

CERES COMMUNITY PROJECT AIR QUALITY & GREENHOUSE GAS IMPACTS ASSESSMENT

Santa Rosa, California

October 10, 2022

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Introduction

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with the proposed food production facility located on Apollo Way, in the Northpoint Commercial Center business park, in Santa Rosa, California. The air quality impacts and GHG emissions from this project would be associated with construction of the new building and associated parking lot(s) and trips generated by the operation of the facility. Air pollutant and GHG emissions associated with construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impacts, as well as the impact of existing toxic air contaminant (TAC) sources affecting the existing nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).¹ BAAQMD recommends using a 1,000-foot screening radius around the project site for purposes of identifying community health risk from existing sources of TACs.

Project Description

The project is located on an approximately 1.5-acre property in the Northpoint Commercial Center business park and would construct a new food production facility totaling approximately 18,000 square feet, consisting of 13,000 square feet of culinary operations and 5,000 square feet of administrative offices. The majority of administrative offices will be located on the building's second floor, with other offices provided on the ground floor for accessibility. The food production equipment would be all-electric. The building would include photovoltaic panels for grid-tied electrical system and use a propane generator and batteries for back-up power. This project would also construct approximately 45 on-site parking spaces.

Setting

The project is located in Sonoma County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}).

Air Pollutants of Concern

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

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5

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

micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality. 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 and/or acute 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. Health risks from TACs are estimated using the Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines, which were published in February of 2015.² See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Regulatory Setting

Federal Regulations

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

In the past decade, the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_x and particulate matter (PM_{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

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

NO_x emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.³

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

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

State Regulations

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

CARB has adopted and implemented a number of additional 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, CARB's program 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-

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

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

averaged emission rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_x.

Bay Area Air Quality Management District (BAAQMD)

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

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

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.⁵ The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. The BAAQMD has identified six such communities: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. Therefore, the project site is not within a CARE area.

Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.⁶ The project area is not within a BAAQMD overburdened area nor within 1,000 feet of any such census tract.

The BAAQMD California Environmental Quality Act (CEQA) *Air Quality Guidelines*⁷ were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the

⁵ See BAAQMD: <https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program> , accessed 10/03/2022.

⁶ See BAAQMD: https://www.baaqmd.gov/~/_media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofverburdenedcommunities-pdf.pdf?la=en , accessed 10/3/2022.

⁷ Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with California Environmental Quality Act (CEQA) requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for TACs, odors, and greenhouse gas (GHG) emissions.

City of Santa Rosa 2035 General Plan

The Santa Rosa 2035 General Plan includes goals, policies, and actions to reduce exposure of the City's sensitive population to exposure of air pollution, toxic air contaminants, and GHG emissions. The following goals, policies, and actions are applicable to the proposed project:

Air Quality

- OSC-J-1: Review all new construction projects and require dust abatement actions as contained in the CEQA Handbook of the Bay Area Air Quality Management District.

- OSC-J-3: Reduce particulate matter emissions from wood burning appliances through implementation of the city's Wood Burning Appliance code.

Sensitive Receptors

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

Significance Thresholds

The current BAAQMD thresholds were used in this analysis and are summarized in Table 1. Impacts above these thresholds are considered potentially significant. 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 significance thresholds. In 2022, BAAQMD revised its GHG thresholds, eliminating quantified emissions limits. The latest BAAQMD significance thresholds used in this analysis are summarized in Table 1. Air quality impacts and community health risks are considered significant if they exceed these thresholds.

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1000-foot zone of influence)	
Excess Cancer Risk	>10 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual PM _{2.5}	>0.3 µg/m ³	>0.8 µg/m ³	
Greenhouse Gas Emissions			
Land Use Projects – (Must Include A or B)	<p>A. Projects must include, at a minimum, the following project design elements:</p> <ol style="list-style-type: none"> 1. Buildings <ol style="list-style-type: none"> a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development). b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. 2. Transportation <ol style="list-style-type: none"> a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor’s Office of Planning and Research’s Technical Advisory on Evaluating Transportation Impacts in CEQA: <ol style="list-style-type: none"> i. Residential projects: 15 percent below the existing VMT per capita ii. Office projects: 15 percent below the existing VMT per employee iii. Retail projects: no net increase in existing VMT b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2. <p>B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).</p>		
<p>Note: ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = coarse 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.</p>			

AIR QUALITY IMPACTS AND MITIGATION MEASURES

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

BAAQMD is the regional agency responsible for overseeing compliance with State and Federal laws, regulations, and programs within the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD, with assistance from the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), prepares and implements specific plans to meet the applicable laws, regulations, and programs. The most recent and comprehensive of which is the *Bay Area 2017 Clean Air Plan*.⁸ The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality and GHG impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which, in turn, affects region-wide emissions of air pollutants and GHGs.

The 2017 Clean Air Plan, adopted by BAAQMD in April 2017, includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Guidance provided in the BAAQMD CEQA guidelines recommends that Plans show consistency with the control measures listed within the Clean Air Plan. At the project-level, BAAQMD's CEQA guidance examines whether a project supports the Clean Air Plan's primary goals: (1) attain air quality standards, (2) reduce population exposure and protecting public health in the Bay Area; and (3) reduce GHG emissions and protect the climate. The proposed project would not conflict with the latest Clean Air planning efforts since 1) project would have emissions below the BAAQMD thresholds (see Impact below), 2) the project would be considered urban infill as it develops an area previously analyzed and approved to be an active industrial land use and would not adversely affect public health in the Bay Area, and 3) would not result in a significant impact on climate change.

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

The Bay Area is considered a non-attainment area for ground-level O₃ and PM_{2.5} under both the NAAQS and the CAAQS. The area is also considered non-attainment for PM₁₀ under the CAAQS, but not the NAAQS. The area has attained both State and Federal ambient air quality standards for carbon monoxide (CO). As part of an effort to attain and maintain ambient air quality standards for O₃, PM_{2.5} and PM₁₀, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. The O₃ precursor pollutant thresholds are for ROG and NO_x, while PM₁₀ and PM_{2.5} have specific thresholds. The thresholds apply to both construction period and operational period emissions.

⁸ Bay Area Air Quality Management District (BAAQMD), 2017. *Final 2017 Clean Air Plan*.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CARB Emission FACTors 2021 (EMFAC2021) model was used to predict emissions from construction traffic, which includes worker travel, vendor trucks, and haul trucks.⁹ The CalEEMod model output along with construction inputs are included in *Attachment 2* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 3*.

CalEEMod Modeling

Land Use Inputs

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

Table 2. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
General Light Industry	18.0	1,000 sq ft	18,000	1.5
Parking Lot	45	Spaces	20,970	

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario was based on a construction start date supplied by the project applicant and CalEEMod model default schedule for each phase, the quantity of equipment to be used, the average hours per day of each piece of equipment, and total number of workdays (included in *Attachment 2*). A construction start date of March 25, 2024 was provided by the applicant and CalEEMod defaults provided a ten-month schedule, or 229 construction workdays. The earliest year of full operation was assumed to be 2025.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on an estimate of soil material imported and/or exported to the site and the estimate of concrete and asphalt truck trips provided by the applicant. CalEEMod provides daily estimates of worker and vendor trips for each applicable construction phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for grading were estimated from the anticipated soil import/export volumes by assuming each truck could carry 10 tons per load. The volume of concrete and asphalt for the project by the applicant and total haul trips were estimated by assuming each truck could carry 10 tons per load.

⁹ See CARB's EMFAC2021 Emissions Inventory at <https://arb.ca.gov/emfac/emissions-inventory>.

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2017 motor vehicle emission factor model. This model has been superseded by the EMFAC2021 model. However, CalEEMod has not been updated to include EMFAC2021. Therefore, the construction traffic information was combined with EMFAC2021 motor vehicle emissions factors. EMFAC2021 provides aggregate emission rates in grams per mile for each vehicle type. The vehicle mix for construction trips was based on CalEEMod default assumptions, where worker trips are comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1 and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, including concrete trucks, are comprised of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips and 20 miles for hauling (soil import/export). Since CalEEMod does not seem to address concrete/asphalt truck deliveries, these were treated as vendor travel distances. Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On road emissions in Sonoma County for 2024 was used in these calculations. Table 3 provides the traffic inputs that were combined with the EMFAC2021 emission database to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2021 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker ¹	Total Vendor ¹	Total Haul ²	
Vehicle mix ¹	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0	CalEEMod default distance with 5-min truck idle time.
Demolition	-	-	-	No demolition.
Site Preparation	16	-	38	300 cy soil exported. CalEEMod default worker trips.
Grading	40	-	-	CalEEMod default worker trips.
Trenching/Foundation	32	-	18	900 cy concrete. CalEEMod default worker trips.
Building Construction	3,200	1,200	44	220 cy concrete. CalEEMod default worker and vendor trips.
Architectural Coating	30	-	-	CalEEMod default worker trips.
Paving	130	-	98	490 cy of concrete/asphalt. CalEEMod default worker trips.

Notes: ¹ Based on 2024 EMFAC2021 light-duty vehicle fleet mix for Sonoma County.
² Trips estimated based on data provided by the applicant.

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions and dividing those emissions by the number of active workdays during that year. Table 4 shows the annualized average daily construction emissions of ROG, NO_x, PM₁₀

exhaust, and PM_{2.5} exhaust during construction of the project. As indicated in Table 4, predicted annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 4. Construction Period Emissions

Year	ROG	NO _x	PM ₁₀ Exhaust	PM _{2.5} Exhaust
<i>Construction Emissions Per Year (Tons)</i>				
2024	0.15	1.17	0.05	0.05
2025	0.11	0.07	<0.01	<0.01
<i>Average Daily Construction Emissions Per Year (pounds/day)</i>				
2024 (203 construction workdays)	1.47	11.48	0.47	0.45
2025 (26 construction workdays)	8.20	5.17	0.22	0.20
<i>BAAQMD Thresholds (pounds per day)</i>	54 lbs./day	54 lbs./day	82 lbs./day	54 lbs./day
Exceed Threshold?	No	No	No	No

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 mitigate these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices.*

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

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

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Mitigation Measure AQ-1

The measures above are consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines. With the *BAAQMD-recommended best management practices* implemented by *Mitigation Measure AQ-1*, the impacts from fugitive PM₁₀ and PM_{2.5} dust would be *less-than-significant*.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by employees and/or volunteers and from food delivery vehicles. Evaporative ROG emissions from architectural coatings and consumer products are also associated with these types of projects. The project would also generate odors associated with cooking large amounts of food. However, all the appliances in the kitchen would be electric and no char broilers would be installed. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

CalEEMod Inputs

Land Uses

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

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest year of full operation would be 2025 if construction begins in 2024. Emissions associated with build-out later than 2025 would be lower.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates for land use types. Typically, the Institute of Transportation Engineers (ITE) trip generation rates are used to estimate traffic for development projects using the amount of the proposed land uses. In this case, the land use used for the analysis (i.e., general industrial) does not provide the most accurate estimate of traffic for the site. Given the unique nature of the project's operation, trip generation was estimated based on the pattern experienced at four existing sites with the same basic operation. Two of these sites are in Sebastopol, one is on Summerfield Road in Santa Rosa, and the fourth is in Novato. Daily vehicle arrivals and departures were counted including an assumed one-truck-per-day delivery bringing food and other supplies to the site. Based on this information, the proposed project is expected to generate an average of 222 trips per day. This rate was input into CalEEMod by dividing daily trips by the square-footage of the proposed project. Saturday and Sunday trip rates were assumed to be the same as weekday rates. The default trip lengths and trip types specified by CalEEMod were used.

EMFAC2021 Adjustment

CalEEMod Version 2020.4.0 uses vehicle emission factors and fleet mix from CARB's EMFAC2017 model. EMFAC2021 became available for use in January 2021 and includes the latest emissions factors for California's car and truck fleets based on updated travel activity. It replaces EMFAC2017. Therefore, CalEEMod emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2021. On-road emission factors from Sonoma County in 2025 were used (See *Attachment 3*). More details about the updated emissions factors used can be found in the EMFAC2021 Technical Support Document.¹⁰

Energy

CalEEMod Version 2020.4.0 defaults for energy use were used, which include the 2019 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. This version of CalEEMod has a default emission factor of 120 pounds of CO₂ per megawatt of electricity produced, which is based on Sonoma Clean Power's 2019 emissions rate.

Other Inputs

Model default assumptions for solid waste emissions were applied to the project. However, the split between wastewater treatment types was changed to 100% aerobic conditions to represent the use of city sewer services.

Existing Uses

The majority of the site is vacant land owned by the applicant. Given the minimal emissions use of the existing site, a CalEEMod model run was not developed to compute emissions from the use of the existing land.

¹⁰ See CARB 2021: <https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac>

Summary of Computed Operational Period Emissions

Annual emissions were predicted using CalEEMod Version 2020.4.0. The daily emissions were estimated assuming 365 days of operation. Table 5 shows average daily emissions of ROG, NO_x, total PM₁₀, and total PM_{2.5} during operation of the project. The operational period emissions would not exceed the BAAQMD significance thresholds.

Table 5. Operational Period Emissions

Scenario	ROG	NO_x	PM₁₀	PM_{2.5}
2025 Project Operational Emissions (<i>tons/year</i>)	0.20	0.20	0.23	0.06
<i>BAAQMD Thresholds (tons /year)</i>	<i>10 tons</i>	<i>10 tons</i>	<i>15 tons</i>	<i>10 tons</i>
<i>Exceed Thresholds?</i>	No	No	No	No
2025 Project Operational Emissions (<i>lbs./day</i>) ¹	1.12	1.14	1.25	0.33
<i>BAAQMD Thresholds (lbs./day)</i>	<i>54 lbs.</i>	<i>54 lbs.</i>	<i>82 lbs.</i>	<i>54 lbs.</i>
<i>Exceed Threshold?</i>	No	No	No	No

Notes: ¹ Assumes 365-day operation.

