1.2000e-004	2.0900e-003	5.5000e-004	1.2000e-004	6.6000e-004	0.0000	21.0596	21.0596	2.2600e-003	0.0000	21.1161

3.5 Trenching - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0143	0.0275	4.0000e-005		6.8000e-004	6.8000e-004		6.2000e-004	6.2000e-004	0.0000	3.6380	3.6380	1.1800e-003	0.0000	3.6674
Total	1.6200e-003	0.0143	0.0275	4.0000e-005		6.8000e-004	6.8000e-004		6.2000e-004	6.2000e-004	0.0000	3.6380	3.6380	1.1800e-003	0.0000	3.6674

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	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0169	0.0169	0.0000	0.0000	0.0169
Total	2.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0169	0.0169	0.0000	0.0000	0.0169

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	1.7300e-003	0.0371	0.0313	4.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	3.6380	3.6380	1.1800e-003	0.0000	3.6674
Total	1.7300e-003	0.0371	0.0313	4.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	3.6380	3.6380	1.1800e-003	0.0000	3.6674

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	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0169	0.0169	0.0000	0.0000	0.0169
Total	2.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0169	0.0169	0.0000	0.0000	0.0169

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1560	1.4250	1.7137	2.8600e-003		0.0650	0.0650		0.0612	0.0612	0.0000	245.7601	245.7601	0.0581	0.0000	247.2129

Total	0.1560	1.4250	1.7137	2.8600e-003		0.0650	0.0650		0.0612	0.0612	0.0000	245.7601	245.7601	0.0581	0.0000	247.2129
-------	--------	--------	--------	-------------	--	--------	--------	--	--------	--------	--------	----------	----------	--------	--------	----------

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4800e-003	0.3915	0.1837	4.9000e-004	7.2800e-003	2.6000e-004	7.5400e-003	2.1200e-003	2.5000e-004	2.3700e-003	0.0000	50.2002	50.2002	4.6200e-003	0.0000	50.3156
Worker	0.0219	8.7800e-003	0.1290	2.6000e-004	0.0253	3.2000e-004	0.0256	6.7600e-003	2.9000e-004	7.0600e-003	0.0000	23.1439	23.1439	6.0000e-004	0.0000	23.1589
Total	0.0314	0.4003	0.3127	7.5000e-004	0.0325	5.8000e-004	0.0331	8.8800e-003	5.4000e-004	9.4300e-003	0.0000	73.3441	73.3441	5.2200e-003	0.0000	73.4745

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	0.1146	2.4968	1.8946	2.8600e-003		0.0144	0.0144		0.0144	0.0144	0.0000	245.7598	245.7598	0.0581	0.0000	247.2126
Total	0.1146	2.4968	1.8946	2.8600e-003		0.0144	0.0144		0.0144	0.0144	0.0000	245.7598	245.7598	0.0581	0.0000	247.2126

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4800e-003	0.3915	0.1837	4.9000e-004	7.2800e-003	2.6000e-004	7.5400e-003	2.1200e-003	2.5000e-004	2.3700e-003	0.0000	50.2002	50.2002	4.6200e-003	0.0000	50.3156
Worker	0.0219	8.7800e-003	0.1290	2.6000e-004	0.0253	3.2000e-004	0.0256	6.7600e-003	2.9000e-004	7.0600e-003	0.0000	23.1439	23.1439	6.0000e-004	0.0000	23.1589
Total	0.0314	0.4003	0.3127	7.5000e-004	0.0325	5.8000e-004	0.0331	8.8800e-003	5.4000e-004	9.4300e-003	0.0000	73.3441	73.3441	5.2200e-003	0.0000	73.4745

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0123	0.1122	0.1448	2.4000e-004		4.7500e-003	4.7500e-003		4.4700e-003	4.4700e-003	0.0000	20.8728	20.8728	4.9100e-003	0.0000	20.9954
Total	0.0123	0.1122	0.1448	2.4000e-004		4.7500e-003	4.7500e-003		4.4700e-003	4.4700e-003	0.0000	20.8728	20.8728	4.9100e-003	0.0000	20.9954

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	7.7000e-004	0.0324	0.0157	4.0000e-005	6.2000e-004	2.0000e-005	6.4000e-004	1.8000e-004	2.0000e-005	2.0000e-004	0.0000	4.2029	4.2029	3.8000e-004	0.0000	4.2124
Worker	1.7400e-003	6.8000e-004	0.0101	2.0000e-005	2.1500e-003	3.0000e-005	2.1700e-003	5.7000e-004	2.0000e-005	6.0000e-004	0.0000	1.8875	1.8875	5.0000e-005	0.0000	1.8886
Total	2.5100e-003	0.0331	0.0258	6.0000e-005	2.7700e-003	5.0000e-005	2.8100e-003	7.5000e-004	4.0000e-005	8.0000e-004	0.0000	6.0903	6.0903	4.3000e-004	0.0000	6.1010

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	9.7300e-003	0.2120	0.1609	2.4000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	20.8727	20.8727	4.9100e-003	0.0000	20.9954
Total	9.7300e-003	0.2120	0.1609	2.4000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	20.8727	20.8727	4.9100e-003	0.0000	20.9954

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	7.7000e-004	0.0324	0.0157	4.0000e-005	6.2000e-004	2.0000e-005	6.4000e-004	1.8000e-004	2.0000e-005	2.0000e-004	0.0000	4.2029	4.2029	3.8000e-004	0.0000	4.2124

Worker	1.7400e-003	6.8000e-004	0.0101	2.0000e-005	2.1500e-003	3.0000e-005	2.1700e-003	5.7000e-004	2.0000e-005	6.0000e-004	0.0000	1.8875	1.8875	5.0000e-005	0.0000	1.8886
Total	2.5100e-003	0.0331	0.0258	6.0000e-005	2.7700e-003	5.0000e-005	2.8100e-003	7.5000e-004	4.0000e-005	8.0000e-004	0.0000	6.0903	6.0903	4.3000e-004	0.0000	6.1010

3.7 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	3.0000e-005	5.2000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0974	0.0974	0.0000	0.0000	0.0975
Total	9.0000e-005	3.0000e-005	5.2000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0974	0.0974	0.0000	0.0000	0.0975

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	9.3100e-003	0.2012	0.1730	2.3000e-004		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.3100e-003	0.2012	0.1730	2.3000e-004		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	3.0000e-005	5.2000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0974	0.0974	0.0000	0.0000	0.0975
Total	9.0000e-005	3.0000e-005	5.2000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0974	0.0974	0.0000	0.0000	0.0975

3.8 Architectural Coating - 2025

Unmitigated Construction On-Site

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

Category	tons/yr										MT/yr					
Archit. Coating	2.6400					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	2.6417	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567

