Appendix B

Air Quality and Greenhouse Gas Emissions

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March 7, 2022 Project 05034.00001.001

Mr. Dennis Clover
3241C Fruitridge Road
Yuba City, CA 95993

Subject: California Truck and Trailer Repair Shop Project Air Quality and Greenhouse Gas Emissions Assessment

Dear Mr. Clover:

HELIX Environmental Planning, Inc. (HELIX) has assessed the air quality and greenhouse gas (GHG) emissions associated with the construction and operation of the proposed California Truck and Trailer Repair Shop Project (project), including a health risk assessment (HRA) to evaluate potential community health risks from the project's on-site emissions. Analysis within this report was prepared to support impact analysis pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Section 15000 et seq. of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento (City). The analysis reviews the discussions of potential impacts and irreversible significant effects analyzed in the 2035 General Plan Master EIR to determine their adequacy for the project (see CEQA Guidelines Section 15178(b),(c)) and identifies any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance, if any (City 2014; City 2015a).

PROJECT LOCATION

The project site is comprised of 2.38 acres (Assessor's Parcel Numbers 250-0025-060 and 250-0025-005) located at 121 Morrison Avenue in the City of Sacramento, California. Access would be provided via a 45-foot-wide driveway from Harris Avenue on the north side of the project site. See Figure 1, *Regional Location*, and Figure 2, *Surrounding Land Uses*, included as attachments to this letter.

PROJECT DESCRIPTION

The project would develop a 9,100 square foot (SF) truck and trailer repair facility and associated parking lot. The building would be comprised of a two-story, 3,500 SF office and administrative area and three truck repair bays totaling 5,600 SF. The building would have a maximum height of 30 feet. The repair bays would be accessed by rollup doors, 16 feet wide by 16 feet tall, located on the west and east end of each bay. The parking lot would be comprised of 28 truck/trailer parking spaces secured with a fence/gate in the western portion of the project site, and 31 vehicle parking spaces west and south of

the proposed building. A six-foot high solid masonry wall, set back 25 feet from the sidewalks, would be constructed along Opportunity Street and Morrison Avenue. A six-foot-high wrought iron and masonry wall, set back 25 feet from the sidewalk, would be constructed along Harris Avenue. Additional site improvements would include lighting, a trash enclosure, a security shack, and landscaping. See Figure 3, *Site Plan*.

Project construction would involve site preparation (clearing and grubbing), grading, wet and dry utility installation, building construction, paving, and landscaping improvements. The site is currently vacant, and no demolition would be required.

The project is anticipated to employ up to 6 people and service 5 to 8 trucks per day. The project would operate from 8:00 a.m. to 5:30 p.m., Monday through Saturday.

AIR QUALITY ANALYSIS

Environmental Setting

The City of Sacramento lies within the Sacramento Valley Air Basin (SVAB). The SVAB consists of all or parts of eleven counties spanning from Solano and Sacramento counties to the south, and Shasta County to the north. The Sacramento Metropolitan Air Quality Management District (SMAQMD) is responsible for implementing emissions standards and other requirements of federal and state laws for Sacramento County, including the project area.

The climate of the SVAB is characterized by hot dry summers and mild rainy winters. During the year the temperature may range from 20 to 115 degrees Fahrenheit with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches with snowfall being very rare. The prevailing winds are moderate in strength and vary from moist breezes from the south to dry land flows from the north. The mountains surrounding the Sacramento Valley create a barrier to airflow, which can trap air pollutants in the valley when certain meteorological conditions are right, and a temperature inversion (areas of warm air overlying areas of cooler air) exists. Air stagnation in the autumn and early winter occurs when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows pollutants to become concentrated in the air. The surface concentrations of pollutants are highest when these conditions are combined with increased levels of smoke or when temperature inversions trap cool air, fog, and pollutants near the ground. The ozone season (May through October) in the SVAB is characterized by stagnant morning air or light winds with the breeze arriving in the afternoon out of the southwest from the San Francisco Bay. Usually, the evening breeze transports the airborne pollutants to the north out of the SVAB. During about half of the days from July to September, however, a phenomenon called the “Schultz Eddy” prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern and pollutants to circle back southward. This phenomenon’s effect exacerbates the pollution levels in the area and increases the likelihood of violating the federal and state air quality standards (SMAQMD 2020).