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

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

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would not include the installation of any stationary TAC emissions sources (i.e., diesel-powered generators). Traffic generated by the project would consist of light-duty gasoline-powered vehicles along with medium duty trucks, which would produce TAC and air pollutant emissions.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There is also one existing stationary source of TAC emissions in addition to the adjacent local roadways in the vicinity of the project. The impact of these existing sources of TAC was also assessed in terms of the cumulative risk which includes the project contribution.

Community Risk Methodology for Construction and Operation

Community risk impacts 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 risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-

year exposure period was used, per BAAQMD guidance,¹¹ with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

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

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

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This includes the existing residences to the east and north of the site, as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions.

Community Health Risk from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust emissions (i.e., DPM) 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}. DPM poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and PM_{2.5}.¹² This assessment included dispersion modeling to predict the offsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod and EMFAC2021 models provided total annual PM₁₀ exhaust emissions (assumed to be all DPM) and fugitive dust emissions (PM_{2.5}) for the off-road construction activities, equipment, and exhaust emissions from on-road vehicles. On-road vehicle emissions are a result of haul truck travel, worker travel, and vendor deliveries during construction. A trip length of a half-mile was used to represent vehicle travel while at or near the construction site based on the size of the construction area. For analysis purposes, it was assumed emissions from on-road

¹¹ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

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

vehicles traveling at or near the site would occur onsite. The emissions used for the modeling of health risk impacts are included in *Attachment 4*.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM_{2.5} concentrations at sensitive receptors in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.¹³ Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive PM_{2.5} dust emissions.

Construction Sources

Both equipment exhaust emissions and fugitive dust emissions were modeled as two area sources to represent the on-site construction emissions, one for exhaust emissions and one for fugitive dust emissions. The area source representing construction equipment exhaust emissions has a release height of 19.7 feet (6 meters) to reflect the height of the equipment exhaust pipes plus an additional distance. The additional distance for the height of the exhaust plume above the exhaust pipes accounts for plume rise of the exhaust gases. Emissions from the construction equipment, on-site, and off-site vehicle travel were distributed throughout the modeled area sources.

Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a release height of 6.6 feet (2 meters) was used as the average release height across the construction site. Figure 1 shows the locations of both the area sources used in the analysis.

AERMOD Inputs and Meteorological Data

AERMOD used a five-year data set (2013 - 2017) of hourly meteorological data from the Sonoma County Airport in Santa Rosa prepared for use with the AERMOD model by BAAQMD. Construction emissions were modeled as occurring daily between 7:00 a.m. to 5:00 p.m., when the majority of construction activity is expected to occur. Annual DPM and PM_{2.5} concentrations from construction activities during the 2024-2025 period were calculated using the model. DPM and PM_{2.5} concentrations were calculated at nearby sensitive receptors. Receptor heights of 5 feet (1.5 meters) were used to represent the breathing height of nearby single-family residences.¹⁴

Summary of Construction Community Risk Impacts

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

¹⁴ Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May. Web: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en>

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

The maximum modeled annual PM_{2.5} concentration was calculated based on combined exhaust and fugitive dust concentrations. The maximum computed HI value was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation reference exposure level of 5 µg/m³.

The maximum modeled annual DPM and PM_{2.5} concentrations were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEI). Results of this assessment indicated that the construction MEI was located at the single-family home east of the construction project site. The unmitigated maximum cancer risks, annual PM_{2.5} concentration, and non-cancer hazards at the MEI from project construction activities would be below the single-source significance thresholds. Table 6 summarizes the maximum cancer risks, PM_{2.5} concentrations, and HIs for project related construction activities affecting the construction MEI. *Attachment 4* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Figure 1. Locations of Project Construction Site, Construction Emissions Sources, Off-Site Sensitive Receptors, and Maximum TAC Impact

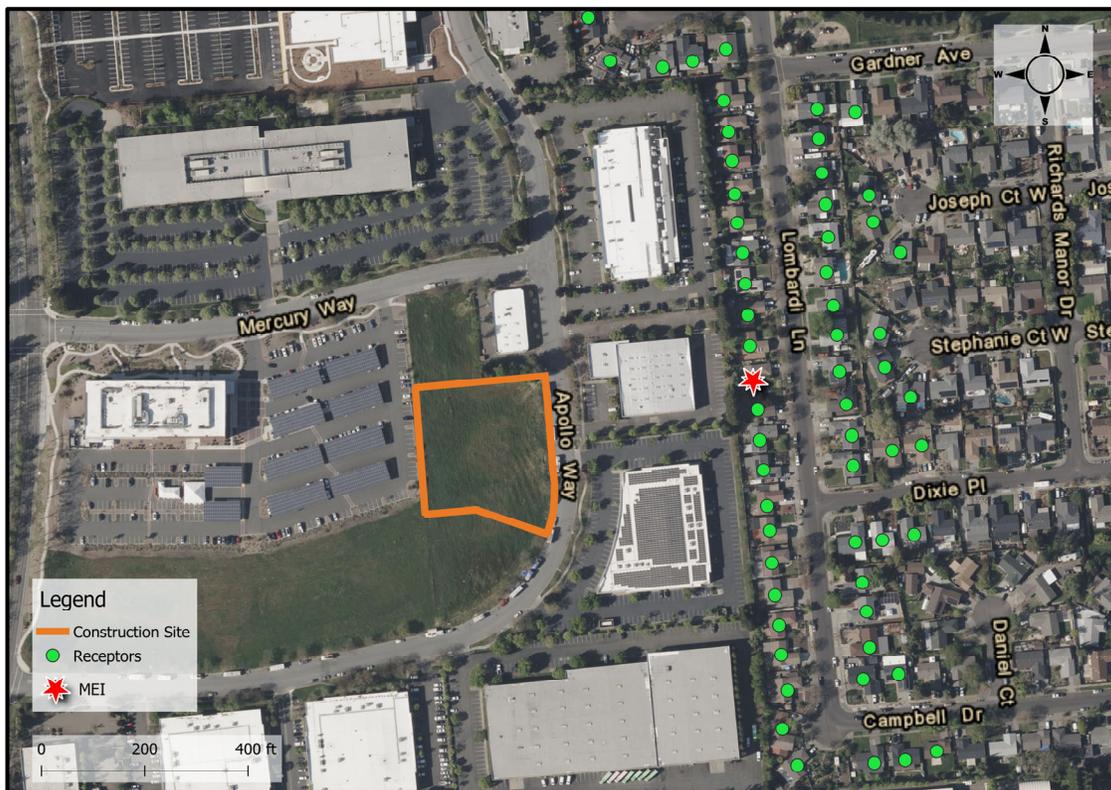


Table 6. Construction Risk Impacts at the Off-site MEI

Source	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
Project Construction	5.56 (infant)	0.04	<0.01
<i>BAAQMD Single-Source Threshold</i>	<i>10</i>	<i>0.3</i>	<i>1.0</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>

Community Health Risk from Project Operation

Health risks associated with project operation are typically associated with proposed new stationary sources of emissions (i.e., diesel-powered emergency generators) and increases in vehicle traffic to and from the site, in particular heavy-duty diesel truck traffic. The project would not include any new diesel-powered emergency generators but would include a propane generator for back-up power. The propane generator would not be considered a source of TAC emissions. Therefore, the only potential new emissions sources associated with operation of the project would be from vehicle traffic increases to and from the site.

The traffic study prepared for the proposed project estimated the number of new trips generated by the project to be approximately 222, based on vehicle counts at four existing sites with the same basic operation.¹⁵ The majority of these trips would be employee or volunteer-generated resulting in emissions from light-duty gasoline vehicles. Therefore, the amount of DPM and/or PM_{2.5} emissions from these trips would be negligible when compared to the volume of traffic using nearby local roadways. As a result, health risks associated with the project-related traffic increases would also be negligible.

For the reasons described above, health risks associated with operation of the project are estimated to be negligible compared to the risks associated with project construction and those associated with existing sources of TAC pollution in the area.

Community Health Risk from Project

The project's overall health risks are those associated with both construction and operation. Since there are negligible TAC emissions associated with operation of the project, the project's overall health risks are equal to those of project construction. Table 6 provides the project's health risks. The unmitigated maximum cancer risks, annual PM_{2.5} concentration, and non-cancer hazards at the MEI from project construction activities would be below the BAAQMD's single-source significance thresholds.

Cumulative Community Risks of all TAC Sources at the Offsite Project MEI

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site (i.e., influence area). These sources include rail lines, highways, busy surface streets, and stationary sources permitted by BAAQMD. Figure 2 shows the project area included within the influence area and the location of the MEI.

¹⁵ W-Trans. 2022. *Preliminary Transportation Impact Study for the Ceres Community Project*. September 1.

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



A review of the area found no local roadways with daily traffic exceeding 10,000 vehicles per day. Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicle per day is considered a low-impact source of TACs and do not need to be considered in the CEQA analysis.¹⁶

Permitted stationary sources of air pollution near the project site were identified using BAAQMD’s *Permitted Stationary Sources 2020* geographic information systems (GIS) website,¹⁷ which identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. A review of BAAQMD’s stationary source GIS map tool identified one (1) stationary source with the potential to affect the MEI, a diesel-fueled emergency power generator. The risk values provided by the website were adjusted for distance using the appropriate BAAQMD *Distance Multiplier Tool for Diesel Internal Combustion Engines*. Community risk impacts from the one stationary source upon the MEI are reported in Table 7. The distance adjustments and website report are provided in *Attachment 5*.

Table 7. Impacts from Combined Sources at Project MEI

Source	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
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¹⁶ Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May. Web: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en>

¹⁷ BAAQMD, <https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65>

Project Construction Impacts			
Project	5.56 (infant)	0.04	<0.01
<i>BAAQMD Single-Source Threshold</i>	<i>10</i>	<i>0.3</i>	<i>1.0</i>
<i>Exceed Single Source Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>
Cumulative Impacts			
Facility 16184 (Generator)	0.40	<0.01	<0.01
Cumulative Total	5.96	<0.05	<0.02
<i>BAAQMD Cumulative Source Threshold</i>	<i>100</i>	<i>0.8</i>	<i>10.0</i>
<i>Exceed Cumulative Source Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>

The project would not exceed the BAAQMD single-source thresholds for cancer risk, annual PM_{2.5} concentration, or HI. Additionally, the cumulative impact of the project considering existing sources of DPM and PM_{2.5} would not exceed the BAAQMD cumulative source thresholds. Thus, the health risk impacts associated with the proposed project are estimated to be less-than-significant.

Impact AIR-4: Create objectionable odors affecting a substantial number of people?

BAAQMD’s Regulation 7: Odiferous Substances generally apply to both restaurants and commercial kitchens. This regulation prohibits discharge of any odorous substance that causes the ambient air at or beyond the property line to be odorous and to remain odorous after dilution with four parts of odor-free air. The significance of odor impacts is based on the potential to cause odor complaints.

Commercial kitchens can produce noticeable odors through the preparation of food. In particular, char broilers and deep fryers tend to produce odors that can be offensive to some people and generate complaints. The project would not include any char broilers but may include electric fryers. Odor impacts could occur if residents associated with the project experienced objectionable odors and made complaints. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative methodologies to determine the presence of a significant odor impact.

The closest existing resident to the proposed restaurant is about 418 feet to the east of the project. Winds in the area generally blow from the south-southeast (based on wind data from Santa Rosa Airport). Therefore, it’s estimated that the project would not create objectional odors that would affect the existing receptors.

There are a number of measures that kitchens can incorporate into their exhaust systems to eliminate or reduce odors so that complaints do not occur. Odors can be effectively controlled with the installation of activated carbon filters/scrubber units or ultraviolet oxidation units in the exhaust systems of cooking equipment, including ovens, griddles, and stove tops. However, odor controls are not 100 percent effective at removing all the odor, so it is recommended that the discharge location for the exhaust system be placed in the least offensive location possible to minimize issues from odor.

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, CH₄, 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.

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2022, total gross nationwide GHG emissions were 5,215.6 million metric tons (MMT) carbon dioxide equivalent (CO₂e).¹⁸ These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission

¹⁸ United States Environmental Protection Agency, 2022. *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2020*. February. Web: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

inventory on an annual basis where the latest inventory includes 2000 through 2019 emissions.¹⁹ In 2019, GHG emissions from statewide emitting activities were 418.2 MMT CO₂e. The 2019 emissions have decreased by 30 percent since peak levels in 2007 and are 7.2 MMT CO₂e lower than 2018 emissions level and almost 13 MMT CO₂e below the State's 2020 GHG limit of 431 MMT CO₂e. Per capita GHG emissions in California have dropped from a 2001 peak of 14.0 MT CO₂e per person to 10.5 MT CO₂e per person in 2019.

Recent Regulatory Actions for GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 – California Global Warming Solutions Act (2006)

Assembly Bill (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, which has a target of reducing GHG emissions 80 percent below 1990 levels.

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.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO₂e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO₂e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO₂e. Thus, an estimated reduction of 80 MMT of CO₂e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

¹⁹ CARB. 2021. *California Greenhouse Gas Emission for 2000 to 2019*. Web: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a GHG emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (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*.²⁰ 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.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB has drafted a 2022 Scoping Plan Update to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The 2022 draft plan:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 or earlier.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as a driving principle.
- Incorporates the contribution of natural and working lands to the state's GHG emissions, as well as its role in achieving carbon neutrality.
- Relies on the most up to date science, including the need to deploy all viable tools, including carbon capture and sequestration as well a direct air capture.
- Evaluates multiple options for achieving our GHG and carbon neutrality targets, as well as the public health benefits and economic impacts associated with each.

The draft Scoping Plan Update was published on May 10, 2022 and circulated for public comment on June 24, 2022. Once final, the 2022 Scoping Plan Update will lay out how the state can get to carbon neutrality by 2045 or earlier. It is also the first Scoping Plan that adds carbon neutrality as a science-based guide and touchstone beyond statutorily established emission reduction targets.²¹

The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The 2022 Draft Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and to not only obtain the statewide goals, but cost-effectively achieve carbon-neutrality by 2045 or earlier. In the draft 2022 Scoping Plan, CARB recommends:

- VMT per capita reduced 12% below 2019 levels by 2030 and 22% below 2019 levels by 2045.