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	3.9000e-004	1.5000e-004	2.2600e-003	0.0000	4.8000e-004	1.0000e-005	4.9000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4220	0.4220	1.0000e-005	0.0000	0.4223
Total	3.9000e-004	1.5000e-004	2.2600e-003	0.0000	4.8000e-004	1.0000e-005	4.9000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4220	0.4220	1.0000e-005	0.0000	0.4223

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	2.6400					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1400e-003	0.0235	0.0183	3.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567

Total	2.6411	0.0235	0.0183	3.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
-------	--------	--------	--------	-------------	--	-------------	-------------	--	-------------	-------------	--------	--------	--------	-------------	--------	--------

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	3.9000e-004	1.5000e-004	2.2600e-003	0.0000	4.8000e-004	1.0000e-005	4.9000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4220	0.4220	1.0000e-005	0.0000	0.4223
Total	3.9000e-004	1.5000e-004	2.2600e-003	0.0000	4.8000e-004	1.0000e-005	4.9000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4220	0.4220	1.0000e-005	0.0000	0.4223

SSF PUC ECR Chestnut - Building C - San Mateo County, Annual

SSF PUC ECR Chestnut - Building C 2030

San Mateo County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	454.00	Space	0.00	181,600.00	0
City Park	1.72	Acre	1.72	74,923.20	0
Apartments Mid Rise	228.00	Dwelling Unit	6.00	377,560.00	652
Strip Mall	13.00	1000sqft	0.30	13,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 Rate

Land Use - PD Land Uses, Extra acreage for trenching/below-grade parking

Construction Phase - Default Construction schedule, added trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Trenching Equip added

Grading - Exported material = 34,765cy

Vehicle Trips - Apts = 5.48, 5.27, 4.83, Mall = 115.46, 109.52, 53.22

Woodstoves - No Wood Burning, All gas

Water And Wastewater - WTP Treatment 100% Aerobic

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	34.20	72.96
tblFireplaces	NumberWood	38.76	0.00
tblGrading	MaterialExported	0.00	34,765.00
tblLandUse	LandUseSquareFeet	228,000.00	377,560.00
tblLandUse	LotAcreage	4.09	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	6.39	5.27
tblVehicleTrips	ST_TR	42.04	109.52
tblVehicleTrips	SU_TR	5.86	4.83
tblVehicleTrips	SU_TR	20.43	53.22
tblVehicleTrips	WD_TR	6.65	5.48
tblVehicleTrips	WD_TR	44.32	115.46
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8659	0.0274	1.6961	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8300e-003	1.7000e-004	12.0026
Energy	0.0111	0.0947	0.0415	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	393.9426	393.9426	0.0306	7.8900e-003	397.0584
Mobile	0.4215	1.1542	4.3011	0.0163	1.8409	0.0108	1.8517	0.4948	0.0100	0.5048	0.0000	1,495.9896	1,495.9896	0.0542	0.0000	1,497.3438
Waste						0.0000	0.0000		0.0000	0.0000	24.0910	0.0000	24.0910	1.4237	0.0000	59.6844
Water						0.0000	0.0000		0.0000	0.0000	5.5965	16.7858	22.3823	0.0209	0.0125	26.6361
Total	2.2985	1.2762	6.0387	0.0170	1.8409	0.0285	1.8694	0.4948	0.0277	0.5225	29.6874	1,918.6000	1,948.2874	1.5322	0.0206	1,992.7252

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	1.8659	0.0274	1.6961	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8300e-003	1.7000e-004	12.0026
Energy	0.0111	0.0947	0.0415	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	393.9426	393.9426	0.0306	7.8900e-003	397.0584
Mobile	0.4215	1.1542	4.3011	0.0163	1.8409	0.0108	1.8517	0.4948	0.0100	0.5048	0.0000	1,495.9896	1,495.9896	0.0542	0.0000	1,497.3438

Waste						0.0000	0.0000		0.0000	0.0000	24.0910	0.0000	24.0910	1.4237	0.0000	59.6844
Water						0.0000	0.0000		0.0000	0.0000	5.5965	16.7858	22.3823	0.0209	0.0125	26.6361
Total	2.2985	1.2762	6.0387	0.0170	1.8409	0.0285	1.8694	0.4948	0.0277	0.5225	29.6874	1,918.6000	1,948.2874	1.5322	0.0206	1,992.7252

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4215	1.1542	4.3011	0.0163	1.8409	0.0108	1.8517	0.4948	0.0100	0.5048	0.0000	1,495.9896	1,495.9896	0.0542	0.0000	1,497.3438
Unmitigated	0.4215	1.1542	4.3011	0.0163	1.8409	0.0108	1.8517	0.4948	0.0100	0.5048	0.0000	1,495.9896	1,495.9896	0.0542	0.0000	1,497.3438

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartment Mid Rise	1,249.44	1,201.56	1101.24	2,821,020	2,821,020
City Park	3.25	39.13	28.79	25,672	25,672
Enclosed Parking with Elevator	0.00	0.00	0.00		

Strip Mall	1,500.98	1,423.76	691.86	2,116,560	2,116,560
Total	2,753.67	2,664.45	1,821.89	4,963,252	4,963,252

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
City Park	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Enclosed Parking with Elevator	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Strip Mall	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896

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	284.5288	284.5288	0.0285	5.8900e-003	286.9944
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	284.5288	284.5288	0.0285	5.8900e-003	286.9944

NaturalGas Mitigated	0.0111	0.0947	0.0415	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4139	109.4139	2.1000e-003	2.0100e-003	110.0640
NaturalGas Unmitigated	0.0111	0.0947	0.0415	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4139	109.4139	2.1000e-003	2.0100e-003	110.0640

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.99054e+006	0.0107	0.0917	0.0390	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003	0.0000	106.2227	106.2227	2.0400e-003	1.9500e-003	106.8539
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	59800	3.2000e-004	2.9300e-003	2.4600e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1912	3.1912	6.0000e-005	6.0000e-005	3.2101
Total		0.0111	0.0947	0.0415	6.1000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4139	109.4139	2.1000e-003	2.0100e-003	110.0640

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.99054e+006	0.0107	0.0917	0.0390	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003	0.0000	106.2227	106.2227	2.0400e-003	1.9500e-003	106.8539
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	59800	3.2000e-004	2.9300e-003	2.4600e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1912	3.1912	6.0000e-005	6.0000e-005	3.2101

Total		0.0111	0.0947	0.0415	6.1000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4139	109.4139	2.1000e-003	2.0100e-003	110.0640
-------	--	--------	--------	--------	-------------	--	-------------	-------------	--	-------------	-------------	--------	----------	----------	-------------	-------------	----------

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	962614	126.6239	0.0127	2.6200e-003	127.7212
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.06418e+006	139.9836	0.0140	2.9000e-003	141.1966
Strip Mall	136240	17.9213	1.7900e-003	3.7000e-004	18.0766
Total		284.5288	0.0285	5.8900e-003	286.9944