Regulatory Setting

Air Quality

Criteria Pollutants

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The U.S. Environmental Protection Agency (USEPA), the federal agency that administrates the Federal Clean Air Act (CAA) of 1970, as amended in 1990, has established national ambient air quality standards (NAAQS) for several air pollution constituents known as criteria pollutants, including: ozone (O_3); carbon monoxide (CO); coarse particulate matter (PM_{10}; particles 10 microns or less) and fine particulate matter ($PM_{2.5}$; particles 2.5 microns or less); sulfur dioxide (SO_2); and lead (Pb). As permitted by the Clean Air Act, California has adopted the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air constituents. Ground-level ozone is not emitted directly into the environment but is generated from complex chemical and photochemical reactions between precursor pollutants, primarily reactive organic gases (ROGs; also known as volatile organic compounds [VOC]), [1] and oxides of nitrogen (NO_X). PM_{10} and $PM_{2.5}$ are generated from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. In addition, PM_{10} and $PM_{2.5}$ can also be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere.

The California Air Resources Board (CARB) is required to designate areas of the state as attainment, nonattainment, or unclassified for the ambient air quality standards. An "attainment" designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A "nonattainment" designation indicates that a pollutant concentration violated the standard at least once. An "unclassified" designation indicates that insufficient data was available to determine the status. The air quality attainment status of Sacramento County is shown in Table 1, *Sacramento County Attainment Status*.

Table 1
SACRAMENTO COUNTY ATTAINMENT STATUS

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone (1 hour)	Nonattainment	No Federal Standard
Ozone (8 hour)	Nonattainment	Nonattainment
Coarse Particulate Matter (PM_{10})	Nonattainment	Attainment
Fine Particulate Matter ($PM_{2.5}$)	Attainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide ($N0_2$)	Attainment	Attainment

[1] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

Pollutant	State of California Attainment Status	Federal Attainment Status
Lead	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Source: SMAQMD 2020.

Sacramento County is designated as nonattainment for the state and federal ozone standards, the state PM_{10} standards, and the federal $PM_{2.5}$ standards. The SMAQMD is responsible for implementing emissions standards and other requirements of federal and state laws in Sacramento County. Attainment plans for meeting the federal air quality standards are incorporated into the State Implementation Plan (SIP), which is subsequently submitted to the USEPA, the federal agency that administrates the Federal CAA of 1970, as amended in 1990. The current air quality plan applicable to the project, the *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (Regional Ozone Plan), was developed by the SMAQMD and adjacent air district to describe how the air districts in and near the Sacramento metropolitan area will continue the progress toward attaining state and national ozone air quality standards (SMAQMD 2017).

Toxic Air Contaminants

Toxic air contaminants (TAC) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term chronic health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe, and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

The Health and Safety Code (§39655[a]) defines TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." All substances that are listed as hazardous air pollutants pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Sec. 7412[b]) are designated as TACs. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (CARB 2021a). Because of their extremely small size, these particles can be inhaled and eventually trapped in

the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2021a).

Greenhouse Gases

Global climate change refers to changes in average climatic conditions on Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as greenhouse gasses (GHGs) because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with: burning of fossil fuels during motorized transport; electricity generation; natural gas consumption; industrial activity; manufacturing; and other activities such as deforestation, agricultural activity, and solid waste decomposition.

The GHGs defined under California's Assembly Bill (AB) 32, described below, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Estimates of GHG emissions are commonly presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential (GWP). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. GHG emissions quantities in this analysis are presented in metric tons (MT) of CO_2e. For consistency with United Nations Standards, modeling and reporting of GHGs in California and the U.S. use the GWPs defined in the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (IPCC 2007): CO_2 – 1; CH_4 – 25; N_2O – 298.

GHG Reduction Regulations and Plans

The primary GHG reduction regulatory legislation and plans (applicable to the project) at the State, regional, and local levels are described below. Implementation of California's GHG reduction mandates is primarily under the authority of CARB at the state level, SMAQMD and the Sacramento Area Council of Governments (SACOG) at the regional level, and the City at the local level.

Executive Order S-3-05: On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Executive Orders are not laws and can only provide the governor's direction to state agencies to act within their authority to reinforce existing laws.