²⁰ California Air Resource Board, 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets*. November. Web:

https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf

²¹ <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>

- 100% of Light-duty vehicle sales are zero emissions vehicles (ZEV) by 2035.
- 100% of medium duty/heavy duty vehicle sales are ZEV by 2040.
- 100% of passenger and other locomotive sales are ZEV by 2030.
- 100% of line haul locomotive sales are ZEV by 2035.
- All electric appliances in new residential and commercial building beginning 2026 (residential) and 2029 (commercial).
- 80% of residential appliance sales are electric by 2030 and 100% of residential appliance sales are electric by 2035.
- 80% of commercial appliance sales are electric by 2030 and 100% of commercial appliance sales are electric by 2045.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal. The 2022 Scoping Plan Update addresses EO B-55-18 and would cost-effectively achieve carbon-neutrality by 2045 or earlier.

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.

Senate Bill 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.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California's RPS program goals, furthering California's focus on using renewable energy and carbon-free power sources for

its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of retail energy sales would need to be from renewable sources, by December 31, 2026 the target would be 40 percent, by December 31, 2027 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.²² The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1, 2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.²³

CEC studies have identified the most aggressive electrification scenario as putting the building sector on track to reach the carbon neutrality goal by 2045.²⁴ Installing new natural gas infrastructure in new buildings will interfere with this goal. To meet the State’s goal, communities have been adopting “Reach” codes that prohibit natural gas connections in new and remodeled buildings.

Requirements for electric vehicle (EV) charging infrastructure are set forth in Title 24 of the California Code of Regulations and are regularly updated on a 3-year cycle. The CALGreen standards consist of a set of mandatory standards required for new development, as well as two more voluntary standards known as Tier 1 and Tier 2. The CalGreen standards have recently been updated (2022 version) to require deployment of additional EV chargers in various building types, including multifamily residential and nonresidential land uses. They include requirements for both EV capable parking spaces and the installation of Level 2 EV supply equipment for multifamily residential and nonresidential buildings. The 2022 CALGreen standards include requirements for both EV readiness and the actual installation of EV chargers. The 2022 CALGreen standards

²² See: <https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%20Din,to%201990%20levels%20by%202020.>

²³ See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

²⁴ California Energy Commission. 2021. *Final Commission Report: California Building Decarbonization Assessment*. Publication Number CEC-400-2021-006-CMF. August

include both mandatory requirements and more aggressive voluntary Tier 1 and Tier 2 provisions. Providing EV charging infrastructure that meets current CALGreen requirements will not be sufficient to power the anticipated more extensive level of EV penetration in the future that is needed to meet SB 30 climate goals.

SB 743 Transportation Impacts

Senate Bill 743 required lead agencies to abandon the old “level of service” metric for evaluating a project’s transportation impacts, which was based solely on the amount of delay experienced by motor vehicles. In response, the Governor’s Office of Planning and Research (OPR) developed a VMT metric that considered other factors such as reducing GHG emissions and increasing multimodal transportation²⁵. A VMT-per-capita metric was adopted into the CEQA Guidelines Section 15064.3 in November 2017. Given current baseline per-capita VMT levels computed by CARB in the 2030 Scoping Plan of 22.24 miles per day for light-duty vehicles and 24.61 miles per day for all vehicle types, the reductions needed to achieve the 2050 climate goal are 16.8 percent for light-duty vehicles and 14.3 percent for all vehicle types combined. *Based on this analysis (as well as other factors), OPR recommended using a 15-percent reduction in per capita VMT as an appropriate threshold of significance for evaluating transportation impacts.*

Advanced Clean Cars Program I and II

The *Advanced Clean Cars Program I*, originally adopted by CARB in 2012, was designed to bring together CARB’s traditional passenger vehicle requirements to meet federal air quality standards and also support California’s AB 32 goals to develop and implement programs to reduce GHG emissions back down to 1990 levels by 2020, a goal achieved in 2016 as a result of numerous emissions reduction programs.

Advanced Clean Cars II is phase two of the original rule. It establishes a year-by-year process, starting in 2026, so all new cars and light trucks sold in California will be zero-emission vehicles by 2035, including plug-in hybrid electric vehicles. The regulation codifies the light-duty vehicle goals set out in Governor Newsom’s Executive Order N-79-20. Currently, 16 percent of new light-duty vehicles sold in California are zero emissions or plug-in hybrids. By 2030, 68 percent of new vehicles sold in California would be zero emissions and 100 percent by 2035.

City of Santa Rosa

2035 General Plan: Greenhouse Gas Appendix

The following greenhouse gas emission reduction goals and policies from the Santa Rosa General Plan 2035 are applicable to the proposed project.

Land Use and Livability:

LUL-G-1 Develop the following areas as mixed-use centers (see General Plan Land Use diagram): South of Hearn Avenue, at Dutton Meadow Avenue, West of Corporate

²⁵ Governor’s Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December.

Center Parkway, at Northpoint Parkway, Piner Road at Marlow Road, and Petaluma Hill Road, at Yolanda Avenue.

Open Space and Conservation:

- OSC-J Take appropriate actions to help Santa Rosa and the larger Bay Area region achieve and maintain all ambient air quality standards.

- OSC-J-1 Review all new construction projects and require dust abatement actions as contained in the CEQA Handbook of the Bay Area Air Quality Management District.

- OSC-J-3 Reduce particulate matter emissions from wood burning appliances through implementation of the city's Wood Burning Appliance code.

- OSC-M Reduce Greenhouse Gas Emissions.

- OSC-M-1 Meet local, regional, and state targets for reduction of greenhouse gas emissions through implementation of the Climate Action Plan.

City of Santa Rosa Climate Action Plan

Adopted by the City of Santa Rosa on June 5, 2012, the Climate Action Plan²⁶ (CAP) is a document that presents measures that will reduce local GHG measures that will meet state, regional, and local reduction targets. The CAP focuses on three target years: 2015, 2020, and 2035. The 2015 year was to determine if the City could meet the reduction target of 25% below 1990 levels by 2015. The 2020 year is included for consistency with AB 32 targets, while a 2035 GHG emission forecast was developed to be consistent with the 2035 General Plan. The City includes several reduction measures that apply to a variety of sectors within the CAP to help sources of GHGs reduce their emissions in a multitude of ways.

The City's CAP follows both the State CEQA Guidelines and BAAQMD's guidelines by incorporating the standard elements of a Qualified GHG Reduction Strategy. Standard elements include measures and performance standards which demonstrates with that when implemented on a project-by-project basis, the measures would collectively achieve specified emissions levels. The GHG reduction measures included in the CAP demonstrate the City's ability to reach its GHG reduction targets.

The Santa Rosa CAP demonstrates that it would meet the anticipated State 2030 GHG emissions reductions targets. If a project can demonstrate consistency with the Santa Rosa CAP, its impacts related to GHG emission by year 2030 would be considered less than significant and fully consistent with State GHG emissions reduction requirements, with no need to quantify project-specific emission. This is consistent with BAAQMD guidelines related to the analysis of projects under the 2020 GHG emissions reduction targets, as applied to the updated 2030 targets.

²⁶ Climate Action Plan City of Santa Rosa; June 5, 2012. <https://srcity.org/DocumentCenter/View/10762/Climate-Action-Plan-PDF?bidId=>

Additionally, the CAP includes the New Development Checklist (Appendix E in the CAP) to ensure that all new development projects are compliant with the City's CAP measures. If a new development complies with the CAP, then the new development would be found to have a less-than-significant impact for GHG emissions. *Attachment 6* provides the City of Santa Rosa's New Development Checklist.

Declaration of a Climate Emergency and Immediate Emergency Mobilization to Restore a Safe Climate

On January 14, 2020, the Santa Rosa City Council adopted a resolution endorsing the declaration of a climate emergency and immediate emergency mobilization to restore a safe climate (Resolution No. Res-2020-002). The City joins a nationwide call for a just transition away from fossil fuels and joins efforts to mobilize efforts to enact policies that reduce GHG emissions. The City will contribute to the development of a countywide 2030 Climate Emergency Mobilization Strategy that focuses on identifying key local actions, including a ten-year Emergency Policy Package to prioritize a short list of the most impactful local policies that will drive changes and identify key areas for state level advocacy.

BAAQMD GHG Significance Thresholds

On April 20, 2022, BAAQMD adopted new thresholds of significance for operational GHG emissions from land use projects for projects beginning the CEQA process. The following framework is how BAAQMD will determine GHG significance moving forward.²⁷ Note BAAQMD intends that the thresholds apply to projects that begin the CEQA process after adoption of the thresholds, unless otherwise directed by the lead agency. The new thresholds of significance are:

- A. Projects must include, at a minimum, the following project design elements:
 - a. Buildings
 - i. The project will not include natural gas appliances or natural gas plumbing (in both residential and non-residential development).
 - ii. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
 - b. Transportation
 - i. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
 - 1. Residential Projects: 15 percent (16.8 percent in Petaluma) below the existing VMT per capita
 - 2. Office Projects: 15 percent (16.8 percent in Petaluma) below the existing VMT per employee

²⁷ Justification Report: BAAQMD CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Project and Plans. Web: https://www.baaqmd.gov/~/_media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf?la=en

- 3. Retail Projects: no net increase in existing VMT
 - ii. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

Any new land use project would have to include either section A or B from the above list, not both, to be considered in compliance with BAAQMD’s GHG thresholds of significance. The City of Santa Rosa has adopted a GHG reduction strategy that meets the CEQA. Therefore, the project is considered less-than-significant if it completes and complies with the New Development Checklist provided in Attachment 6.

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

The proposed building would be constructed in conformance with CALGreen and the Title 24 Building Code, which requires high-efficiency water fixtures, water-efficient irrigation systems, and compliance with current energy efficacy standards. Additionally, the project must complete the City’s New Development Checklist to demonstrate compliance with its Climate Action Plan.

Considering Section A of the BAAQMD GHG thresholds:

Buildings:

- i. The project will not include natural gas appliances or natural gas plumbing (in both residential and non-residential development).

Project Conforms – the project will not include natural gas appliances. It will utilize electric appliances only.

- ii. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

Project Conforms – the Project would meet CALGreen Building Standards Code requirements that are considered to be energy efficient It is also subject to the City’s New Development Checklist to demonstrate compliance with the City’s CAP.

Transportation:

- i. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target.

Project Conforms – The proposed project is an employment-based land use for which the City of Santa Rosa uses a metric of VMT per employee. Both the Technical Advisory and Santa Rosa’s VMT Guidelines encourage the use of screening maps to identify geographic areas for which the anticipated VMT would be 15 percent below regional average thresholds, allowing jurisdictions to “screen” projects in those areas from

quantitative VMT analysis since impacts can be presumed to be less than significant. The Sonoma County Transportation Authority prepared a draft screening map for the City of Santa Rosa indicating areas where VMT is likely to be below the prescribed threshold and therefore less-than-significant. The project site is located within a screened area, so it is reasonable to conclude that the project would have a less-than-significant VMT impact.

- ii. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

Project Conforms – The Project would include electric vehicle charging infrastructure that meets or exceeds current Building Code CALGreen Tier 2 compliance.

Because the project would meet either section A or Section B of the BAAQMD GHG thresholds, it is considered to have less-than-significant GHG emissions impacts.

Impact GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would not conflict or otherwise interfere with the statewide GHG reduction measures identified in CARB’s Scoping Plan nor would the project conflict with SB 100 goals. For example, proposed buildings would be constructed in conformance with CALGreen and the Title 24 Building Code, which requires high-efficiency water fixtures, water-efficient irrigation systems, and compliance with current energy efficacy standards. Likewise, the City’s New Development Checklist includes requirements that ensure the project complies with the City’s CAP.

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.

Attachment 3 includes the EMFAC2021 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 includes the emissions estimates for construction and health risk calculations.

Attachment 5 includes the cumulative community risk calculations and health risk calculations from sources affecting the MEI.

Attachment 6 includes the City of Santa Rosa’s New Development Checklist.

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 2015.²⁸ 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.²⁹ This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.³⁰ Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

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

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

²⁸ 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.

²⁹ CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

³⁰ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

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

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

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

Where:

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

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

Where:

- C_{air} = concentration in air (µg/m³)
- DBR = daily breathing rate (L/kg body weight-day)
- 8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)
- A = Inhalation absorption factor
- EF = Exposure frequency (days/year)
- 10⁻⁶ = Conversion factor

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

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

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

Non-Cancer Hazards

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

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

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 Inputs and Outputs

Ceres Santa Rosa Kitchen Project - Sonoma-San Francisco County, Annual

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

**Ceres Santa Rosa Kitchen Project
Sonoma-San Francisco County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	18.00	1000sqft	1.50	18,000.00	0
Parking Lot	45.00	Space	0.00	20,970.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Climate Zone	4			Operational Year	2025
Utility Company	Sonoma Clean Power				
CO2 Intensity (lb/MW hr)	119.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CalEEMod modeling based on the information provided by Darryl Berlin

Land Use - Based on information provided by the client

Construction Phase - No Demo - Based on CalEEMod Default

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No Demo

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Based on Site Pre Default

Trips and VMT - 10,485 CF Asphalt, 433.76 CY concrete per materials provided

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On-road Fugitive Dust - Default

Demolition - No Demo

Grading - Based on email from Darryl Berlin 9-2-2022. Civil will try to balance the site earthwork, so import/export will be negligible.

Architectural Coating - Default

Vehicle Trips - Based on 222 daily trips for another kitchen operated by the client and 18,000sqft. Assume same trip rate for each day of the week.

Vehicle Emission Factors - EMFAC2021 Sonoma Co. 2025

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust - Default

Woodstoves - Not Applicable

Energy Use - Default. Note the project would use all electric appliances.

Water And Wastewater - Assume 100% wastewater treatment facility treated wastewater (city sewer).

Solid Waste - Default

Construction Off-road Equipment Mitigation - Basic BMPs and T4i

Fleet Mix - Based on EMFAC2021 for Sonoma Co.