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	962614	126.6239	0.0127	2.6200e-003	127.7212
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.06418e+006	139.9836	0.0140	2.9000e-003	141.1966
Strip Mall	136240	17.9213	1.7900e-003	3.7000e-004	18.0766
Total		284.5288	0.0285	5.8900e-003	286.9944

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8659	0.0274	1.6961	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8300e-003	1.7000e-004	12.0026
Unmitigated	1.8659	0.0274	1.6961	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8300e-003	1.7000e-004	12.0026

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	0.2764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5378					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.2000e-004	7.8600e-003	3.3500e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.1083	9.1083	1.7000e-004	1.7000e-004	9.1624
Landscaping	0.0509	0.0195	1.6927	9.0000e-005		9.4000e-003	9.4000e-003		9.4000e-003	9.4000e-003	0.0000	2.7737	2.7737	2.6600e-003	0.0000	2.8402
Total	1.8659	0.0274	1.6961	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8300e-003	1.7000e-004	12.0026

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	0.2764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5378					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.2000e-004	7.8600e-003	3.3500e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.1083	9.1083	1.7000e-004	1.7000e-004	9.1624
Landscaping	0.0509	0.0195	1.6927	9.0000e-005		9.4000e-003	9.4000e-003		9.4000e-003	9.4000e-003	0.0000	2.7737	2.7737	2.6600e-003	0.0000	2.8402
Total	1.8659	0.0274	1.6961	1.4000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	11.8820	11.8820	2.8300e-003	1.7000e-004	12.0026

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	22.3823	0.0209	0.0125	26.6361
Unmitigated	22.3823	0.0209	0.0125	26.6361

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	14.8551 / 9.36518	20.1409	0.0196	0.0117	24.1282
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.962943 / 0.590191	1.2978	1.2700e-003	7.6000e-004	1.5562
Total		22.3823	0.0209	0.0125	26.6361

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	14.8551 / 9.36518	20.1409	0.0196	0.0117	24.1282
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.962943 / 0.590191	1.2978	1.2700e-003	7.6000e-004	1.5562
Total		22.3823	0.0209	0.0125	26.6361

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	24.0910	1.4237	0.0000	59.6844
Unmitigated	24.0910	1.4237	0.0000	59.6844

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	104.88	21.2897	1.2582	0.0000	52.7443
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	13.65	2.7708	0.1638	0.0000	6.8646
Total		24.0910	1.4237	0.0000	59.6844

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	104.88	21.2897	1.2582	0.0000	52.7443
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	13.65	2.7708	0.1638	0.0000	6.8646
Total		24.0910	1.4237	0.0000	59.6844

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

SSF PUC ECR Chestnut - Building B - San Mateo County, Annual

SSF PUC ECR Chestnut - Building B 2030**San Mateo County, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Day-Care Center	5.50	1000sqft	0.13	5,500.00	0
Enclosed Parking with Elevator	510.00	Space	0.00	204,000.00	0
City Park	1.72	Acre	1.72	74,923.20	0
Apartments Mid Rise	288.00	Dwelling Unit	7.58	491,020.00	824

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 Rate

Land Use - PD Land Uses, Extra acreage for trenching/below-grade parking

Construction Phase - Default Construction schedule, added trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Trenching Equip added

Grading - Exported material = 34,765cy

Vehicle Trips - Apts = 5.48, 5.27, 4.83, Daycare = 47.64, 4.00, 3.75

Woodstoves - No Wood Burning, All gas

Water And Wastewater - WTP Treatment 100% Aerobic

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	43.20	92.16
tblFireplaces	NumberWood	48.96	0.00
tblGrading	MaterialExported	0.00	34,765.00
tblLandUse	LandUseSquareFeet	288,000.00	491,020.00
tblLandUse	LotAcreage	4.59	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	6.39	5.27
tblVehicleTrips	ST_TR	6.21	4.00
tblVehicleTrips	SU_TR	5.86	4.83
tblVehicleTrips	SU_TR	5.83	3.75
tblVehicleTrips	WD_TR	6.65	5.48
tblVehicleTrips	WD_TR	74.06	47.64
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3712	0.0346	2.1417	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.5700e-003	2.1000e-004	15.1597
Energy	0.0141	0.1203	0.0530	7.7000e-004		9.7000e-003	9.7000e-003		9.7000e-003	9.7000e-003	0.0000	459.4186	459.4186	0.0347	9.1800e-003	463.0211
Mobile	0.2989	0.8287	3.1909	0.0124	1.4156	8.1100e-003	1.4237	0.3805	7.5400e-003	0.3880	0.0000	1,143.3154	1,143.3154	0.0410	0.0000	1,144.3391
Waste						0.0000	0.0000		0.0000	0.0000	28.3741	0.0000	28.3741	1.6769	0.0000	70.2956
Water						0.0000	0.0000		0.0000	0.0000	6.7223	20.1930	26.9153	0.0252	0.0150	32.0252
Total	2.6841	0.9836	5.3857	0.0134	1.4156	0.0305	1.4461	0.3805	0.0299	0.4104	35.0964	1,637.9345	1,673.0309	1.7813	0.0244	1,724.8406

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	2.3712	0.0346	2.1417	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.5700e-003	2.1000e-004	15.1597
Energy	0.0141	0.1203	0.0530	7.7000e-004		9.7000e-003	9.7000e-003		9.7000e-003	9.7000e-003	0.0000	459.4186	459.4186	0.0347	9.1800e-003	463.0211
Mobile	0.2989	0.8287	3.1909	0.0124	1.4156	8.1100e-003	1.4237	0.3805	7.5400e-003	0.3880	0.0000	1,143.3154	1,143.3154	0.0410	0.0000	1,144.3391

Waste						0.0000	0.0000		0.0000	0.0000	28.3741	0.0000	28.3741	1.6769	0.0000	70.2956
Water						0.0000	0.0000		0.0000	0.0000	6.7223	20.1930	26.9153	0.0252	0.0150	32.0252
Total	2.6841	0.9836	5.3857	0.0134	1.4156	0.0305	1.4461	0.3805	0.0299	0.4104	35.0964	1,637.9345	1,673.0309	1.7813	0.0244	1,724.8406

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2989	0.8287	3.1909	0.0124	1.4156	8.1100e-003	1.4237	0.3805	7.5400e-003	0.3880	0.0000	1,143.3154	1,143.3154	0.0410	0.0000	1,144.3391
Unmitigated	0.2989	0.8287	3.1909	0.0124	1.4156	8.1100e-003	1.4237	0.3805	7.5400e-003	0.3880	0.0000	1,143.3154	1,143.3154	0.0410	0.0000	1,144.3391

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,578.24	1,517.76	1391.04	3,563,394	3,563,394
City Park	3.25	39.13	28.79	25,672	25,672
Day-Care Center	262.02	22.00	20.63	227,573	227,573

Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,843.51	1,578.89	1,440.46	3,816,639	3,816,639

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
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
Apartments Mid Rise	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
City Park	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Day-Care Center	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Enclosed Parking with Elevator	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896