Assembly Bill 32 – Global Warming Solution Act of 2006: The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed by AB 32 to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

Executive Order B-30-15: On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California is on track to meet or exceed the target of reducing GHGs emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

Senate Bill 32: Signed into law by Governor Brown on September 8, 2016, Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

California Air Resources Board: On December 11, 2008, the CARB adopted the Climate Change Scoping Plan (Scoping Plan) as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. Measures applicable to development projects include those related to energy-efficiency building and appliance standards, the use of renewable sources for electricity generation, regional transportation targets, and green building strategy. Relative to transportation, the Scoping Plan includes nine measures or recommended actions related to reducing vehicle miles traveled (VMT) and vehicle GHGs through fuel and efficiency measures. These measures would be implemented statewide rather than on a project-by-project basis (CARB 2008).

In response to EO B-30-15 and SB 32, all state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue driving down emissions (CARB 2014). In December 2017, CARB adopted the 2017 Climate Change Scoping Plan Update, the Strategy for Achieving California's 2030 Greenhouse Gas Target, to reflect the 2030 target set by EO B-30-15 and codified by SB 32 (CARB 2017).

Sacramento Area Council of Governments: As required by the Sustainable Communities and Climate Protection Act of 2008 (SB 375), SACOG has developed the 2020 Metropolitan Transportation Plan and Sustainable Communities Strategy. This plan seeks to reduce GHG and other mobile source emissions through coordinated transportation and land use planning to reduce VMT.

City of Sacramento: To meet the statewide GHG emission targets, the City adopted the City of Sacramento Climate Action Plan (CAP) on February 14, 2012 to comply with AB 32. The CAP identified how the City and the broader community could reduce Sacramento's GHG emissions and included reduction targets, strategies, and specific actions. In 2015, the City of Sacramento adopted the 2035 General Plan Update. The update incorporated measures and actions from the CAP into Appendix B, General Plan CAP Policies and Programs, which includes citywide policies and programs that are supportive of reducing GHG emissions (City 2015b).

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015).

Residential areas are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children and infants are considered more susceptible to health effects of air pollution due to their immature immune systems, developing organs, and higher breathing rates. As such, schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities.

The closest existing sensitive receptors to the project site are single-family residences across Morisson Drive south of the project site, approximately 80 feet from the project parking lot and approximately 150 feet from the project building, see Figure 4, *Cancer Risk*, attached to this letter report. The closest school (kindergarten up to 12th grade) to the project site is the Glenwood Elementary School approximately 2,100 feet (0.4 miles) to the north. The closest daycare center to the school is the Morey Avenue Early Childhood Development Center, approximately 600 feet south of the project site.

Methods

Criteria Pollutant Emissions

Criteria pollutant and precursor emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0 CalEEMod is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod was developed by CAPCOA in collaboration with the California air quality management and pollution control districts, primarily the SCAQMD. The calculation methodology, source of emission factors used, and default data is described in the CalEEMod User's Guide, and Appendices A, D, and E (CAPCOA 2021). The complete model output files are included as Attachment A to this report.

Construction modeling assumes the longest anticipated schedule reported by the project applicant: site 3 weeks; preparation; 5 weeks grading; 3 weeks underground utilities; 6 weeks building construction; and 2 weeks paving. The project building would be prefabricated and would not require exterior

painting. Interior painting was assumed to occur concurrently with the last 3 weeks of building construction. Construction equipment assumptions were based on estimates from the project applicant and CalEEMod defaults. An estimated 400 cubic yards (CY) of vegetation/debris was included in the modeling as material export during site preparation. 400 CY of aggregate import for the building pad was included as material import during grading. 1,280 CY of aggregate and asphalt was included as material import during paving. Construction emissions modeling assumes implementation of the SMAQMD Basic Construction Emissions Control Practices.

Mobile emissions were modeled assuming the maximum daily employees and client trucks estimated by the project applicant (6 employees, 8 client trucks), and 2 vendor deliveries, a total of 32 one-way trips per day. The fleet mix assumed automobiles and light trucks for worker trips, heavy duty trucks for client trips, and medium duty trucks for vendor trips.

Emissions resulting from energy use, water use, and solid waste generation were modeled using CalEEMod defaults for an automobile care center.

Diesel Particulate Matter Health Risks

Potential health risks to nearby sensitive receptors from the emission of DPM on the project site during operation of the proposed truck and trailer repair shop were analyzed in accordance with the OEHHA Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2015).