Stationary Sources - Emergency Generators and Fire Pumps - Generator will be propane, not diesel or CNG

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	0.00
tblFleetMix	HHD	6.6260e-003	0.02
tblFleetMix	HHD	6.6260e-003	0.02
tblFleetMix	LDA	0.55	0.50
tblFleetMix	LDA	0.55	0.50
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.17	0.21
tblFleetMix	LDT2	0.17	0.21
tblFleetMix	LHD1	0.03	0.04
tblFleetMix	LHD1	0.03	0.04
tblFleetMix	LHD2	8.6190e-003	0.01
tblFleetMix	LHD2	8.6190e-003	0.01
tblFleetMix	MCY	0.03	4.3220e-003
tblFleetMix	MCY	0.03	4.3220e-003

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tblFleetMix	MDV	0.12	0.14
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MH	4.1400e-003	1.1230e-003
tblFleetMix	MH	4.1400e-003	1.1230e-003
tblFleetMix	MHD	0.01	0.02
tblFleetMix	MHD	0.01	0.02
tblFleetMix	OBUS	1.0950e-003	1.8070e-003
tblFleetMix	OBUS	1.0950e-003	1.8070e-003
tblFleetMix	SBUS	1.5400e-003	1.2000e-003
tblFleetMix	SBUS	1.5400e-003	1.2000e-003
tblFleetMix	UBUS	2.9300e-004	1.3500e-003
tblFleetMix	UBUS	2.9300e-004	1.3500e-003
tblGrading	MaterialExported	0.00	300.00
tblLandUse	LandUseSquareFeet	18,000.00	20,970.00
tblLandUse	LotAcreage	0.41	1.50
tblLandUse	LotAcreage	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.30
tblTripsAndVMT	HaulingTripLength	20.00	7.30
tblTripsAndVMT	HaulingTripLength	20.00	7.30
tblTripsAndVMT	HaulingTripNumber	38.00	0.00
tblTripsAndVMT	VendorTripNumber	6.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00

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tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	16.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblVehicleEF	HHD	0.02	0.23
tblVehicleEF	HHD	0.04	0.08
tblVehicleEF	HHD	5.37	4.38
tblVehicleEF	HHD	0.44	0.74
tblVehicleEF	HHD	0.01	1.4220e-003
tblVehicleEF	HHD	889.96	713.42
tblVehicleEF	HHD	1,418.69	1,693.64
tblVehicleEF	HHD	0.15	0.05
tblVehicleEF	HHD	0.14	0.12
tblVehicleEF	HHD	0.22	0.27
tblVehicleEF	HHD	1.8000e-005	2.7000e-005
tblVehicleEF	HHD	4.78	3.58
tblVehicleEF	HHD	2.81	2.15
tblVehicleEF	HHD	2.81	2.79
tblVehicleEF	HHD	2.8640e-003	2.8060e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	2.7400e-003	2.6780e-003
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	8.4860e-003	8.4000e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	8.0000e-006	4.0500e-004
tblVehicleEF	HHD	4.2000e-004	1.1500e-004
tblVehicleEF	HHD	0.37	0.27

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

tblVehicleEF	HHD	4.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	2.5600e-004	1.0550e-003
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	8.3010e-003	6.0930e-003
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	8.0000e-006	4.0500e-004
tblVehicleEF	HHD	4.2000e-004	1.1500e-004
tblVehicleEF	HHD	0.42	0.53
tblVehicleEF	HHD	4.0000e-006	0.00
tblVehicleEF	HHD	0.08	0.11
tblVehicleEF	HHD	2.5600e-004	1.0550e-003
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	1.9810e-003	2.0910e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.55	0.67
tblVehicleEF	LDA	2.13	3.08
tblVehicleEF	LDA	236.61	253.42
tblVehicleEF	LDA	49.40	66.69
tblVehicleEF	LDA	4.3200e-003	4.3980e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.17	0.24
tblVehicleEF	LDA	0.04	8.3920e-003
tblVehicleEF	LDA	1.4600e-003	1.2330e-003
tblVehicleEF	LDA	1.7030e-003	1.9350e-003
tblVehicleEF	LDA	0.02	2.9370e-003
tblVehicleEF	LDA	1.3460e-003	1.1360e-003

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tblVehicleEF	LDA	1.5660e-003	1.7800e-003
tblVehicleEF	LDA	0.04	0.30
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	7.6710e-003	8.0660e-003
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.20	0.31
tblVehicleEF	LDA	2.3400e-003	2.4300e-003
tblVehicleEF	LDA	4.8900e-004	6.4000e-004
tblVehicleEF	LDA	0.04	0.30
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.22	0.34
tblVehicleEF	LDT1	5.3460e-003	7.5200e-003
tblVehicleEF	LDT1	0.07	0.12
tblVehicleEF	LDT1	1.11	1.66
tblVehicleEF	LDT1	2.44	6.46
tblVehicleEF	LDT1	290.80	336.42
tblVehicleEF	LDT1	62.26	92.13
tblVehicleEF	LDT1	7.5950e-003	0.01
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.10	0.16
tblVehicleEF	LDT1	0.27	0.45
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	1.9860e-003	2.2150e-003
tblVehicleEF	LDT1	2.3830e-003	3.2380e-003
tblVehicleEF	LDT1	0.02	3.7600e-003

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tblVehicleEF	LDT1	1.8290e-003	2.0400e-003
tblVehicleEF	LDT1	2.1910e-003	2.9770e-003
tblVehicleEF	LDT1	0.11	0.75
tblVehicleEF	LDT1	0.24	0.21
tblVehicleEF	LDT1	0.09	0.00
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.13	0.61
tblVehicleEF	LDT1	0.38	0.66
tblVehicleEF	LDT1	2.8780e-003	3.2260e-003
tblVehicleEF	LDT1	6.1600e-004	8.8400e-004
tblVehicleEF	LDT1	0.11	0.75
tblVehicleEF	LDT1	0.24	0.21
tblVehicleEF	LDT1	0.09	0.00
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.13	0.61
tblVehicleEF	LDT1	0.41	0.73
tblVehicleEF	LDT2	3.5280e-003	2.9730e-003
tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.81	0.86
tblVehicleEF	LDT2	2.78	3.90
tblVehicleEF	LDT2	305.45	341.05
tblVehicleEF	LDT2	65.56	89.08
tblVehicleEF	LDT2	6.3450e-003	6.3340e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.27	0.35
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	1.5000e-003	1.3900e-003
tblVehicleEF	LDT2	1.7710e-003	2.1380e-003

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tblVehicleEF	LDT2	0.02	3.5700e-003
tblVehicleEF	LDT2	1.3810e-003	1.2790e-003
tblVehicleEF	LDT2	1.6280e-003	1.9660e-003
tblVehicleEF	LDT2	0.07	0.33
tblVehicleEF	LDT2	0.15	0.09
tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.08	0.25
tblVehicleEF	LDT2	0.32	0.41
tblVehicleEF	LDT2	3.0220e-003	3.2700e-003
tblVehicleEF	LDT2	6.4900e-004	8.5400e-004
tblVehicleEF	LDT2	0.07	0.33
tblVehicleEF	LDT2	0.15	0.09
tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.25
tblVehicleEF	LDT2	0.35	0.44
tblVehicleEF	LHD1	4.0030e-003	4.4210e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.16	0.17
tblVehicleEF	LHD1	1.12	0.98
tblVehicleEF	LHD1	0.93	1.72
tblVehicleEF	LHD1	9.51	9.26
tblVehicleEF	LHD1	751.80	766.70
tblVehicleEF	LHD1	9.25	14.33
tblVehicleEF	LHD1	9.7400e-004	8.7400e-004
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	0.02	0.03

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tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.53	1.21
tblVehicleEF	LHD1	0.26	0.36
tblVehicleEF	LHD1	1.1400e-003	1.0060e-003
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9340e-003
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.4400e-004	2.0900e-004
tblVehicleEF	LHD1	1.0900e-003	9.6300e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5560e-003	2.4840e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.2400e-004	1.9200e-004
tblVehicleEF	LHD1	2.0910e-003	0.12
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0320e-003	0.00
tblVehicleEF	LHD1	0.14	0.13
tblVehicleEF	LHD1	0.33	0.17
tblVehicleEF	LHD1	0.07	0.10
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	7.3020e-003	7.4520e-003
tblVehicleEF	LHD1	9.2000e-005	1.4200e-004
tblVehicleEF	LHD1	2.0910e-003	0.12
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.0320e-003	0.00
tblVehicleEF	LHD1	0.17	0.16
tblVehicleEF	LHD1	0.33	0.17

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tblVehicleEF	LHD1	0.08	0.11
tblVehicleEF	LHD2	2.8120e-003	2.9950e-003
tblVehicleEF	LHD2	7.6000e-003	7.2940e-003
tblVehicleEF	LHD2	7.6030e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.75	0.59
tblVehicleEF	LHD2	0.52	1.08
tblVehicleEF	LHD2	14.77	14.31
tblVehicleEF	LHD2	761.89	837.07
tblVehicleEF	LHD2	6.68	8.92
tblVehicleEF	LHD2	1.9280e-003	1.8160e-003
tblVehicleEF	LHD2	0.07	0.09
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	1.29	1.08
tblVehicleEF	LHD2	0.17	0.22
tblVehicleEF	LHD2	1.5310e-003	1.4430e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	1.0500e-004	7.8000e-005
tblVehicleEF	LHD2	1.4640e-003	1.3810e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7280e-003	2.6850e-003
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	9.6000e-005	7.2000e-005
tblVehicleEF	LHD2	8.7700e-004	0.05
tblVehicleEF	LHD2	0.04	0.01
tblVehicleEF	LHD2	0.02	0.02

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tblVehicleEF	LHD2	4.8300e-004	0.00
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.10	0.07
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	1.4100e-004	1.3700e-004
tblVehicleEF	LHD2	7.3400e-003	8.0570e-003
tblVehicleEF	LHD2	6.6000e-005	8.8000e-005
tblVehicleEF	LHD2	8.7700e-004	0.05
tblVehicleEF	LHD2	0.04	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.8300e-004	0.00
tblVehicleEF	LHD2	0.15	0.15
tblVehicleEF	LHD2	0.10	0.07
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	MCY	0.36	0.20
tblVehicleEF	MCY	0.27	0.22
tblVehicleEF	MCY	21.08	15.51
tblVehicleEF	MCY	9.22	8.77
tblVehicleEF	MCY	217.51	191.52
tblVehicleEF	MCY	63.10	55.33
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	9.7380e-003
tblVehicleEF	MCY	1.19	0.67
tblVehicleEF	MCY	0.28	0.17
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.1620e-003	1.9900e-003
tblVehicleEF	MCY	3.1630e-003	3.6490e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	2.0240e-003	1.8650e-003

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tblVehicleEF	MCY	2.9820e-003	3.4400e-003
tblVehicleEF	MCY	0.91	4.85
tblVehicleEF	MCY	0.87	3.55
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.47	1.34
tblVehicleEF	MCY	0.76	3.92
tblVehicleEF	MCY	2.06	1.65
tblVehicleEF	MCY	2.1520e-003	1.8930e-003
tblVehicleEF	MCY	6.2400e-004	5.4700e-004
tblVehicleEF	MCY	0.91	0.14
tblVehicleEF	MCY	0.87	3.55
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	3.03	1.59
tblVehicleEF	MCY	0.76	3.92
tblVehicleEF	MCY	2.24	1.79
tblVehicleEF	MDV	4.0540e-003	3.8170e-003
tblVehicleEF	MDV	0.08	0.11
tblVehicleEF	MDV	0.86	0.97
tblVehicleEF	MDV	3.16	4.31
tblVehicleEF	MDV	376.28	416.15
tblVehicleEF	MDV	80.13	107.77
tblVehicleEF	MDV	8.4830e-003	8.9640e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.33	0.46
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	1.5660e-003	1.4930e-003
tblVehicleEF	MDV	1.8520e-003	2.2190e-003
tblVehicleEF	MDV	0.02	3.6540e-003

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tblVehicleEF	MDV	1.4460e-003	1.3790e-003
tblVehicleEF	MDV	1.7030e-003	2.0410e-003
tblVehicleEF	MDV	0.08	0.43
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.08	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.09	0.33
tblVehicleEF	MDV	0.40	0.55
tblVehicleEF	MDV	3.7190e-003	3.9870e-003
tblVehicleEF	MDV	7.9300e-004	1.0330e-003
tblVehicleEF	MDV	0.08	0.43
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.08	0.00
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.09	0.33
tblVehicleEF	MDV	0.44	0.60
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.25	1.10
tblVehicleEF	MH	2.00	2.26
tblVehicleEF	MH	1,505.95	1,637.06
tblVehicleEF	MH	17.37	20.60
tblVehicleEF	MH	0.07	0.08
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.85	1.92
tblVehicleEF	MH	0.24	0.29
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.05

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tblVehicleEF	MH	2.4500e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.3210e-003	3.3570e-003
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	2.2500e-004	2.4600e-004
tblVehicleEF	MH	0.68	32.01
tblVehicleEF	MH	0.06	8.17
tblVehicleEF	MH	0.25	0.00
tblVehicleEF	MH	0.09	0.09
tblVehicleEF	MH	0.02	0.20
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.7200e-004	2.0400e-004
tblVehicleEF	MH	0.68	32.01
tblVehicleEF	MH	0.06	8.17
tblVehicleEF	MH	0.25	0.00
tblVehicleEF	MH	0.11	0.11
tblVehicleEF	MH	0.02	0.20
tblVehicleEF	MH	0.10	0.12
tblVehicleEF	MHD	2.3490e-003	0.01
tblVehicleEF	MHD	1.5330e-003	7.8020e-003
tblVehicleEF	MHD	6.4340e-003	7.2390e-003
tblVehicleEF	MHD	0.33	0.67
tblVehicleEF	MHD	0.22	0.25
tblVehicleEF	MHD	0.80	0.86
tblVehicleEF	MHD	68.68	162.53
tblVehicleEF	MHD	1,026.30	1,198.76
tblVehicleEF	MHD	6.19	7.30
tblVehicleEF	MHD	0.01	0.03