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	320.4086	320.4086	0.0320	6.6300e-003	323.1851
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	320.4086	320.4086	0.0320	6.6300e-003	323.1851

NaturalGas Mitigated	0.0141	0.1203	0.0530	7.7000e-004		9.7000e-003	9.7000e-003		9.7000e-003	9.7000e-003	0.0000	139.0100	139.0100	2.6600e-003	2.5500e-003	139.8361
NaturalGas Unmitigated	0.0141	0.1203	0.0530	7.7000e-004		9.7000e-003	9.7000e-003		9.7000e-003	9.7000e-003	0.0000	139.0100	139.0100	2.6600e-003	2.5500e-003	139.8361

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					
Apartment Mid Rise	2.51436e+006	0.0136	0.1159	0.0493	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	134.1760	134.1760	2.5700e-003	2.4600e-003	134.9734
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Day-Care Center	90585	4.9000e-004	4.4400e-003	3.7300e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.8340	4.8340	9.0000e-005	9.0000e-005	4.8627
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		0.0141	0.1203	0.0530	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	139.0100	139.0100	2.6600e-003	2.5500e-003	139.8361

Mitigated

[illegible]

Total		0.0141	0.1203	0.0530	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	139.0100	139.0100	2.6600e-003	2.5500e-003	139.8361
-------	--	--------	--------	--------	-------------	--	-------------	-------------	--	-------------	-------------	--------	----------	----------	-------------	-------------	----------

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.21593e+006	159.9460	0.0160	3.3100e-003	161.3320
City Park	0	0.0000	0.0000	0.0000	0.0000
Day-Care Center	24420	3.2123	3.2000e-004	7.0000e-005	3.2401
Enclosed Parking with Elevator	1.19544e+006	157.2503	0.0157	3.2500e-003	158.6130
Total		320.4086	0.0320	6.6300e-003	323.1851

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.21593e+006	159.9460	0.0160	3.3100e-003	161.3320
City Park	0	0.0000	0.0000	0.0000	0.0000
Day-Care Center	24420	3.2123	3.2000e-004	7.0000e-005	3.2401
Enclosed Parking with Elevator	1.19544e+006	157.2503	0.0157	3.2500e-003	158.6130
Total		320.4086	0.0320	6.6300e-003	323.1851

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3712	0.0346	2.1417	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.5700e-003	2.1000e-004	15.1597
Unmitigated	2.3712	0.0346	2.1417	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.5700e-003	2.1000e-004	15.1597

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	0.3528					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9531					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1600e-003	9.9300e-003	4.2300e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	11.5052	11.5052	2.2000e-004	2.1000e-004	11.5736
Landscaping	0.0642	0.0246	2.1375	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5023	3.5023	3.3500e-003	0.0000	3.5861
Total	2.3712	0.0346	2.1417	1.7000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.5700e-003	2.1000e-004	15.1597

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	0.3528					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9531					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1600e-003	9.9300e-003	4.2300e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	11.5052	11.5052	2.2000e-004	2.1000e-004	11.5736
Landscaping	0.0642	0.0246	2.1375	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5023	3.5023	3.3500e-003	0.0000	3.5861
Total	2.3712	0.0346	2.1417	1.7000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.0075	15.0075	3.5700e-003	2.1000e-004	15.1597

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	26.9153	0.0252	0.0150	32.0252
Unmitigated	26.9153	0.0252	0.0150	32.0252

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	18.7644 / 11.8297	25.4412	0.0247	0.0148	30.4777
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Day-Care Center	0.235893 / 0.606581	0.5306	3.3000e-004	1.9000e-004	0.5958
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		26.9153	0.0252	0.0150	32.0252

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	18.7644 / 11.8297	25.4412	0.0247	0.0148	30.4777
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Day-Care Center	0.235893 / 0.606581	0.5306	3.3000e-004	1.9000e-004	0.5958
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		26.9153	0.0252	0.0150	32.0252

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.3741	1.6769	0.0000	70.2956
Unmitigated	28.3741	1.6769	0.0000	70.2956

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	132.48	26.8922	1.5893	0.0000	66.6244
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Day-Care Center	7.15	1.4514	0.0858	0.0000	3.5958
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		28.3741	1.6769	0.0000	70.2956

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	132.48	26.8922	1.5893	0.0000	66.6244
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Day-Care Center	7.15	1.4514	0.0858	0.0000	3.5958
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		28.3741	1.6769	0.0000	70.2956

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

SSF PUC ECR Chestnut - Building A - San Mateo County, Annual

SSF PUC ECR Chestnut - Building A 2030

San Mateo County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	477.00	Space	0.00	190,800.00	0
City Park	1.72	Acre	1.72	74,923.20	0
Apartments Mid Rise	293.00	Dwelling Unit	7.71	369,375.00	838

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 Rate

Land Use - PD Land Uses, Extra acreage for trenching/below-grade parking

Construction Phase - Default Construction schedule, added trenching

Off-road Equipment - Default Construction Equipment

Off-road Equipment - Trenching Equip added

Grading - Exported material = 34,765cy

Vehicle Trips - Apts = 5.48, 5.27, 4.83

Woodstoves - No Wood Burning, All gas

Water And Wastewater - WTP Treatment 100% Aerobic

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	43.95	93.76
tblFireplaces	NumberWood	49.81	0.00
tblGrading	MaterialExported	0.00	34,765.00
tblLandUse	LandUseSquareFeet	293,000.00	369,375.00
tblLandUse	LotAcreage	4.29	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	6.39	5.27
tblVehicleTrips	SU_TR	5.86	4.83
tblVehicleTrips	WD_TR	6.65	5.48
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

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	1.7861	0.0352	2.1785	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6300e-003	2.1000e-004	15.4220
Energy	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	446.3036	446.3036	0.0336	8.9100e-003	449.7994
Mobile	0.2770	0.7720	3.0114	0.0119	1.3542	7.6900e-003	1.3619	0.3640	7.1500e-003	0.3711	0.0000	1,091.1867	1,091.1867	0.0389	0.0000	1,092.1596
Waste						0.0000	0.0000		0.0000	0.0000	27.3896	0.0000	27.3896	1.6187	0.0000	67.8565
Water						0.0000	0.0000		0.0000	0.0000	6.7541	20.0723	26.8264	0.0253	0.0151	31.9585
Total	2.0769	0.9250	5.2400	0.0128	1.3542	0.0301	1.3843	0.3640	0.0296	0.3936	34.1437	1,572.8298	1,606.9734	1.7201	0.0242	1,657.1960