DPM Emissions

DPM emissions from truck idling and circulating with the project site were estimated based on emissions factors calculated from the CARB's EMFAC2021 Emissions Inventory for heavy duty trucks traveling at 5 miles per hour (mph; CARB 2021b). Maximum hourly emissions assume 3 trucks idling and circulating on the project site within the same hour. Annual average emissions assume 8 trucks per day, 6 days per week, 52 weeks per year. The emissions inventory assumes implementation of all applicable USEPA and CARB regulations (the Best Available Control Technology [BACT] for DPM emissions). The DPM calculation sheet is included as Attachment B to this letter.

Dispersion Modeling

Localized concentrations of TACs were modeled using Lakes AERMOD View version 10.0.1. The Lakes program utilizes USEPA's AERMOD gaussian air dispersion model version 19191. Plot files from AERMOD using unitized emissions (one gram per second) from the truck idling points and truck circulation paths were imported into CARB's Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 21081. The ADMRT calculated ground-level concentrations of TACs utilizing the imported plot files and the annual and hourly emissions inventory. The Lakes AERMOD and ADMRT input/output reports are provided in Attachment B to this letter.

Source Parameters

Truck idling and circulation on the project site was modeled as point sources for truck idling and volume line sources for truck circulation. Each truck was assumed to enter the site on the project driveway, travel to the western parking area, idle for 5 minutes, travel to the apron west of the shop building, idle

for a further 5 minutes, exit the shop building on the east side and travel back to the western parking area, idle another 5 minutes, then depart the project site on the project driveway. Truck idling point source parameters assumes a release height of 12.5 feet and the stack parameters recommended by the San Joaquin Valley Air Pollution Control District (SJVAPCD) for modeling truck idling: stack diameter 0.1 meters (0.33 feet); exit gas temperature 366 degrees Kelvin (199 degrees Fahrenheit); gas exit velocity 51.71 meters per second (115 feet per second; SJVAPCD 2015). Truck circulation routes were modeled as a volume line source following the recommendations of the USEPA Haul Road Workgroup Final Report assuming an average truck height of 12 feet and an average truck width of 8.5 feet (USEPA 2011). The project building and the existing commercial building adjacent to the project site to the east were included in the modeling. Building downwash from point sources was modeled using the Building Profile Input Program (BPIP – a building preprocessing program for AERMOD).

Meteorological Data

SMAQMD provides pre-processed meteorological data suitable for use with AERMOD (SMAQMD 2019) for projects within Sacramento County. The available data set most representative of conditions in the project vicinity (similar terrain and surrounding development) was from the Sacramento Executive Airport station, approximately 8.5 miles southwest of the project site. The Sacramento Executive Airport set includes five years of data collected between 2014 to 2018. Rural dispersion coefficients were selected in the model to reflect the existing low population density and building characteristics typical of the immediate project vicinity. A wind rose for the Sacramento Executive Airport shows an average speed of 6.6 miles per hour from the south (Iowa Environmental Mesonet 2019). The wind rose graphic is included in Attachment B to this letter.

Terrain Data

United States Geological Survey (USGS) National Elevation Dataset (NED) files with a 30-meter resolution covering an area approximately 500 meters (1,640 feet) around the project site were used in the model to cover the analysis area. Terrain data was imported to the model using AERMAP (a terrain preprocessing program for AERMOD).

Receptor Modeling

To develop risk isopleths (linear contours showing equal level of risk) and ensure that the area of maximum impact was captured, receptors were placed in a cartesian grid 540 meters by 340 meters (approximately 1,772 feet by 1,115 feet), centered on the project site with a grid spacing of 10 meters (33 feet) and a receptor height (flagpole height) of 1.2 meters (4 feet) above the ground. Additional discrete receptors were placed at the residential property line of the 5 closest identified sensitive receptors (south of the project site) and the 5 closest off-site worker buildings (east, north, and west of the project site). See Figure 4 for the modeled discrete receptor locations.