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tblVehicleEF	MHD	0.14	0.16
tblVehicleEF	MHD	4.5760e-003	5.1370e-003
tblVehicleEF	MHD	0.39	0.84
tblVehicleEF	MHD	1.57	0.91
tblVehicleEF	MHD	1.85	1.48
tblVehicleEF	MHD	2.9900e-004	1.6130e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	7.8810e-003	9.8580e-003
tblVehicleEF	MHD	8.2000e-005	9.3000e-005
tblVehicleEF	MHD	2.8600e-004	1.5430e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	7.5360e-003	9.4250e-003
tblVehicleEF	MHD	7.5000e-005	8.6000e-005
tblVehicleEF	MHD	3.2600e-004	0.02
tblVehicleEF	MHD	0.02	4.8460e-003
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	1.6800e-004	0.00
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.5100e-004	1.5150e-003
tblVehicleEF	MHD	9.7500e-003	0.01
tblVehicleEF	MHD	6.1000e-005	7.2000e-005
tblVehicleEF	MHD	3.2600e-004	0.02
tblVehicleEF	MHD	0.02	4.8460e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.6800e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.04

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tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	OBUS	7.1450e-003	8.2470e-003
tblVehicleEF	OBUS	4.5070e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.65	0.62
tblVehicleEF	OBUS	0.54	0.65
tblVehicleEF	OBUS	2.11	2.49
tblVehicleEF	OBUS	102.51	95.04
tblVehicleEF	OBUS	1,312.38	1,493.67
tblVehicleEF	OBUS	15.81	19.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.15
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.43	0.39
tblVehicleEF	OBUS	1.51	1.13
tblVehicleEF	OBUS	1.10	0.89
tblVehicleEF	OBUS	1.4200e-004	4.2400e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.9840e-003	0.02
tblVehicleEF	OBUS	1.7600e-004	2.0400e-004
tblVehicleEF	OBUS	1.3600e-004	4.0600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.6260e-003	0.02
tblVehicleEF	OBUS	1.6100e-004	1.8800e-004
tblVehicleEF	OBUS	1.4060e-003	0.09
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	6.0600e-004	0.00
tblVehicleEF	OBUS	0.03	0.06

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tblVehicleEF	OBUS	0.07	0.10
tblVehicleEF	OBUS	0.10	0.12
tblVehicleEF	OBUS	9.7300e-004	9.0200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.5600e-004	1.8800e-004
tblVehicleEF	OBUS	1.4060e-003	0.09
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	6.0600e-004	0.00
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.07	0.10
tblVehicleEF	OBUS	0.11	0.13
tblVehicleEF	SBUS	0.03	0.09
tblVehicleEF	SBUS	4.2340e-003	0.22
tblVehicleEF	SBUS	2.7040e-003	2.1580e-003
tblVehicleEF	SBUS	1.59	1.06
tblVehicleEF	SBUS	0.32	0.95
tblVehicleEF	SBUS	0.39	0.30
tblVehicleEF	SBUS	334.60	179.82
tblVehicleEF	SBUS	1,065.38	1,091.51
tblVehicleEF	SBUS	2.29	1.87
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.15	0.15
tblVehicleEF	SBUS	2.7540e-003	2.3970e-003
tblVehicleEF	SBUS	3.11	1.36
tblVehicleEF	SBUS	4.09	2.63
tblVehicleEF	SBUS	1.05	0.43
tblVehicleEF	SBUS	2.5480e-003	1.1300e-003
tblVehicleEF	SBUS	0.74	0.04

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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	2.9000e-005	2.1000e-005
tblVehicleEF	SBUS	2.4370e-003	1.0790e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.8200e-003	2.7840e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	2.7000e-005	2.0000e-005
tblVehicleEF	SBUS	2.5400e-004	0.01
tblVehicleEF	SBUS	2.6100e-003	3.4700e-003
tblVehicleEF	SBUS	0.15	0.10
tblVehicleEF	SBUS	1.2000e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	5.8280e-003	6.4270e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	3.1750e-003	1.5410e-003
tblVehicleEF	SBUS	0.01	9.7030e-003
tblVehicleEF	SBUS	2.3000e-005	1.8000e-005
tblVehicleEF	SBUS	2.5400e-004	0.01
tblVehicleEF	SBUS	2.6100e-003	3.4700e-003
tblVehicleEF	SBUS	0.22	0.22
tblVehicleEF	SBUS	1.2000e-004	0.00
tblVehicleEF	SBUS	0.08	0.27
tblVehicleEF	SBUS	5.8280e-003	6.4270e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	UBUS	2.29	0.60
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	17.52	8.81
tblVehicleEF	UBUS	0.84	2.66

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tblVehicleEF	UBUS	1,702.90	1,251.03
tblVehicleEF	UBUS	8.29	20.64
tblVehicleEF	UBUS	0.28	0.17
tblVehicleEF	UBUS	6.6330e-003	0.02
tblVehicleEF	UBUS	0.64	0.29
tblVehicleEF	UBUS	0.08	0.20
tblVehicleEF	UBUS	0.08	0.11
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	4.6580e-003	3.1740e-003
tblVehicleEF	UBUS	8.5000e-005	1.3100e-004
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	7.7720e-003	6.3890e-003
tblVehicleEF	UBUS	4.4500e-003	3.0240e-003
tblVehicleEF	UBUS	7.9000e-005	1.2100e-004
tblVehicleEF	UBUS	1.9200e-004	0.04
tblVehicleEF	UBUS	2.5600e-003	0.01
tblVehicleEF	UBUS	1.0800e-004	0.00
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.7800e-004	0.03
tblVehicleEF	UBUS	0.05	0.09
tblVehicleEF	UBUS	9.4990e-003	7.5470e-003
tblVehicleEF	UBUS	8.2000e-005	2.0400e-004
tblVehicleEF	UBUS	1.9200e-004	0.04
tblVehicleEF	UBUS	2.5600e-003	0.01
tblVehicleEF	UBUS	1.0800e-004	0.00
tblVehicleEF	UBUS	2.33	0.64
tblVehicleEF	UBUS	5.7800e-004	0.03
tblVehicleEF	UBUS	0.05	0.10
tblVehicleTrips	ST_TR	1.99	12.33

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tblVehicleTrips	SU_TR	5.00	12.33
tblVehicleTrips	WD_TR	4.96	12.33
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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	0.1437	1.1364	1.2515	2.2300e-003	0.0205	0.0463	0.0668	9.8600e-003	0.0446	0.0544	0.0000	184.3174	184.3174	0.0320	0.0000	185.1168
2025	0.1059	0.0636	0.0903	1.5000e-004	0.0000	2.6700e-003	2.6700e-003	0.0000	2.5300e-003	2.5300e-003	0.0000	12.6124	12.6124	2.8300e-003	0.0000	12.6830
Maximum	0.1437	1.1364	1.2515	2.2300e-003	0.0205	0.0463	0.0668	9.8600e-003	0.0446	0.0544	0.0000	184.3174	184.3174	0.0320	0.0000	185.1168

Mitigated Construction

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0405	0.9972	1.3612	2.2300e-003	9.2000e-003	0.0158	0.0250	4.4400e-003	0.0158	0.0203	0.0000	184.3172	184.3172	0.0320	0.0000	185.1166
2025	0.1008	0.0638	0.0989	1.5000e-004	0.0000	6.1000e-004	6.1000e-004	0.0000	6.1000e-004	6.1000e-004	0.0000	12.6123	12.6123	2.8300e-003	0.0000	12.6830
Maximum	0.1008	0.9972	1.3612	2.2300e-003	9.2000e-003	0.0158	0.0250	4.4400e-003	0.0158	0.0203	0.0000	184.3172	184.3172	0.0320	0.0000	185.1166

	ROG	NOx	CO	SO2	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	43.38	11.58	-8.81	0.00	55.01	66.41	63.05	54.97	65.07	63.33	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-25-2024	6-24-2024	0.4350	0.3341
2	6-25-2024	9-24-2024	0.4102	0.3415
3	9-25-2024	12-24-2024	0.4057	0.3378
4	12-25-2024	3-24-2025	0.1991	0.1891
		Highest	0.4350	0.3415

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0815	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1300e-003	1.1300e-003	0.0000	0.0000	1.2000e-003

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

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	3/24/2024	3/22/2024	5	0	
2	Site Preparation	Site Preparation	3/25/2024	3/26/2024	5	2	
3	Grading	Grading	3/27/2024	4/1/2024	5	4	
4	Trenching	Trenching	3/27/2024	4/1/2024	5	4	
5	Building Construction	Building Construction	4/4/2024	1/8/2025	5	200	
6	Paving	Paving	1/9/2025	1/22/2025	5	10	
7	Architectural Coating	Architectural Coating	1/23/2025	2/5/2025	5	10	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 27,000; Non-Residential Outdoor: 9,000; Striped Parking Area: 1,258

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

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

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Graders	1	8.00	187	0.41
Trenching	Rubber Tired Dozers	1	7.00	247	0.40
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	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	0.00	0.00	0.00	10.80	7.30	7.30	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	10.80	7.30	7.30	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	0.00	0.00	0.00	10.80	7.30	7.30	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.8300e-003	0.0000	2.8300e-003	1.3500e-003	0.0000	1.3500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	5.0700e-003	9.8200e-003	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.5113	1.5113	4.9000e-004	0.0000	1.5235
Total	3.0000e-004	5.0700e-003	9.8200e-003	2.0000e-005	2.8300e-003	3.0000e-005	2.8600e-003	1.3500e-003	3.0000e-005	1.3800e-003	0.0000	1.5113	1.5113	4.9000e-004	0.0000	1.5235

Mitigated Construction Off-Site

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

3.4 Grading - 2024

Unmitigated Construction On-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0142	0.0000	0.0142	6.8500e-003	0.0000	6.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6000e-003	0.0276	0.0174	4.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	3.6207	3.6207	1.1700e-003	0.0000	3.6500
Total	2.6000e-003	0.0276	0.0174	4.0000e-005	0.0142	1.1400e-003	0.0153	6.8500e-003	1.0500e-003	7.9000e-003	0.0000	3.6207	3.6207	1.1700e-003	0.0000	3.6500

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.3700e-003	0.0000	6.3700e-003	3.0800e-003	0.0000	3.0800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4000e-004	0.0127	0.0243	4.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	3.6207	3.6207	1.1700e-003	0.0000	3.6500
Total	7.4000e-004	0.0127	0.0243	4.0000e-005	6.3700e-003	7.0000e-005	6.4400e-003	3.0800e-003	7.0000e-005	3.1500e-003	0.0000	3.6207	3.6207	1.1700e-003	0.0000	3.6500

Mitigated Construction Off-Site

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

3.5 Trenching - 2024

Unmitigated Construction On-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2100e-003	0.0237	0.0133	3.0000e-005		9.6000e-004	9.6000e-004		8.9000e-004	8.9000e-004	0.0000	3.0225	3.0225	9.8000e-004	0.0000	3.0470
Total	2.2100e-003	0.0237	0.0133	3.0000e-005		9.6000e-004	9.6000e-004		8.9000e-004	8.9000e-004	0.0000	3.0225	3.0225	9.8000e-004	0.0000	3.0470

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.0000e-004	0.0101	0.0196	3.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.0225	3.0225	9.8000e-004	0.0000	3.0470
Total	6.0000e-004	0.0101	0.0196	3.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.0225	3.0225	9.8000e-004	0.0000	3.0470

Mitigated Construction Off-Site

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

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

Category	tons/yr										MT/yr					
	Off-Road	0.1377	1.0732	1.2142	2.1400e-003		0.0437	0.0437		0.0422	0.0422	0.0000	176.1629	176.1629	0.0293	0.0000
Total	0.1377	1.0732	1.2142	2.1400e-003		0.0437	0.0437		0.0422	0.0422	0.0000	176.1629	176.1629	0.0293	0.0000	176.8964

Unmitigated Construction Off-Site

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

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					

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Off-Road	0.0389	0.9693	1.3074	2.1400e-003		0.0157	0.0157		0.0157	0.0157	0.0000	176.1627	176.1627	0.0293	0.0000	176.8962
Total	0.0389	0.9693	1.3074	2.1400e-003		0.0157	0.0157		0.0157	0.0157	0.0000	176.1627	176.1627	0.0293	0.0000	176.8962

Mitigated Construction Off-Site

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

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	3.9700e-003	0.0312	0.0373	7.0000e-005		1.1800e-003	1.1800e-003		1.1400e-003	1.1400e-003	0.0000	5.4490	5.4490	8.9000e-004	0.0000	5.4712

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Total	3.9700e-003	0.0312	0.0373	7.0000e-005		1.1800e-003	1.1800e-003		1.1400e-003	1.1400e-003	0.0000	5.4490	5.4490	8.9000e-004	0.0000	5.4712
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Unmitigated Construction Off-Site

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

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	1.2000e-003	0.0300	0.0404	7.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	5.4490	5.4490	8.9000e-004	0.0000	5.4712
Total	1.2000e-003	0.0300	0.0404	7.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	5.4490	5.4490	8.9000e-004	0.0000	5.4712

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Mitigated Construction Off-Site

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

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	2.8700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.8700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334

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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0700e-003	0.0286	0.0493	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0700e-003	0.0286	0.0493	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334

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Mitigated Construction Off-Site

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

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	0.0982					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.0991	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0982					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	5.3000e-003	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.0985	5.3000e-003	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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Mitigated Construction Off-Site

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

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					

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Mitigated	0.1175	0.1813	0.9359	2.6800e-003	0.2207	2.6300e-003	0.2233	0.0554	2.4800e-003	0.0579	0.0000	254.9860	254.9860	0.0107	0.0148	259.6603
Unmitigated	0.1175	0.1813	0.9359	2.6800e-003	0.2207	2.6300e-003	0.2233	0.0554	2.4800e-003	0.0579	0.0000	254.9860	254.9860	0.0107	0.0148	259.6603

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	221.94	221.94	221.94	647,956	647,956
Parking Lot	0.00	0.00	0.00		
Total	221.94	221.94	221.94	647,956	647,956