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	1.7861	0.0352	2.1785	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6300e-003	2.1000e-004	15.4220
Energy	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	446.3036	446.3036	0.0336	8.9100e-003	449.7994
Mobile	0.2770	0.7720	3.0114	0.0119	1.3542	7.6900e-003	1.3619	0.3640	7.1500e-003	0.3711	0.0000	1,091.1867	1,091.1867	0.0389	0.0000	1,092.1596
Waste						0.0000	0.0000		0.0000	0.0000	27.3896	0.0000	27.3896	1.6187	0.0000	67.8565
Water						0.0000	0.0000		0.0000	0.0000	6.7541	20.0723	26.8264	0.0253	0.0151	31.9585
Total	2.0769	0.9250	5.2400	0.0128	1.3542	0.0301	1.3843	0.3640	0.0296	0.3936	34.1437	1,572.8298	1,606.9734	1.7201	0.0242	1,657.1960

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2770	0.7720	3.0114	0.0119	1.3542	7.6900e-003	1.3619	0.3640	7.1500e-003	0.3711	0.0000	1,091.1867	1,091.1867	0.0389	0.0000	1,092.1596
Unmitigated	0.2770	0.7720	3.0114	0.0119	1.3542	7.6900e-003	1.3619	0.3640	7.1500e-003	0.3711	0.0000	1,091.1867	1,091.1867	0.0389	0.0000	1,092.1596

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,605.64	1,544.11	1415.19	3,625,259	3,625,259
City Park	3.25	39.13	28.79	25,672	25,672
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,608.89	1,583.24	1,443.98	3,650,931	3,650,931

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

Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
City Park	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Enclosed Parking with Elevator	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896

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	309.7982	309.7982	0.0310	6.4100e-003	312.4827
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	309.7982	309.7982	0.0310	6.4100e-003	312.4827
NaturalGas Mitigated	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167
NaturalGas Unmitigated	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.55802e+006	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.55802e+006	0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0138	0.1179	0.0502	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.5055	136.5055	2.6200e-003	2.5000e-003	137.3167

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
--	-----------------	-----------	-----	-----	------

Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.23704e+006	162.7229	0.0163	3.3700e-003	164.1329
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.11809e+006	147.0753	0.0147	3.0400e-003	148.3498
Total		309.7982	0.0310	6.4100e-003	312.4827

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.23704e+006	162.7229	0.0163	3.3700e-003	164.1329
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	1.11809e+006	147.0753	0.0147	3.0400e-003	148.3498
Total		309.7982	0.0310	6.4100e-003	312.4827

6.0 Area Detail

6.1 Mitigation Measures Area

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

Category	tons/yr										MT/yr					
Mitigated	1.7861	0.0352	2.1785	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6300e-003	2.1000e-004	15.4220
Unmitigated	1.7861	0.0352	2.1785	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6300e-003	2.1000e-004	15.4220

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	0.2640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1800e-003	0.0101	4.3000e-003	6.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	11.7049	11.7049	2.2000e-004	2.1000e-004	11.7745
Landscaping	0.0653	0.0251	2.1742	1.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	3.5623	3.5623	3.4100e-003	0.0000	3.6475
Total	1.7861	0.0352	2.1785	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6300e-003	2.1000e-004	15.4220

Mitigated

[illegible]

Hearth	1.1800e-003	0.0101	4.3000e-003	6.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	11.7049	11.7049	2.2000e-004	2.1000e-004	11.7745
Landscaping	0.0653	0.0251	2.1742	1.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	3.5623	3.5623	3.4100e-003	0.0000	3.6475
Total	1.7861	0.0352	2.1785	1.8000e-004		0.0129	0.0129		0.0129	0.0129	0.0000	15.2672	15.2672	3.6300e-003	2.1000e-004	15.4220

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	26.8264	0.0253	0.0151	31.9585
Unmitigated	26.8264	0.0253	0.0151	31.9585

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.0901 / 12.0351	25.8829	0.0252	0.0151	31.0068
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

Total		26.8264	0.0253	0.0151	31.9585
-------	--	---------	--------	--------	---------

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.0901 / 12.0351	25.8829	0.0252	0.0151	31.0068
City Park	0 / 2.04935	0.9435	9.0000e-005	2.0000e-005	0.9517
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		26.8264	0.0253	0.0151	31.9585

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	27.3896	1.6187	0.0000	67.8565
Unmitigated	27.3896	1.6187	0.0000	67.8565

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	134.78	27.3591	1.6169	0.0000	67.7811
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		27.3896	1.6187	0.0000	67.8565

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	134.78	27.3591	1.6169	0.0000	67.7811
City Park	0.15	0.0305	1.8000e-003	0.0000	0.0754
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		27.3896	1.6187	0.0000	67.8565

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

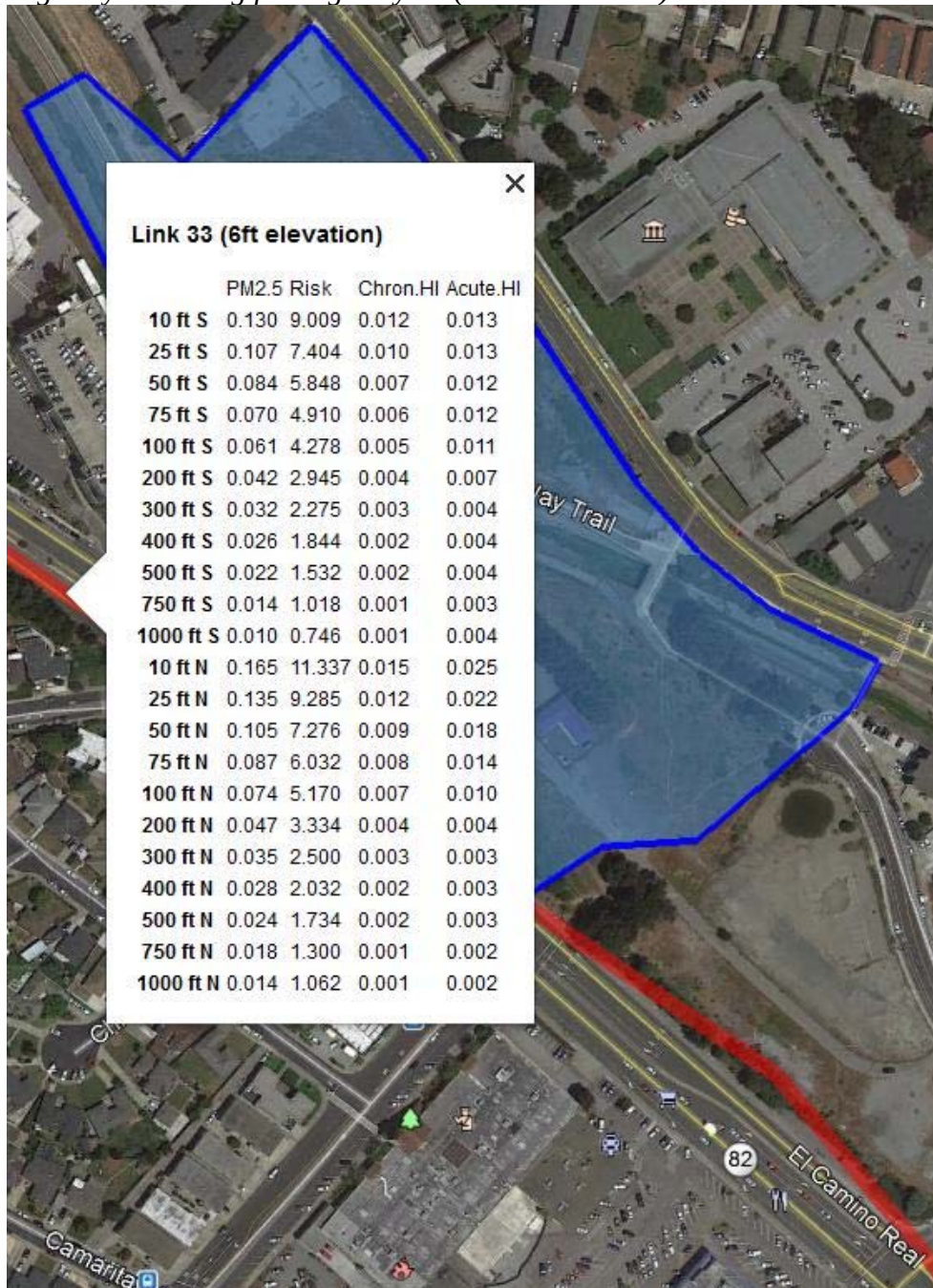
Equipment Type	Number
----------------	--------