Risk Determination

Health risks resulting from localized concentration of DPM emitted by trucks idling and circulation on the project site were estimated using the ADMRT. The latest cancer slope factors, chronic Recommended Exposure Limits (REL), acute RELs and exposure paths for DPM are included in the ADMRT. For the residential cancer risk, an exposure duration of 30 years was selected in accordance

with the OEHHA (2015) guidelines. In accordance with OEHHA guidelines, the model conservatively assumes that residents would be standing and breathing outdoors at the location of the property line closest to the project site every day between 17 and 21 hours per day (depending on the age group, starting with infants in utero in the third trimester of pregnancy) for 30 years. For off-site worker cancer risk, an exposure duration of 25 years was selected with an assumption of 8 hours per day, five days per week of exposure while standing outside. The mandatory minimum exposure pathways and the OEHHA derived breathing intake rate percentile method were selected. Because DPM does not have RELs for 8-hour chronic or acute health risks, only cancer risk and chronic health risks were evaluated.

Standards of Significance

To be consistent with the analysis in the 2035 General Plan Master EIR, air quality impacts may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- Construction emissions of NO_X above 85 pounds per day;
- Operational emissions of NO_X or ROG above 65 pounds per day;
- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- Any increase in PM_{10} concentrations, unless all feasible BACT and Best Management Practices (BMPs) have been applied, then increases above 80 pounds per day or 14.6 tons per year;
- Any increase in $PM_{2.5}$ concentrations, unless all feasible BACT and BMPs have been applied, then increases above 82 pounds per day or 15 tons per year;
- CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm); or
- Exposure of sensitive receptors to substantial pollutant concentrations.

Exposure of sensitive receptors to TACs would be significant if:

- TAC exposure results in health risks to sensitive receptors greater than an increased incremental cancer risk of 10 in 1 million or an acute or chronic health index of 1.

A project would have a significant effect relating to greenhouse gas emissions if it conflicts with the City's 2035 General Plan policies and programs supporting the City's GHG reduction targets, and if the project would result in construction or operational GHG emissions exceeding the SMAQMD's threshold of 1,100 MT CO2e per year.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR addressed the potential effects of the 2035 General Plan on ambient air quality and the potential for exposure of people, especially sensitive receptors such as children or the elderly, to unhealthful pollutant concentrations. See Master EIR, Chapter 4.2.

Policies in the 2035 General Plan in Environmental Resources were identified as mitigating potential effects of development that could occur under the 2035 General Plan. For example, Policy ER 6.1.1 calls for the City to work with CARB and the SMAQMD to meet state and federal air quality standards; Policy ER 6.1.2 requires the City to review proposed development projects to ensure that the projects incorporate feasible measures that reduce construction and operational emissions; Policy ER 6.1.4 and ER 6.1.11 calls for coordination of City efforts with SMAQMD; and Policy ER 6.1.15 requires the City to give preference to contractors using reduced-emission equipment.

The Master EIR identified exposure to sources of TACs as a potential effect. Policies in the 2035 General Plan would reduce the effect to a less-than-significant level. The policies include ER 6.1.4, requiring coordination with SMAQMD in evaluating exposure of sensitive receptors to TACs, and impose appropriate conditions on projects to protect public health and safety; as well as Policy LU 2.7.5 requiring extensive landscaping and trees along freeways fronting elevation and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

The Master EIR found that greenhouse gas emissions that would be generated by development consistent with the 2035 General Plan would contribute to climate change on a cumulative basis. Policies of the General Plan identified in the Master EIR that would reduce construction related GHG emissions include: ER 6.1.11 requiring coordination with SMAQMD to ensure feasible mitigation measures are incorporated to reduce GHG emissions, and ER 6.1.15. The 2035 General Plan incorporates the GHG reduction strategy of the 2012 CAP, which demonstrates compliance mechanism for achieving the City's adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.8 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emission reduction goals, ER 6.1.9 also commits the City to evaluate the feasibility and effectiveness of new GHG emissions reduction measures in view of the City's longer-term GHG emission reduction goal. The discussion of greenhouse gas emissions and climate change in the 2035 General Plan Master EIR are incorporated by reference in this letter. (CEQA Guidelines Section 15150; City 2014; City 2015a).

Impact Analysis

a) Result in construction emissions of NO_X above 85 pounds per day?

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

Construction emissions of NO_X during project construction would primarily result from the use of heavy diesel-powered off-road equipment and from vehicles (primarily diesel-powered trucks) traveling to and from the project site. Project construction emissions were modeled using CalEEMod, as described above. Maximum daily emissions of NO_X are predicted to occur during site preparations and would be

11.0 pounds pe day. Therefore, construction of the project would not result in emissions of NO_X in excess of 85 pounds per day and would have **no additional project-specific environmental effects** beyond what has been previously identified in the Master EIR.

b) Result in operational emissions of NO_X or ROG above 65 pounds per day?