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.496277	0.042517	0.213536	0.139361	0.044626	0.012312	0.023102	0.018467	0.001807	0.001350	0.004322	0.001200	0.001123
Parking Lot	0.496277	0.042517	0.213536	0.139361	0.044626	0.012312	0.023102	0.018467	0.001807	0.001350	0.004322	0.001200	0.001123

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8.3342	8.3342	2.2900e-003	2.8000e-004	8.4743
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8.3342	8.3342	2.2900e-003	2.8000e-004	8.4743
NaturalGas Mitigated	2.5400e-003	0.0231	0.0194	1.4000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	25.1472	25.1472	4.8000e-004	4.6000e-004	25.2966
NaturalGas Unmitigated	2.5400e-003	0.0231	0.0194	1.4000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	25.1472	25.1472	4.8000e-004	4.6000e-004	25.2966

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	471240	2.5400e-003	0.0231	0.0194	1.4000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	25.1472	25.1472	4.8000e-004	4.6000e-004	25.2966
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.5400e-003	0.0231	0.0194	1.4000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	25.1472	25.1472	4.8000e-004	4.6000e-004	25.2966

Mitigated

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	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	471240	2.5400e-003	0.0231	0.0194	1.4000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	25.1472	25.1472	4.8000e-004	4.6000e-004	25.2966
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.5400e-003	0.0231	0.0194	1.4000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	25.1472	25.1472	4.8000e-004	4.6000e-004	25.2966

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	145800	7.9347	2.1800e-003	2.6000e-004	8.0681
Parking Lot	7339.5	0.3994	1.1000e-004	1.0000e-005	0.4062
Total		8.3342	2.2900e-003	2.7000e-004	8.4743

Mitigated

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	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	145800	7.9347	2.1800e-003	2.6000e-004	8.0681
Parking Lot	7339.5	0.3994	1.1000e-004	1.0000e-005	0.4062
Total		8.3342	2.2900e-003	2.7000e-004	8.4743

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0815	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1300e-003	1.1300e-003	0.0000	0.0000	1.2000e-003
Unmitigated	0.0815	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1300e-003	1.1300e-003	0.0000	0.0000	1.2000e-003

6.2 Area by SubCategory

Unmitigated

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	9.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0717					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1300e-003	1.1300e-003	0.0000	0.0000	1.2000e-003	
Total	0.0815	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1300e-003	1.1300e-003	0.0000	0.0000	1.2000e-003	

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	9.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0717					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1300e-003	1.1300e-003	0.0000	0.0000	1.2000e-003	
Total	0.0815	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1300e-003	1.1300e-003	0.0000	0.0000	1.2000e-003	

7.0 Water Detail

7.1 Mitigation Measures Water

Ceres Santa Rosa Kitchen Project - Sonoma-San Francisco County, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.6985	5.4100e-003	3.2400e-003	3.8002
Unmitigated	2.6985	5.4100e-003	3.2400e-003	3.8002

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	4.1625 / 0	2.6985	5.4100e-003	3.2400e-003	3.8002
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.6985	5.4100e-003	3.2400e-003	3.8002

Mitigated

Ceres Santa Rosa Kitchen Project - Sonoma-San Francisco County, Annual

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

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	4.1625 / 0	2.6985	5.4100e-003	3.2400e-003	3.8002
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.6985	5.4100e-003	3.2400e-003	3.8002

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.5308	0.2678	0.0000	11.2248
Unmitigated	4.5308	0.2678	0.0000	11.2248

8.2 Waste by Land Use

Unmitigated

Ceres Santa Rosa Kitchen Project - Sonoma-San Francisco County, Annual

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

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	22.32	4.5308	0.2678	0.0000	11.2248
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		4.5308	0.2678	0.0000	11.2248

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	22.32	4.5308	0.2678	0.0000	11.2248
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		4.5308	0.2678	0.0000	11.2248

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Ceres Santa Rosa Kitchen Project - Sonoma-San Francisco County, Annual

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Attachment 3: EMFAC2021 Calculations

CalEEMod EMFAC2021 Emission Factors 2024

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004486	0.00306	0.011182	0.229564325	0.008258	0	0	0.093333	0
A	CH4_RUNEX	0.002356	0.008266	0.00323	0.004262	0.010768	0.007573	0.00785	0.08549697	0.010374	0.590975229	0.200497	0.217099	0.012678
A	CH4_STREX	0.072424	0.131889	0.09108	0.115668	0.020031	0.011527	0.007723	7.94313E-08	0.022763	0.024177279	0.220866	0.002132	0.025745
A	CO_IDLEX	0	0	0	0	0.170402	0.13619	0.673026	4.385455918	0.594927	0	0	1.046371	0
A	CO_RUNEX	0.722633	1.783294	0.914548	1.050963	1.028035	0.607558	0.287233	0.746873277	0.722629	9.615218982	15.95244	0.96422	1.245955
A	CO_STREX	3.295055	6.876608	4.131212	4.597183	1.708798	1.089857	0.931331	0.001541214	2.597371	2.647556059	8.794472	0.302106	2.360576
A	CO2_NBIO_IDLEX	0	0	0	0	9.330884	14.35781	163.3239	726.8022467	91.91963	0	0	180.597	0
A	CO2_NBIO_RUNEX	253.8811	331.6122	339.4269	414.0742	775.291	844.9837	1214.221	1723.693575	1516.373	1284.513259	192.1186	1099.22	1643.48
A	CO2_NBIO_STREX	66.67904	91.22105	88.72935	107.2275	14.32643	9.039546	7.720743	0.057313191	19.73616	20.81816269	56.26956	1.853639	21.0584
A	NOX_IDLEX	0	0	0	0	0.082747	0.112218	0.872486	3.696971328	0.383213	0	0	1.400829	0
A	NOX_RUNEX	0.044493	0.173813	0.081059	0.116086	1.29283	1.131648	0.989059	2.24902995	1.157526	0.311563219	0.683493	2.760802	1.943204
A	NOX_STREX	0.256761	0.474068	0.370516	0.494517	0.367693	0.226061	1.481377	2.764062925	0.868049	0.207851604	0.17667	0.426595	0.29152
A	PM10_IDLEX	0	0	0	0	0.001015	0.001434	0.001966	0.003029796	0.000425	0	0	0.001189	0
A	PM10_PMBW	0.008445	0.010738	0.010207	0.010463	0.077923	0.09092	0.045208	0.083798715	0.051771	0.106340589	0.012	0.044873	0.044936
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009953	0.010738	0.012	0.03359679	0.012	0.025542012	0.004	0.011151	0.013401
A	PM10_RUNEX	0.001297	0.002339	0.001433	0.001556	0.026182	0.028718	0.011302	0.022804801	0.019103	0.002593691	0.00198	0.014967	0.046243
A	PM10_STREX	0.002003	0.003398	0.002183	0.002301	0.000222	8.31E-05	0.000101	2.24136E-06	0.000215	0.000128456	0.003682	2.08E-05	0.000282
A	PM25_IDLEX	0	0	0	0	0.000971	0.001372	0.00188	0.002892579	0.000407	0	0	0.001135	0
A	PM25_PMBW	0.002956	0.003758	0.003572	0.003662	0.027273	0.031822	0.015823	0.02932955	0.01812	0.037219206	0.0042	0.015706	0.015728
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002488	0.002684	0.003	0.008399198	0.003	0.006385503	0.001	0.002788	0.00335
A	PM25_RUNEX	0.001195	0.002155	0.001319	0.001437	0.025013	0.027459	0.010806	0.021812805	0.018261	0.002469117	0.001857	0.014304	0.044198
A	PM25_STREX	0.001842	0.003124	0.002007	0.002116	0.000204	7.64E-05	9.32E-05	2.06085E-06	0.000197	0.000118111	0.003474	1.92E-05	0.00026
A	ROG_DIURN	0.309715	0.784841	0.330028	0.43094	0.121752	0.053229	0.021405	0.00052177	0.0869	0.044002802	4.808115	0.008033	32.85154
A	ROG_HTSK	0.090637	0.213367	0.092319	0.113822	0.031044	0.01392	0.005414	0.000148454	0.021034	0.015249413	3.543556	0.002796	8.600171
A	ROG_IDLEX	0	0	0	0	0.020008	0.015762	0.025637	0.276802023	0.049388	0	0	0.100299	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.009272	0.037783	0.013116	0.018571	0.139164	0.133891	0.031182	0.023375284	0.062705	0.031473951	1.385193	0.052356	0.093724
A	ROG_RUNLS	0.238891	0.641897	0.254355	0.337532	0.178161	0.073839	0.04442	0.001364404	0.098382	0.036016464	3.900692	0.004546	0.205041
A	ROG_STREX	0.336468	0.708909	0.432993	0.599072	0.101336	0.055873	0.042672	4.31192E-07	0.122703	0.095254529	1.690138	0.011758	0.10908
A	SO2_IDLEX	0	0	0	0	9.02E-05	0.000137	0.001525	0.006230416	0.000873	0	0	0.001549	0
A	SO2_RUNEX	0.002509	0.003278	0.003355	0.00409	0.007536	0.008134	0.011523	0.015505401	0.014586	0.006747987	0.001899	0.009772	0.016092
A	SO2_STREX	0.000659	0.000902	0.000877	0.00106	0.000142	8.94E-05	7.63E-05	5.66599E-07	0.000195	0.000205809	0.000556	1.83E-05	0.000208
A	TOG_DIURN	0.309715	0.784841	0.330028	0.43094	0.121752	0.053229	0.021405	0.00052177	0.0869	0.044002802	0.144989	0.008033	32.85154
A	TOG_HTSK	0.090637	0.213367	0.092319	0.113822	0.031044	0.01392	0.005414	0.000148454	0.021034	0.015249413	3.543556	0.002796	8.600171
A	TOG_IDLEX	0	0	0	0	0.027932	0.021191	0.040148	0.532918774	0.064623	0	0	0.214947	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.013489	0.055082	0.019118	0.026985	0.167503	0.154947	0.04332	0.111661588	0.083249	0.628347151	1.635702	0.275881	0.12134
A	TOG_RUNLS	0.238891	0.641897	0.254355	0.337532	0.178161	0.073839	0.04442	0.001364404	0.098382	0.036016464	3.900692	0.004546	0.205041
A	TOG_STREX	0.36839	0.776166	0.474072	0.655907	0.11095	0.061174	0.04672	4.72101E-07	0.134345	0.104291719	1.836491	0.012873	0.119429
A	N2O_IDLEX	0	0	0	0	0.000881	0.001818	0.025203	0.117696158	0.012815	0	0	0.026649	0
A	N2O_RUNEX	0.004758	0.01196	0.006757	0.009762	0.056194	0.087024	0.15959	0.275564354	0.147405	0.181567063	0.044536	0.153083	0.077891
A	N2O_STREX	0.032097	0.043051	0.039048	0.043644	0.028412	0.018279	0.005393	4.36974E-05	0.018738	0.02535604	0.010047	0.00236	0.030021

CalEEMod Construction Inputs

Phase	CalEEMod	CalEEMod	Total	Total	CalEEMod	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor Vehicle	Hauling Vehicle	Worker	Vendor	Hauling
	WORKER	VENDOR	Worker	Vendor	HAULING									
Demolition	0	0	0	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	0	0	0
Site Preparation	8	0	16	0	38	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	172.8	0	760
Grading	10	0	40	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	432	0	0
Building Construction	16	6	3200	1200	44	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	34560	8760	321.2
Paving	13	0	130	0	98	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	1404	0	715.4
Architectural Coating	3	0	30	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	324	0	0
Trenching	8	0	32	0	18	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	345.6	0	131.4

Number of Days Per Year

2024	2024/03/24	12/31/24	283	203
2025	1/1/25	2025/02/05	36	26
			319	229 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	2024/03/24	2024/03/22	5	0
Site Preparation	2024/03/25	2024/03/26	5	2
Grading	2024/03/27	2024/04/01	5	4
Trenching	2024/03/27	2024/04/01	5	4
Building Construction	2024/04/04	2025/01/08	5	200
Paving	2025/01/09	2025/01/22	5	10
Architectural Coating	2025/01/23	2025/02/05	5	10

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	Grams													
Hauling	100.28	5615.41	2308.5971	31.128	576.47	270.91	847.4	86.74	115.37	202.11	3467199.405	210.2919	554.6006	3637727.7
Vendor	489.99	19471.77	8124.2	123.082	2619.24	917.21	3536.5	394.11	393.49	787.60	13406807.34	557.9437	1994.976	14015259
Worker	5310.03	4371.88	53740.1	111.147	11134.28	717.67	11852.0	1675.36	259.95	1935.31	11244241.38	467.9307	388.9403	11371844
Total (g)	5900.30	29459.05761	64172.891	265.3571997	14329.9936	1905.789056	16235.783	2156.208736	768.8072035	2925.01594	28118248.12	1236.166	2938.516	29024830
Total (lbs)	13.01	64.95	141.48	0.59	31.59	4.2	35.79	4.75	1.69	6.45	61990.1259	2.72528	6.47832	63988.797
Total (tons)	0.0065	0.032	0.071	0.000	0.016	0.0021	0.0179	0.0024	0.001	0.003	31.00	0.00	0.00	31.994399
Total (MT)											28.12	0.00	0.00	29.02483

YEAR	Tons													
2024	0.0058	0.0288	0.0628	0.0003	0.0140	0.0019	0.0159	0.0021	0.0008	0.0029	24.9450	0.001097	0.002607	25.749301
2025	0.0007	0.0037	0.0080	0.0000	0.0018	0.0002	0.0020	0.0003	0.0001	0.0004	3.1732	0.00014	0.000332	3.2755294