11.0 Vegetation

[illegible]

Attachment 3: Screening Community Risk Calculations

Highway Screening for Highway 82 (El Camino Real)



Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	North-South
Side of the Roadway	West
Distance from Roadway	30 feet
	Project Site
Annual Average Daily Traffic (ADT)	14,855

Results

San Mateo County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

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

Cancer Risk

5.94 (per million)

Mission Road

Cumulative plus project volumes from traffic report
Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant in

Adjusted for 2015 OEHA
and EMFAC2014 for 2018

4.08
(per million)

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

Notes and References:

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

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	North
Distance from Roadway	630 feet
	Project Site
Annual Average Daily Traffic (ADT)	42,620

Results

San Mateo County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.091 (µg/m³)

Cancer Risk

4.35 (per million)

Chestnut Avenue

Cumulative plus project volumes from traffic report
Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant in

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

2.99
(per million)

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

Notes and References:

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

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	South
Distance from Roadway	120 feet
	Project Site
Annual Average Daily Traffic (ADT)	15,020

Results

San Mateo County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.107 (µg/m³)

Cancer Risk

4.41 (per million)

Grand Avenue

Cumulative plus project volumes from traffic report
Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant in

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

3.03
(per million)

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

Notes and References:

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

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	North
Distance from Roadway	350 feet
	Project Site
Annual Average Daily Traffic (ADT)	13,005

Results

San Mateo County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.043 (µg/m³)

Cancer Risk

2.05 (per million)

Arroyo Drive

Cumulative plus project volumes from traffic report
Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant in

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

1.41
(per million)

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

Notes and References:

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

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for

- County: Select the County where the project is located. The calculator is only
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated)

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	North-South
Side of the Roadway	West
Distance from Roadway	150 feet
Annual Average Daily Traffic (ADT)	14,855

Const MEI Cancer

Adjusted for 2015 OEHHA and EMFAC2014 for 2018
1.67
(per million)

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

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicles
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA to

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	North-South
Side of the Roadway	West
Distance from Roadway	200 feet
Annual Average Daily Traffic (ADT)	14,855

Const MEI PM2.5

Results

San Mateo County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.043 (µg/m³)

Mission Road

Cumulative plus project volumes from traffic report
Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant

Notes and References:

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

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for

- County: Select the County where the project is located. The calculator is only
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated)

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	North
Distance from Roadway	550 feet
Annual Average Daily Traffic (ADT)	42,620

Const MEI Cancer

Adjusted for 2015 OEHHA and EMFAC2014 for 2018
3.38
(per million)

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

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicles
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA to

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	North
Distance from Roadway	1000 feet
	Project Site
Annual Average Daily Traffic (ADT)	42,620

Results

San Mateo County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.056 (µg/m³)

Chestnut Avenue

Cumulative plus project volumes from traffic report
Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant

Notes and References:

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

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for

- County: Select the County where the project is located. The calculator is only
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated)

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	South
Distance from Roadway	1000 feet
	Project Site
Annual Average Daily Traffic (ADT)	15,020

Adjusted for 2015 OEHHA and EMFAC2014 for 2018
0.47
(per million)

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

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicles
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA to

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	South
Distance from Roadway	250 feet
Annual Average Daily Traffic (ADT)	15,020

Results

San Mateo County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.061 (µg/m³)

Grand Avenue

Cumulative plus project volumes from traffic report

Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant

Notes and References:

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

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for

- County: Select the County where the project is located. The calculator is only
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated)

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	North
Distance from Roadway	630 feet
	Project Site
Annual Average Daily Traffic (ADT)	13,005

Adjusted for 2015 OEHHA and EMFAC2014 for 2018
0.91
(per million)

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

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicles
2. Roadways were modeled using CALINE4 Cal3qhc air dispersion model assuming a source length of one kilometer. Meteorological data used
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA to

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	North
Distance from Roadway	1000 feet
	Project Site
Annual Average Daily Traffic (ADT)	13,005

Results

San Mateo County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.017 (µg/m³)

Arroyo Drive

Cumulative plus project volumes from traffic report
Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant

Notes and References:

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



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Risk & Hazard Stationary Source Inquiry Form

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

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

[Click here for guidance on conducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.](#)

[Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.](#)

Table A: Requester Contact Information

Date of Request	11/13/2018
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	CDivine@illingworthrodkin.com
Project Name	SSF PUC ECR Chestnut SP
Address	Mission Road between Grand Avenue and Oak Avenue
City	South San Francisco
County	San Francisco
Type (residential, commercial, mixed use, industrial, etc.)	Residential Mixed-use
Project Size (# of units or building square feet)	809 DU, daycare, retail
Comments: Address/location for plant # 22000 no longer exists. Is this still an active source?	