The General Plan Maser EIR found this impact to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact (City 2014; City 2015a).

Emission sources of NO_X and ROG from long-term operation of the project would be exhaust from vehicles, exhaust from the occasional use of landscape maintenance equipment, and occasional ROG emissions from the use of solvents and degreasers and the reapplication of paint for building and parking lot maintenance.

Project operational emissions were modeled using CalEEMod, as described above. The results of the modeling show that operation of the project would produce a maximum of 0.7 pounds per day of NO_X and 0.3 pounds per day of ROG. Therefore, operation of the project would not result in emissions of NO_X or ROG in excess of 65 pounds per day and would have **no additional project-specific environmental effects** beyond what has been previously identified in the Master EIR.

c) Violate any air quality standard or have a cumulatively considerable contribution to an existing or projected air quality violation?

The General Plan Master evaluated impacts related to emissions of ozone precursors (ROG and NO_X) and particulate matter (PM_{10} and $PM_{2.5}$) and found impacts to be to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact. The General Plan Master did not evaluate impacts related to the cumulative contribution of emissions (City 2014; City 2015a).

The pollutants of primary concern in Sacramento County are those related to the NAAQS and CAAQS nonattainment designations discussed above: NO_X and ROG (because they are ozone precursors), PM_{10} and $PM_{2.5}$. As discussed in questions A and B, above, and question D, below, construction and operation of the project would not result in emissions in excess of the SMAQMD thresholds which were developed to ensure that a development project's contribution to regional air quality would not result in a new air quality standard violation or result in a cumulatively considerable contribution to an existing air quality violation. Therefore, the project would have **no additional project-specific environmental effects** beyond what has been previously identified in the Master EIR.

d) Result in PM_{10} and $PM_{2.5}$ concentrations that exceed SMAQMD requirements?

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

The project would result in PM_{10} and $PM_{2.5}$ emissions during construction in the form of fugitive dust from earth moving and disturbing activities and in the form exhaust emissions, primarily from diesel powered off-road equipment and on-road trucks. According to the SMAQMD's CEQA Guide Thresholds, projects that result in less than 80 pounds per day of PM_{10} and less than 82 pounds per day of $PM_{2.5}$ during construction would have less than significant impacts. However, all construction projects, regardless of the emission levels, are required to implement the SMAQMD's Basic Construction Emission

Control Practices (also known as BMPs; SMAQMD 2019). The BMPs satisfy the requirements of SMAQMD's Rule 403, Fugitive Dust, which requires every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates (SMAQMD 1977). The results of the modeling show that construction of the project would produce a maximum of 3.2 pounds per day of PM_{10} and 1.8 pounds per day of $PM_{2.5}$.

The project would result in PM_{10} and $PM_{2.5}$ emissions during operation in the form of fugitive dust, brake dust, and vehicle exhaust from vehicles traveling to and from the project site. The results of the modeling show that operation of the project would produce less than 0.1 pounds per day of PM_{10} and $PM_{2.5}$.

Therefore, construction or operation of the project would not result in emissions of PM_{10} or $PM_{2.5}$ in excess of the SMAQMD thresholds and would have **no additional project-specific environmental effects** beyond what has been previously identified in the Master EIR.

e) Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm)?

The General Plan Master EIR did not evaluate impacts from CO concentrations (City 2014; City 2015a).

As described in the existing air quality discussion, above, Sacramento County is designated in attainment for the CO NAAQS and CAAQS. According to the SMAQMD's CEQA Guide (SMAQMD 2020): "Other pollutants such as CO, sulfur dioxide and lead are of less concern because operational activities are not likely to generate substantial quantities of these criteria air pollutants and the Sacramento Valley Air Basin has been in attainment for these criteria air pollutants for multiple years." Localized concentrations of CO, or "hot spots," are primarily of concern for heavily congested roadways with stop-ang-go traffic, particularly in areas with limited vertical mixing such as tunnels, long underpasses, or below-grade roadways. Because the project's contribution to area traffic would be limited a maximum of 32 trucks and cars per day, the project would not result in CO localized concentrations that exceed the CAAQS. The impact would be **less than significant**.

f) Result in exposure of sensitive receptors to substantial pollutant concentrations?