CalEEMod Construction Inputs

Phase	CalEEMod	CalEEMod	Total	Total	CalEEMod	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor Vehicle	Hauling Vehicle	Worker	Vendor	Hauling				
	WORKER	VENDOR	Worker	Vendor	HAULING										TRIPS	TRIPS	Trips	Trips
Demolition		0	0	0	0	0	0.5	0.5	0.5	LD_Mix	HDT_Mix	HHDT	0	0	0			
Site Preparation	8	0	16	0	38	0.5	0.5	0.5	LD_Mix	HDT_Mix	HHDT	8	0	19				
Grading	10	0	40	0	0	0.5	0.5	0.5	LD_Mix	HDT_Mix	HHDT	20	0	0				
Building Construction	16	6	3200	1200	44	0.5	0.5	0.5	LD_Mix	HDT_Mix	HHDT	1600	600	22				
Paving	13	0	130	0	98	0.5	0.5	0.5	LD_Mix	HDT_Mix	HHDT	65	0	49				
Architectural Coating	3	0	30	0	0	0.5	0.5	0.5	LD_Mix	HDT_Mix	HHDT	15	0	0				
Trenching	8	0	32	0	18	0.5	0.5	0.5	LD_Mix	HDT_Mix	HHDT	16	0	9				

Number of Days Per Year

2024	2024/03/24	12/31/24	283	203
2025	1/1/25	2025/02/05	36	26
			319	229 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	2024/03/24	2024/03/22	5	0
Site Preparation	2024/03/25	2024/03/26	5	2
Grading	2024/03/27	2024/04/01	5	4
Trenching	2024/03/27	2024/04/01	5	4
Building Construction	2024/04/04	2025/01/08	5	200
Paving	2025/01/09	2025/01/22	5	10
Architectural Coating	2025/01/23	2025/02/05	5	10

Summary of Construction Traffic Emissions (EMFAC2021) Half-Mile Trips

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	Grams													
Hauling	57.52	1501.94	942.56589	2.769	29.60	14.48	44.1	4.45	6.47	10.92	314563.8567	53.91795	50.59336	330988.63
Vendor	267.40	6260.37	3905.0	12.808	179.40	65.67	245.1	26.99	29.67	56.67	1420116.838	177.0862	219.5477	1489969.2
Worker	4693.46	1318.89	16955.1	7.692	515.48	41.11	556.6	77.56	19.28	96.84	778135.3047	324.0432	138.2728	827441.69
Total (g)	5018.38	9081.194923	21802.705	23.26846141	724.477	121.2588472	845.73585	109.01077	55.42047252	164.4312425	2512816	555.0474	408.4139	2648399.5
Total (lbs)	11.06	20.02	48.07	0.05	1.60	0.3	1.86	0.24	0.12	0.36	5539.810998	1.22367	0.900399	5838.7215
Total (tons)	0.0055	0.010	0.024	0.000	0.001	0.0001	0.0009	0.0001	0.000	0.000	2.77	0.00	0.00	2.9193608
Total (MT)											2.51	0.00	0.00	2.6483995

YEAR	Tons													
2024	0.0049	0.0089	0.0213	0.0000	0.0007	0.0001	0.0008	0.0001	0.0001	0.0002	2.2292	0.000492	0.000362	2.3495206
2025	0.0006	0.0011	0.0027	0.0000	0.0001	0.0000	0.0001	0.0000	0.0000	0.0000	0.2836	6.26E-05	4.61E-05	0.2988789

CalEEMod EMFAC2021 Emission Factors Input - 2025

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004421	0.002995	0.011554	0.227256009	0.008247	0	0	0.093565	0
A	CH4_RUNEX	0.002091	0.00752	0.002973	0.003817	0.010082	0.007294	0.007802	0.082604215	0.010241	0.595837346	0.195104	0.215204	0.011664
A	CH4_STREX	0.067606	0.124429	0.086246	0.107819	0.019487	0.011176	0.007239	7.62201E-08	0.021979	0.023411516	0.216236	0.002158	0.025076
A	CO_IDLEX	0	0	0	0	0.170269	0.13563	0.669053	4.383392175	0.615018	0	0	1.058369	0
A	CO_RUNEX	0.669681	1.657785	0.861223	0.973897	0.979595	0.589195	0.248835	0.735764084	0.645085	8.813333273	15.5108	0.95339	1.099941
A	CO_STREX	3.075087	6.456135	3.903522	4.313857	1.724932	1.079612	0.857949	0.001421945	2.488863	2.66471502	8.766231	0.303983	2.260908
A	CO2_NBIO_IDLEX	0	0	0	0	9.261566	14.31127	162.5341	713.4240861	95.04069	0	0	179.8199	0
A	CO2_NBIO_RUNEX	245.8213	326.3359	330.8311	403.6723	766.696	837.0734	1198.76	1693.641964	1493.666	1251.032329	191.5224	1091.512	1637.058
A	CO2_NBIO_STREX	64.69413	89.36982	86.40518	104.5364	14.33173	8.916699	7.297039	0.04608416	19.00656	20.63927465	55.32899	1.865005	20.60109
A	NOX_IDLEX	0	0	0	0	0.080996	0.110416	0.838428	3.579840528	0.389622	0	0	1.363271	0
A	NOX_RUNEX	0.039214	0.158411	0.07328	0.102103	1.207728	1.077274	0.912935	2.145731623	1.12778	0.291877272	0.667708	2.632136	1.924186
A	NOX_STREX	0.241845	0.450159	0.348356	0.456285	0.360722	0.221416	1.481785	2.787226081	0.886877	0.196353842	0.170815	0.434549	0.293554
A	PM10_IDLEX	0	0	0	0	0.001006	0.001443	0.001613	0.002806057	0.000424	0	0	0.00113	0
A	PM10_PMBW	0.008392	0.010742	0.010199	0.010441	0.077794	0.090788	0.045093	0.083559011	0.051963	0.106400292	0.012	0.044818	0.044934
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009934	0.010742	0.012	0.033599224	0.012	0.025554966	0.004	0.011137	0.01343
A	PM10_RUNEX	0.001233	0.002215	0.00139	0.001493	0.025154	0.028244	0.009858	0.02236211	0.019024	0.003174417	0.00199	0.014381	0.046016
A	PM10_STREX	0.001935	0.003238	0.002138	0.002219	0.000209	7.78E-05	9.3E-05	1.70034E-06	0.000204	0.000131139	0.003649	2.12E-05	0.000267
A	PM25_IDLEX	0	0	0	0	0.000963	0.001381	0.001543	0.0026783	0.000406	0	0	0.001079	0
A	PM25_PMBW	0.002937	0.00376	0.00357	0.003654	0.027228	0.031776	0.015783	0.029245654	0.018187	0.037240102	0.0042	0.015686	0.015727
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002484	0.002685	0.003	0.008399806	0.003	0.006388742	0.001	0.002784	0.003357
A	PM25_RUNEX	0.001136	0.00204	0.001279	0.001379	0.024031	0.027006	0.009425	0.021389394	0.018187	0.003024111	0.001865	0.013743	0.043983
A	PM25_STREX	0.00178	0.002977	0.001966	0.002041	0.000192	7.15E-05	8.55E-05	1.5634E-06	0.000188	0.000120578	0.00344	1.95E-05	0.000246
A	ROG_DIURN	0.299353	0.752967	0.327137	0.426268	0.117986	0.053576	0.019038	0.000405358	0.085609	0.037503974	4.852721	0.010888	32.01
A	ROG_HTSK	0.086501	0.205117	0.089941	0.110574	0.029867	0.013787	0.004846	0.000114752	0.02036	0.012393092	3.545394	0.00347	8.173138
A	ROG_IDLEX	0	0	0	0	0.019693	0.015548	0.024391	0.274576937	0.050259	0	0	0.101012	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.008066	0.034202	0.011938	0.016438	0.132158	0.130391	0.026831	0.022165085	0.059254	0.036714064	1.338618	0.051338	0.08921
A	ROG_RUNLS	0.230148	0.608059	0.251253	0.331578	0.171946	0.073579	0.038929	0.001054757	0.096122	0.034092953	3.921125	0.006427	0.19706
A	ROG_STREX	0.310232	0.663164	0.406337	0.552335	0.09839	0.054044	0.039593	4.13462E-07	0.118712	0.092213413	1.651793	0.011905	0.10506
A	SO2_IDLEX	0	0	0	0	8.96E-05	0.000137	0.001515	0.006093226	0.000902	0	0	0.001541	0
A	SO2_RUNEX	0.00243	0.003226	0.00327	0.003987	0.007452	0.008057	0.011368	0.015211399	0.01435	0.0075472	0.001893	0.009703	0.016026
A	SO2_STREX	0.00064	0.000884	0.000854	0.001033	0.000142	8.82E-05	7.21E-05	4.55589E-07	0.000188	0.00020404	0.000547	1.84E-05	0.000204
A	TOG_DIURN	0.299353	0.752967	0.327137	0.426268	0.117986	0.053576	0.019038	0.000405358	0.085609	0.037503974	4.852721	0.010888	32.01
A	TOG_HTSK	0.086501	0.205117	0.089941	0.110574	0.029867	0.013787	0.004846	0.000114752	0.02036	0.012393092	3.545394	0.00347	8.173138
A	TOG_IDLEX	0	0	0	0	0.027476	0.020869	0.039115	0.528167959	0.065495	0	0	0.216061	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.011737	0.049865	0.017401	0.023886	0.158714	0.150729	0.038261	0.107394747	0.078786	0.638947864	1.585491	0.272864	0.114539
A	TOG_RUNLS	0.230148	0.608059	0.251253	0.331578	0.171946	0.073579	0.038929	0.001054757	0.096122	0.034092953	3.921125	0.006427	0.19706
A	TOG_STREX	0.339665	0.726081	0.444888	0.604737	0.107725	0.059172	0.04335	4.52688E-07	0.129975	0.10096208	1.794952	0.013035	0.115028
A	N2O_IDLEX	0	0	0	0	0.000874	0.001816	0.025119	0.115639802	0.013368	0	0	0.026507	0
A	N2O_RUNEX	0.004398	0.011094	0.006334	0.008964	0.055139	0.086578	0.158494	0.270868532	0.148758	0.171601889	0.043854	0.1516	0.077983
A	N2O_STREX	0.030981	0.041877	0.037747	0.041709	0.028101	0.017917	0.005137	2.73578E-05	0.018136	0.023940172	0.009738	0.002397	0.030539

CalEEMod EMFAC2021 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.496277	0.042517	0.213536	0.139361	0.044626	0.012312	0.023102	0.018467	0.001807	0.00135	0.004322	0.0012	0.001123

Attachment 4: Construction TAC Emissions & Health Risk Calculations

Ceres Santa Rosa Kitchen

DPM Emissions and Modeling Emission Rates - Without Controls

Construction Year	Activity	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)	
			(ton/year)	(lb/yr)	(lb/hr)			(g/s)
2024	Construction	DPM_CONST	0.0491	98.2	0.04289	5.40E-03	6188.1	8.73E-07
		<i>Construction Hours</i>						
		Weekday hr/day =	10	(7am - 5pm)				
		days/yr =	Varies					
		hours/year =	Varies					

Ceres Santa Rosa Kitchen

PM2.5 Fugitive Dust Emissions for Modeling - Without Controls

Construction Year	Activity	Area Source	PM2.5 Emissions			Modeled Area (m ²)	PM2.5 Emission Rate (g/s/m ²)	
			(ton/year)	(lb/yr)	(lb/hr)			(g/s)
2024	Construction	PM25_CONST	0.0100	20.0	0.00872	1.10E-03	6188.1	1.77E-07
		<i>Construction Hours</i>						
		Weekday hr/day =	10	(7am - 5pm)				
		days/yr =	Varies					
		hours/year =	Varies					

Ceres Santa Rosa Kitchen, Santa Rosa, CA - Construction Impacts
Maximum DPM Cancer Risk and PM2.5 Calculations
Impacts at Off-Site Residential Receptors - 1.5 meter receptor height

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

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

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

Where: C_{air} = concentration in air (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Exposure Information			Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult			Adult Cancer Risk (per million)	Maximum		
		Age	DPM Conc (ug/m3)				Modeled		Age Sensitivity Factor		Fugitive Total		
			Year	Annual			Year	Annual			PM2.5	PM2.5	
0	0.25	-0.25 - 0*	2024	0.0313	10	0.43							
1	1	0 - 1	2024	0.0313	10	5.14	2024	0.0313	1	0.09	0.006	0.0066	0.038
2	1	1 - 2	2025	0.0000	10	0.00	2025	0.0000	1	0.00	0.000	0.0000	0.0000
3	1	2 - 3	2026	0.0000	3	0.00	2026	0.0000	1	0.00			
4	1	3 - 4	2027	0.0000	3	0.00	2027	0.0000	1	0.00			
5	1	4 - 5	2028	0.0000	3	0.00	2028	0.0000	1	0.00			
6	1	5 - 6	2029	0.0000	3	0.00	2029	0.0000	1	0.00			
7	1	6 - 7	2030	0.0000	3	0.00	2030	0.0000	1	0.00			
8	1	7 - 8	2031	0.0000	3	0.00	2031	0.0000	1	0.00			
9	1	8 - 9	2032	0.0000	3	0.00	2032	0.0000	1	0.00			
10	1	9 - 10	2033	0.0000	3	0.00	2033	0.0000	1	0.00			
11	1	10 - 11	2034	0.0000	3	0.00	2034	0.0000	1	0.00			
12	1	11 - 12	2035	0.0000	3	0.00	2035	0.0000	1	0.00			
13	1	12 - 13	2036	0.0000	3	0.00	2036	0.0000	1	0.00			
14	1	13 - 14	2037	0.0000	3	0.00	2037	0.0000	1	0.00			
15	1	14 - 15	2038	0.0000	3	0.00	2038	0.0000	1	0.00			
16	1	15 - 16	2039	0.0000	3	0.00	2039	0.0000	1	0.00			
17	1	16-17	2040	0.0000	1	0.00	2040	0.0000	1	0.00			
18	1	17-18	2041	0.0000	1	0.00	2041	0.0000	1	0.00			
19	1	18-19	2042	0.0000	1	0.00	2042	0.0000	1	0.00			
20	1	19-20	2043	0.0000	1	0.00	2043	0.0000	1	0.00			
21	1	20-21	2044	0.0000	1	0.00	2044	0.0000	1	0.00			
22	1	21-22	2045	0.0000	1	0.00	2045	0.0000	1	0.00			
23	1	22-23	2046	0.0000	1	0.00	2046	0.0000	1	0.00			
24	1	23-24	2047	0.0000	1	0.00	2047	0.0000	1	0.00			
25	1	24-25	2048	0.0000	1	0.00	2048	0.0000	1	0.00			
26	1	25-26	2049	0.0000	1	0.00	2049	0.0000	1	0.00			
27	1	26-27	2050	0.0000	1	0.00	2050	0.0000	1	0.00			
28	1	27-28	2051	0.0000	1	0.00	2051	0.0000	1	0.00			
29	1	28-29	2052	0.0000	1	0.00	2052	0.0000	1	0.00			
30	1	29-30	2053	0.0000	1	0.00	2053	0.0000	1	0.00			
Total Increased Cancer Risk						5.56				0.09			