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

1. Complete all the contact and project information requested in **Table A**. Incomplete forms will not be processed. Please include a project site map.
2. Download and install the free program Google Earth, <http://www.google.com/earth/download/ge/>, and then download the county specific Google Earth stationary source application files from the District's website, <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>. The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.
3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.
4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.
5. List the stationary source information in **Table B** section only.
6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.
7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

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

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

Table B: Google Earth data											PROJECT SITE			
Distance from Receptor (feet) or MEI ¹	Facility Name	Address	Plant No.	Cancer Risk ²	Hazard Risk ²	PM _{2.5} ²	Source No. ³	Type of Source ⁴	Fuel Code ⁵	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
300	Kaiser Foundation Hospital	1200 El Camino Real	4047	184.6981	0.095904	0.2406	S9-S15	Generator, Sterilizer, Boiler	98	Emissions file attached. Use BETA Calculator	0.25	3.0	0.03	<0.01
120	County of San Mateo	1040 Old Mission Road	14871	1.248862	0.001925	0.00159	S1	Generator	98	Use ICE Multiplier	0.64	0.8	0.00	0.00
200	Forza Telecom-Ph8 Chestnut Head End	955 Antoinette Lane	22000	0.383307	0.001159	0.00047	S1	Generator	98	Active. Cell tower.	0.41	0.2	0.00	0.00
1000	California Water Service Company	80 Chestnut Avenue	108499	30.01695	0.148186	0	S1	GDF		Public Records Request	0.01	0.4	0.00	0.00
1000	Access Properties LLC	91 Westborough Boulevard	19316	3.44475	0.005163	0.00438	S1	Generator	98	Use ICE Multiplier	0.04	0.1	0.00	0.00
800	Westborough Kwik Serv	1 Westborough Boulevard	111428	243.1373	1.20031	0	S1	GDF		Public Records Request	0.02	5.1	0.02	0.00

Footnotes:

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

Date last updated:

		Construction MEI				
Distance (feet) from Const MEI Cancer Risk ¹	Distance (feet) from Const MEI PM2.5 Risk ¹	Distance Adjustment Multiplier for Cancer Risk	Distance Adjustment Multiplier for PM2.5	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
1000	315	0.04	0.04	0.7	0.03	<0.01
780	520	0.06	0.10	0.1	0.00	0.00
180	1000	0.50	0.04	0.2	0.00	0.00
870	1000	0.02	0.01	0.5	0.00	0.00
1000	1000	0.04	0.04	0.1	0.00	0.00
800	1000	0.02	0.01	5.1	0.02	0.00

Kaiser Hospital #4047 BETA Emissions Calculator Summary Sheet

<u>Kaiser Hospital #4047</u>	<u>Project Site</u>	<u>Cancer Risk</u>	<u>PM2.5</u>	<u>HI</u>
3 Generators	No Adjustment	10.6	0.01	0.01
3 Boilers	Distance Adjustment 300ft project site	2.7	<0.01	<0.01
1 Sterilizer		0.3	-	0.01
Total		0.01	-	<0.01
		3.01	<0.01	<0.03

<u>Kaiser Hospital #4047</u>	<u>Cancer Construction MEI</u>	<u>Cancer Risk</u>	<u>HI</u>
3 Generators	No Adjustment	10.6	0.01
3 Boilers	Distance Adjustment 1,000ft Const Mei Cancer	0.4	<0.01
1 Sterilizer		0.3	0.01
Total		0.01	<0.01
		0.71	<0.03

<u>Kaiser Hospital #4047</u>	<u>PM2.5 Construction MEI</u>	<u>PM2.5</u>	<u>HI</u>
3 Generators	No Adjustment	0.01	0.01
3 Boilers	Distance Adjustment 315ft Const Mei PM2.5	<0.01	<0.01
1 Sterilizer		-	0.01
Total		-	<0.01
		<0.01	<0.03

Attachment 4: Construction Health Risk Calculations

DPM Emissions and Modeling Emission Rates - With Project Construction Design Features

Construction Year	Construction Area	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2020	Building C	0.0192	C-DPM	38.4	0.01169	1.47E-03	7,702	1.91E-07
2021	Building C	0.0024	C-DPM	4.9	0.00148	1.86E-04	7,702	2.42E-08
2022	Building B	0.0187	B-DPM	37.4	0.01139	1.43E-03	9,423	1.52E-07
2023	Building B	0.0026	B-DPM	5.1	0.00156	1.96E-04	9,423	2.08E-08
2024	Building A	0.0185	A-DPM	37.0	0.01126	1.42E-03	9,003	1.58E-07
2025	Building A	0.0024	A-DPM	4.8	0.00147	1.86E-04	9,003	2.06E-08
Total		0.0638		127.6	0.0388	0.0049		

Operation Hours

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

PM2.5 Fugitive Dust Emissions for Modeling - With Project Construction Design Features

Construction Year	Construction Area	Area Source	Area (ton/year)	PM2.5 Emissions			Modeled Area (m ²)	PM2.5 Emission Rate g/s/m ²
				(lb/yr)	(lb/hr)	(g/s)		
2020	Building C	C_FUG	0.0271	54.2	0.01650	2.08E-03	7,702	2.70E-07
2021	Building C	C_FUG	0.0008	1.6	0.00048	6.06E-05	7,702	7.87E-09
2022	Building B	B_FUG	0.0284	56.8	0.01729	2.18E-03	9,423	2.31E-07
2023	Building B	B_FUG	0.0010	2.0	0.00061	7.75E-05	9,423	8.22E-09
2024	Building A	A_FUG	0.0283	56.6	0.01723	2.17E-03	9,003	2.41E-07
2025	Building A	A_FUG	0.0009	1.8	0.00055	6.98E-05	9,003	7.75E-09
Total			0.08651	173.0	0.0527	0.0066		

Operation Hours

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

**SSF PUC ECR, South San Francisco, CA - Summary of Maximum Health Impacts
at Off-Site Residential Receptors**

**Maximum Impacts at Construction Off-Site Residential MEI Location
- With Project Construction Design Features**

Emissions Year						
	Maximum Concentrations		Cancer Risk (per million)		Hazard Index	Maximum Annual PM2.5 Concentration
	Exhaust PM10/DPM (µg/m ³)	Fugitive PM2.5 (µg/m ³)				
			Infant/Child	Adult	(-)	(µg/m ³)
2020	0.0185	0.0251	3.3	0.05	0.004	0.04
2021	0.0023	0.0007	0.4	0.01	0.000	0.00
2022	0.0025	0.0100	0.1	0.01	0.001	0.02
2023	0.0003	0.0004	0.0	0.00	0.000	0.00
2024	0.0011	0.0456	0.0	0.00	0.000	0.07
2025	0.0001	0.0015	0.0	0.00	0.000	0.00
Maximum	0.0185	0.0456	-	-	0.004	0.07
Total	-	-	3.8	0.07	-	-

**SSF PUC ECR, South San Francisco, CA - Summary of Health Impacts
Building C - On-Site Residential Receptors**

**Maximum Impacts at Construction MEI Location
- With Project Construction Design Features**

Emissions Year						
	Maximum Concentrations		Cancer Risk (per million)		Hazard Index	Maximum Annual PM2.5 Concentration
	Exhaust PM10/DPM	Fugitive PM2.5				
	(µg/m ³)	(µg/m ³)	Infant/Child	Adult	(-)	(µg/m ³)
2022	0.0174	0.0328	3.1	0.05	0.003	0.05
2023	0.0024	0.0012	0.4	0.01	0.000	0.00
2024	0.0029	0.0050	0.1	0.01	0.001	0.01
2025	0.0004	0.0002	0.0	0.00	0.000	0.00
Maximum	0.0174	0.0328	-	-	0.003	0.05
Total	-	-	3.6	0.1	-	-