The General Plan Master EIR evaluated impact to sensitive receptors resulting from exposure to substantial concentrations of TACs and found the impact to be less than significant, and no mitigation would be required. The General Plan Master evaluated impacts related to emissions of ozone precursors (ROG and NO_X) and particulate matter (PM_{10} and $PM_{2.5}$) and found impacts to be to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact. The General Plan Master EIR did not evaluate impacts from exposure of sensitive receptors to substantial concentrations of other criteria pollutants (City 2014; City 2015a).

As described above, the closest existing sensitive receptors to the project site are single-family residences across Morrison Drive south of the project site, approximately 80 feet from the project parking lot and approximately 150 feet from the project building. As discussed in question E above, and question G, below, sensitive receptors would not be exposed to substantial pollutant concentrations and the project would have **no additional project-specific environmental effects** beyond what has been previously identified in the Master EIR.

g) Result in TAC exposures creating an increased cancer risk of 10 in 1 million for stationary sources, or substantially increase health risks from exposure to TACs from mobile sources?

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

The project would add a maximum of 20 daily truck trips (16 client truck trips and 4 vendor truck trips) to area roads and would not contribute substantially to increased health risks from exposure to TACs from mobile sources.

The only significant source of TACs on the project site would be DPM from off-road equipment during construction and from trucks idling and circulating on the project site during long-term operation. Due to the small size of the project, short duration of construction, and intermittent nature of constructions activities, construction of the project would not result in substantially increased health risks due to prolonged exposure to concentrations of DPM. A health risk assessment was conducted to determine the long-term community health risks associated with exposure to DPM from operation of the project, as described in the Methods section, above.

Health risks associated with cancer from development projects are estimated using the incremental excess cancer risk expressed as cancer cases per one million exposed individuals. The incremental excess cancer risk is an estimate of the chance a person exposed to specific sources of a TACs may have of developing cancer from that exposure beyond the individual's risk of developing cancer from existing background levels of pollutants in the ambient air. For context, the average cancer risk from TACs in the ambient air for an individual living in an urban area of California is 830 in 1 million (CARB 2015). Cancer risk estimates do not mean, and should not be interpreted to mean, that a person will develop cancer from estimated exposures to toxic air pollutants.

Health risks associated with chronic and acute effects from a development project are quantified using the maximum hazard index. A hazard index is the potential exposure to a substance divided by the reference exposure level (the level at which no adverse effects are expected). A hazard index of less than one indicates no adverse health effects are expected from the potential exposure to the substance. The maximum hazard index is the sum of hazard indices for pollutants with non-cancer health effects that have the same or similar adverse health effects.

The modeled point of maximum impact for the project (geographic point outside of the project site with the highest estimated incremental cancer risk and maximum hazard index) would be a point near the project boundary in the Harris Drive right of way, approximately 36 feet north of the project building, at approximately Universal Transverse Mercator (UTM) coordinates Zone 10, 633600 meters east, 4277800 meters north (see Figure 4). The maximum health risk exposure at this point would be a residential incremental cancer risk of 0.7 in 1 million and a residential non-cancer chronic hazard index less than 0.01. No residents or workers are anticipated to be at the point of maximum impact for prolonged periods.

The maximum estimated community incremental excess cancer, chronic and acute health risks due to exposure to the project TAC emissions from long term operation of the project are presented in Table 2, *Maximum Exposed Individual Incremental Cancer Health Risk and Hazard Index*. These estimates are conservative (health protective) and assume that the resident or worker is outdoors for the entire

30-year exposure period. The modeled locations of the Maximum Exposed Individual Resident (MEIR) and the point of maximum impact, along with the residential cancer risk isopleths (contours of equal risk), are shown in Figure 4. The complete HRA model output, including tables of health risks for all modeled discrete receptors and isopleth figures for incremental cancer risk, non-cancer chronic hazard index and acute hazard index are included as Attachment B to this letter report.