* Third trimester of pregnancy

Attachment 5: Cumulative Health Risks

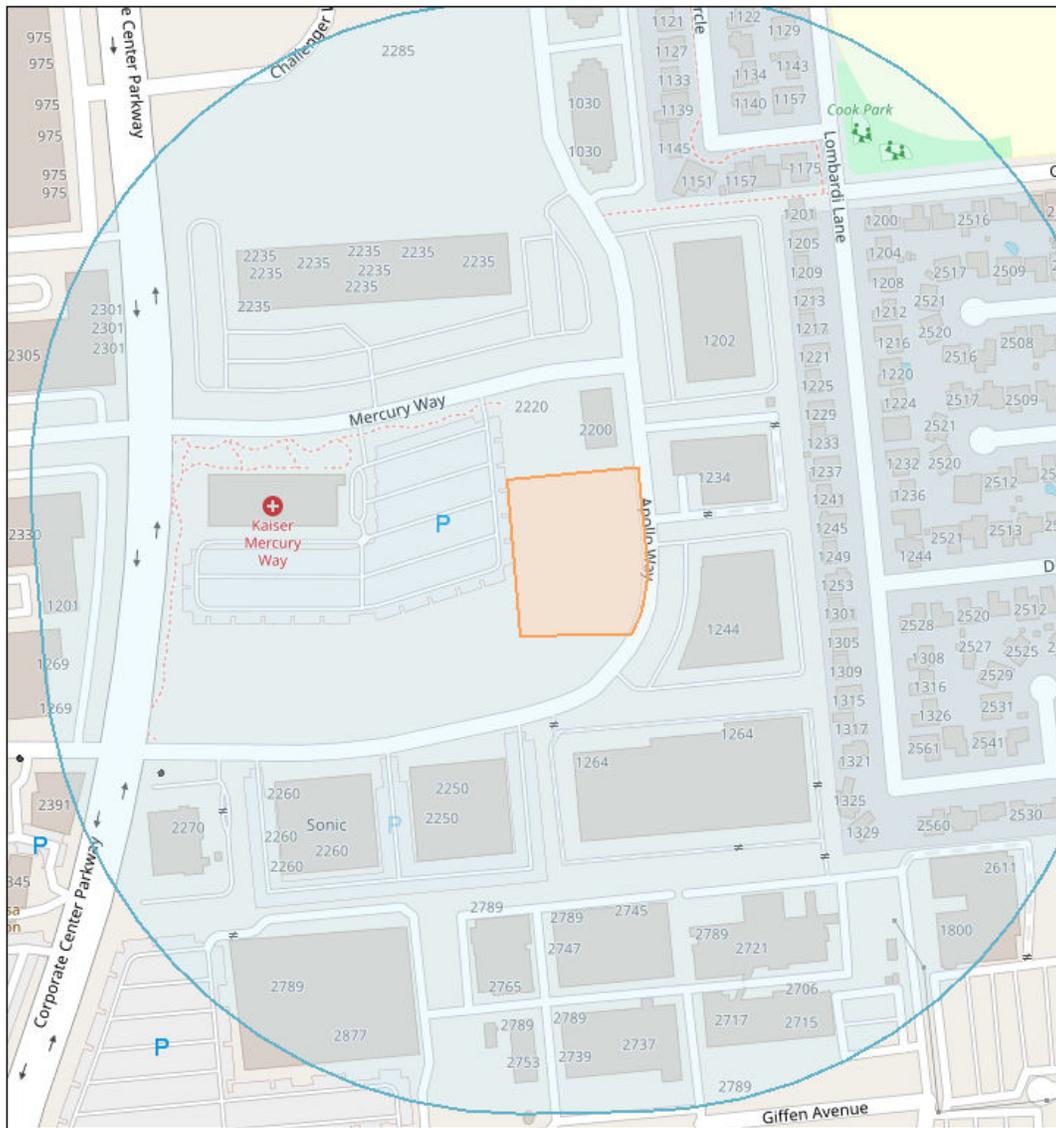


Screening Report

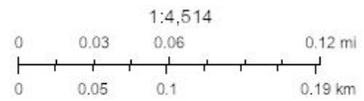
Area of Interest (AOI) Information

Area : 4,421,597.82 ft²

Jul 29 2022 14:39:34 Mountain Daylight Time



- Permitted Stationary Sources



Summary

Name	Count	Area(ft ²)	Length(ft)
Permitted Stationary Sources	1	N/A	N/A

Permitted Stationary Sources

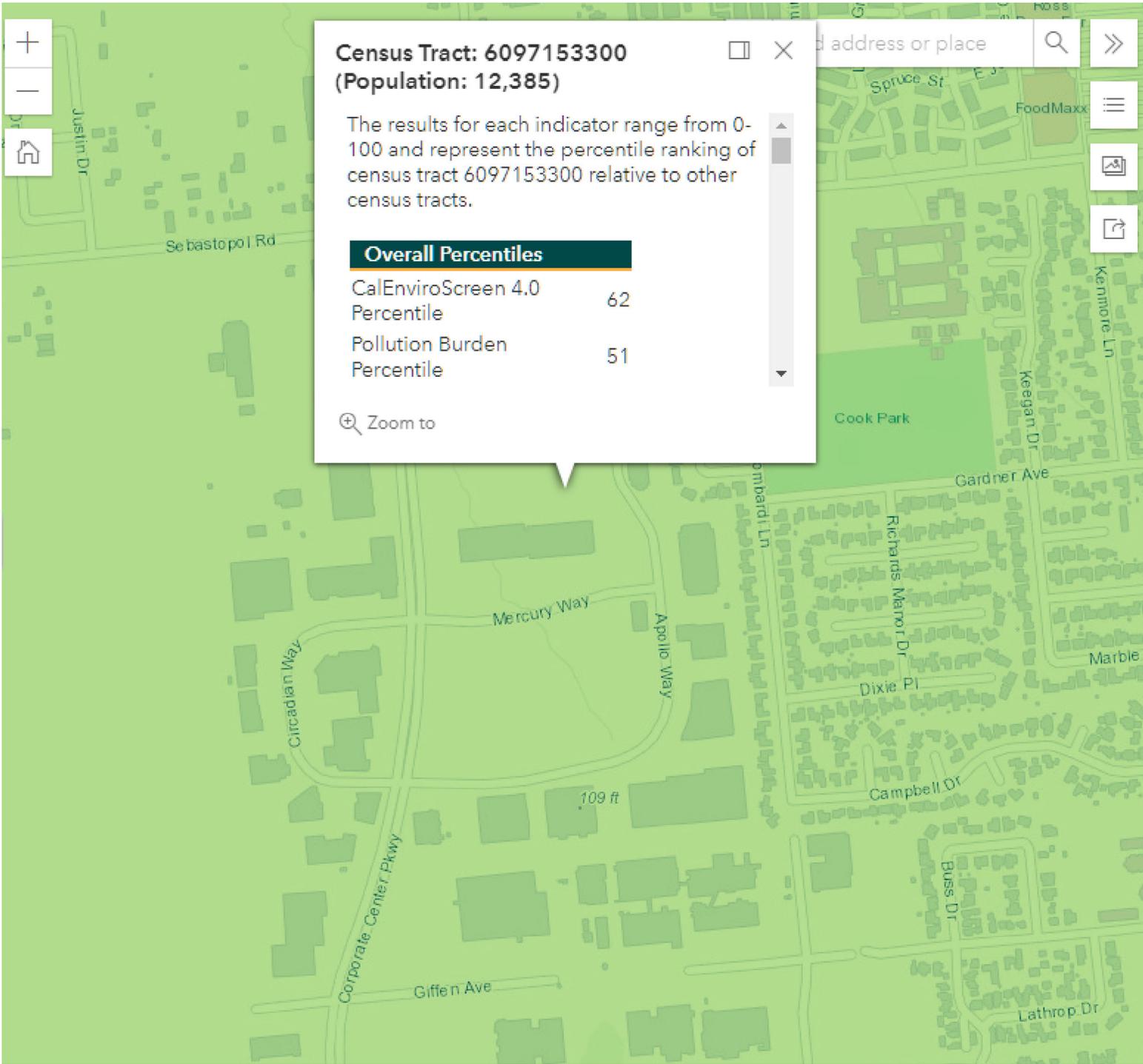
#	FacID	FacName	Address	City	Street
1	16184	Sprint United Management Co	2270 Apollo Way	Santa Rosa	CA

#	Zip	County	Latitude	Longitude	Details
1	95,407.00	Sonoma	38.42	-122.75	Generator

#	NAICS	Sector	Sub_Sector	Industry	ChronicHI
1	221,112.00	Utilities	Utilities	Fossil Fuel Electric Power Generation	0.0027044

#	PM2_5	Cancer Risk {expression/expr0}	Chronic Hazard Index {expression/expr1}	PM2.5 {expression/expr2}	Count
1	0.0126702	10.064	0.003	0.013	1

NOTE: A larger buffer than 1000 feet may be warranted depending on proximity to significant sources.



Census Tract: 6097153300
(Population: 12,385)

The results for each indicator range from 0-100 and represent the percentile ranking of census tract 6097153300 relative to other census tracts.

Overall Percentiles

CalEnviroScreen 4.0 Percentile	62
Pollution Burden Percentile	51

Zoom to



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	NA
Contact Name	NA
Affiliation	Illingworth & Rodkin, Inc.
Phone	NA
Email	NA
Project Name	Ceres
Address	Appollo Way
City	Santa Rosa
County	Sonoma
Type (residential, commercial, mixed use, industrial, etc.)	Industrial
Project Size (# of units or building square feet)	18-ksf

Comments: Information obtained from 2020 GIS database. No SSIF required.

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 Matthew Hanson at 415-749-8733, or mhanson@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (feet) or MEI ¹	Plant No.	Facility Name	Address	Cancer Risk ²	Hazard Risk ²	PM _{2.5} ²	Source No. ³	Type of Source ⁴	Fuel Code ⁵	Status/Comments	Distance Adjustment Multiplier to MEI	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
1,538	16184	Sprint United Management Co	2270 Apollo Way	10.06	0.003	0.01		Generator	98	2020 Dataset	0.04	0.40	0.0001	0.001
												0.00	0.000	0.000

Construction MEI

Attachment 6: City of Santa Rosa's New Development Checklist

APPENDIX E: CAP NEW DEVELOPMENT CHECKLIST

To ensure new development projects are compliant with the City’s Climate Action Plan, the following checklist has been developed. This checklist should be filled out for each new project, subject to discretionary review, to allow new development to find a less than significant impact for greenhouse gas emissions in the environmental review process.

#	Description	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
1.1.1	Comply with CALGreen Tier 1 standards*				
1.1.3	After 2020, all new development will utilize zero net electricity*				
1.3.1	Install real-time energy monitors to track energy use*				
1.4.2	Comply with the City's tree preservation ordinance*				
1.4.3	Provide public & private trees in compliance with the Zoning Code*				
1.5	Install new sidewalks and paving with high solar reflectivity materials*				
2.1.3	Pre-wire and pre-plumb for solar thermal or PV systems				
3.1.2	Support implementation of station plans and corridor plans				
3.2.1	Provide on-site services such as ATMs or dry cleaning to site users				
3.2.2	Improve non-vehicular network to promote walking, biking				
3.2.3	Support mixed-use, higher-density development near services				
3.3.1	Provide affordable housing near transit				
3.5.1	Unbundle parking from property cost				
3.6.1	Install calming features to improve ped/bike experience				
4.1.1	Implement the Bicycle and Pedestrian Master Plan				
4.1.2	Install bicycle parking consistent with regulations*				
4.1.3	Provide bicycle safety training to residents, employees, motorists				
4.2.2	Provide safe spaces to wait for bus arrival				

#	Description	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
4.3.2	Work with large employers to provide rideshare programs				
4.3.3	Consider expanding employee programs promoting transit use				
4.3.4	Provide awards for employee use of alternative commute options				
4.3.5	Encourage new employers of 50+ to provide subsidized transit passes*				
4.3.7	Provide space for additional park-and-ride lots				
4.5.1	Include facilities for employees that promote telecommuting				
5.1.2	Install electric vehicle charging equipment				
5.2.1	Provide alternative fuels at new refueling stations*				
6.1.3	Increase diversion of construction waste*				
7.1.1	Reduce potable water use for outdoor landscaping*				
7.1.3	Use water meters which track real-time water use*				
7.3.2	Meet on-site meter separation requirements in locations with current or future recycled water capabilities*				
8.1.3	Establish community gardens and urban farms				
9.1.2	Provide outdoor electrical outlets for charging lawn equipment				
9.1.3	Install low water use landscapes*				
9.2.1	Minimize construction equipment idling time to 5 minutes or less*				
9.2.2	Maintain construction equipment per manufacturer's specs*				
9.2.3	Limit GHG construction equipment emissions by using electrified equipment or alternative fuels*				

**To be in compliance with the CAP, all measures denoted with an asterisk are required in all new development projects unless otherwise specified. If a project cannot meet one or more of the mandatory requirements, substitutions may be made from other measures listed at the discretion of the Community Development Director.*

DISCUSSION (PLEASE LIST POLICY #)

[Empty text area for discussion]