SSF PUC ECR, South San Francisco, CA - Summary of Health Impacts
Building B - On-Site Residential Receptors

Maximum Impacts at Construction MEI Location
- With Project Construction Design Features

Emissions Year						
	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM10/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)				
2024	0.0307	0.0573	5.5	0.09	0.006	0.09
2025	0.0040	0.0018	0.7	0.01	0.001	0.01
Maximum Total	0.0307 -	0.0573 -	- 6.1	- 0.1	0.006 -	0.09 -

SSF PUC ECR, South San Francisco, CA - Summary of Health Impacts
Building B - Day Care Infant Receptors

Maximum Impacts at Construction Day Care Site
- With Project Construction Design Features

Emissions Year					
	Maximum Concentrations		Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM10/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)			
2024	0.0050	0.0082	0.8	0.001	0.01
2025	0.0007	0.0003	0.1	0.000	0.00
Maximum Total	0.0050 -	0.0082 -	- 0.9	0.001 -	0.01 -

**SSF PUC ECR, South San Francisco, CA - Summary of Health Impacts
Kaiser Hospital Receptors**

**Maximum Impacts at Kaiser Hospital (2024-2025)
- With Project Construction Design Features***

Emissions Year						
	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM10/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)				
			Infant/Child	Adult		
2024	0.0065	0.0108	1.1	0.02	0.001	0.02
2025	0.0008	0.0004	0.1	0.00	0.000	0.00
Maximum	0.0065	0.0108	-	-	0.001	0.02
Total	-	-	1.3	0.0	-	-

* Assumes exposure begins in 2024

SSF PUC South San Francisco, CA

**Maximum DPM Cancer Risk Calculations From Construction - With Project Construction Design Features
Off-Site Residential Receptors (1.5 meter receptor heights)**

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

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)	Infant/Child - Exposure Information					Infant/Child		Adult - Exposure Information			Maximum	
		Age	DPM Conc (ug/m3)		Age	Cancer Risk (per million)	Modeled		Age	Cancer Risk (per million)			
			Year	Annual	Sensitivity Factor		Year	Annual	Sensitivity Factor				
0	0.25	-0.25 - 0*	2020	0.0185	10	0.25	2020	0.0185	1				
1	1	0 - 1	2020	0.0185	10	3.03	2020	0.0185	1	0.053	0.02514	0.0436	
2	1	1 - 2	2021	0.0023	10	0.38	2021	0.0023	1	0.007	0.00073	0.0031	
3	1	2 - 3	2022	0.0025	3	0.07	2022	0.0025	1	0.007	0.00996	0.0167	
4	1	3 - 4	2023	0.0003	3	0.01	2023	0.0003	1	0.001	0.00035	0.0013	
5	1	4 - 5	2024	0.0011	3	0.03	2024	0.0011	1	0.003	0.04558	0.0650	
6	1	5 - 6	2025	0.0001	3	0.00	2025	0.0001	1	0.000	0.00147	0.0040	
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						3.8				0.07			

* Third trimester of pregnancy

SSF PUC South San Francisco, CA

**Maximum DPM Cancer Risk Calculations From Construction - With Project Construction Design Features
Building C - On-Site Residential Receptors (1.5 meter receptor heights)**

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

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)	Maximum	
			DPM Conc (ug/m3)		Sensitivity Factor		Modeled		Age Sensitivity Factor		Fugitive PM2.5	Total PM2.5
			Year	Annual			DPM Conc (ug/m3)	Annual				
0	0.25	-0.25 - 0*	2022	0.0174	10	0.24	2022	0.0174	1			
1	1	0 - 1	2022	0.0174	10	2.86	2022	0.0174	1	0.050	0.03275	0.0501
2	1	1 - 2	2023	0.0024	10	0.39	2023	0.0024	1	0.007	0.00117	0.0036
3	1	2 - 3	2024	0.0029	3	0.08	2024	0.0029	1	0.008	0.00496	0.0079
4	1	3 - 4	2025	0.0004	3	0.01	2025	0.0004	1	0.001	0.00016	0.0005
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.000		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.000		
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						3.6				0.1		

* Third trimester of pregnancy

SSF PUC South San Francisco, CA

Maximum DPM Cancer Risk Calculations From Construction - With Project Construction Design Features
Building B - On-Site Residential Receptors (1.5 meter receptor heights)

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

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)	Infant/Child - Exposure Information				Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum	
		Age	DPM Conc (ug/m3)		Sensitivity Factor		Modeled		Age Sensitivity Factor			
			Year	Annual			DPM Conc (ug/m3)					
							Year	Annual				
0	0.25	-0.25 - 0*	2024	0.0307	10	0.42	2024	0.0307	1			
1	1	0 - 1	2024	0.0307	10	5.05	2024	0.0307	1	0.088	0.05731	0.0880
2	1	1 - 2	2025	0.0040	10	0.66	2025	0.0040	1	0.012	0.00184	0.0059
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.000		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.000		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.000		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.000		
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						6.1				0.1		

* Third trimester of pregnancy

SSF PUC South San Francisco, CA

Maximum DPM Cancer Risk Calculations From Construction

- With Project Construction Design Features

Daycare by Building B - On-Site Residential Receptors (1 meter receptor heights)

$$\text{Cancer Risk (per million)} = \text{CPF} \times \text{Inhalation Dose} \times \text{ASF} \times \text{ED/AT} \times \text{FAH} \times 1.0\text{E}6$$

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)

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

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

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

		Child - Exposure Information			Child
Exposure				Age*	Cancer
Exposure	Duration	DPM Conc (ug/m3)		Sensitivity	Risk
Year	(years)	Year	Annual	Factor	(per million)
1	1	2024	0.0050	10	0.8
2	1	2025	0.0007	10	0.1
Total					0.9

* Children assumed to be from 0 to 5 years of age

Maximum	
Fugitive	Total
PM2.5	PM2.5
0.0082	0.013
0.0003	0.001

SSF PUC South San Francisco, CA

**Maximum DPM Cancer Risk Calculations From Construction - With Project Construction Design Features
Kaiser Hospital Residential Receptors (1.5 meter receptor heights)**

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

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)	Maximum	
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor		Fugitive PM2.5	Total PM2.5
			Year	Annual			DPM Conc (ug/m3)	Sensitivity				
0	0.25	-0.25 - 0*	2024	0.0065	10	0.09	2024	0.0065	1			
1	1	0 - 1	2024	0.0065	10	1.06	2024	0.0065	1	0.019	0.01079	0.0172
2	1	1 - 2	2025	0.0008	10	0.14	2025	0.0008	1	0.002	0.00035	0.0012
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29	0.0000	1	0.00	0.0000	1	0.00				
30	1	29-30	0.0000	1	0.00	0.0000	1	0.00				
Total Increased Cancer Risk						1.3				0.0		

* Third trimester of pregnancy