Table 2
MAXIMUM EXPOSED INDIVIDUAL INCREMENTAL CANCER RISK AND HAZARD INDEX

	MEI Resident Cancer Risk	MEI Worker Cancer Risk	MEI Resident Chronic Hazard Index	MEI Worker Chronic Hazard Index
Results	0.2 in 1 million	<0.1 in 1 million	<0.01	<0.01
Threshold	10 in 1 million	10 in 1 million	1	1
Exceed Threshold?	*No*	*No*	*No*	*No*

Source: Lakes AERMOD View version 10.0.1 and CARB ADMRT version 21081. See Attachment B for model inputs, outputs, and risk isopleths.
MEI = Maximum Exposed Individual

As shown in Table 2, the maximum incremental increased cancer risks, and maximum non-cancer chronic and acute hazard index due to exposure to DPM from long term operation of the project would not exceed the SMAQMD thresholds. Therefore, operation of the project would not result in TAC exposures creating an increased cancer risk of 10 in 1 million for stationary sources, or substantially increase health risks from exposure to TACs from mobile sources, and the project would have **no additional project-specific environmental effects** beyond what has been previously identified in the Master EIR.

h) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

To meet the statewide GHG emission targets, the City adopted the City of Sacramento Climate Action Plan (CAP) on February 14, 2012 to comply with AB 32. The CAP identified how the City and the broader community could reduce Sacramento's GHG emissions and included reduction targets, strategies, and specific actions. In 2015, the City of Sacramento adopted the 2035 General Plan Update. The update incorporated measures and actions from the CAP. into Appendix B, General Plan CAP Policies and Programs, lists the citywide policies and programs that are supportive of reducing GHG emissions. (City 2015b).

The project site is designated as Employment Center (Low Rise) in the North Sacramento Community Plan. The project would be consistent with the land use designation and would not require a General Plan or Community Plan Amendment. Therefore, the employment growth resulting from implementation of the project would be consistent with the assumptions used to calculate future City and community GHG inventories, and GHG emissions reduction goals. The project would maintain existing sidewalks along the project frontage of Harris Avenue, Opportunity Street, and Morrison Avenue. The project would comply with the City development standards and regulations for the project

driveways and sidewalks, which address hazards or barriers for pedestrian or bicycle access, and bicycle parking requirements. The project building would comply with current Title 24 building energy standards. The project would comply with City and current CALGreen building water efficiency and water efficient landscaping and irrigation requirements. Therefore, the project would not conflict with or obstruct implementation of any of the policies or programs identified in the 2035 General Plan Appendix B for supporting the City's GHG reduction goals.

The SMAQMD has provided guidance which lead agencies can use to determine the significance of the GHG emissions associated with individual development projects. Projects which result in construction or operational GHG emissions less than 1,100 MT CO_2e per year would not result in a significant GHG emission impact (SMAQMD 2021). The project's construction and operational GHG emissions were quantified using CalEEMod as described in the AQ/GHG assessment letter (see Appendix B) and are compared to the SMAQMDs GHG threshold in Table 3, *Construction and Operational GHG Emissions*.

Table 3
CONSTRUCTION AND OPERATIONAL GHG EMISSIONS

Source	Annual Emissions (MT CO_2e per year)
Construction (2022)	63
Operation (2023)	95
SMAQMD Threshold	1,100
Exceed Threshold?	*No*

Source: CalEEMod. See Attachment B for model output.
MT CO_2e = Metric tons carbon dioxide equivalents; SMAQMD = Sacramento Metropolitan Air Quality Management District

As discussed above, the project would not conflict with, or obstruction implementation of, any policies or programs identified in the City's 2035 General Plan as supporting attainment of the City's GHG reduction goals. As shown in Table 3, the project's construction and operational GHG emissions would not exceed the SMAQMD's threshold. Therefore, the project would not conflict with an applicable GHG reduction plan, policy, or regulation and the project would have no additional significant environmental effects beyond what has been previously identified in the Master EIR.

SUMMARY

The project's emissions of criteria pollutants and precursors would be below SMAQMD thresholds and would have no additional significant environmental effects beyond what has been previously identified in the Master EIR. Community health risks resulting from on-site emissions of DPM from long-term operation of the project were evaluated in an HRA following OEHHA guidelines. Project TAC emissions would not result in increased health risks beyond the SMAQMD thresholds and have no additional significant environmental effects beyond what has been previously identified in the Master EIR. The project would not conflict with any policies or programs identified in the City's 2035 General Plan identified as supporting attainment of the City's GHG reduction goals. Project construction and operational emissions of GHG would not exceed the SMAQMD's development project GHG emission

thresholds. The project would not conflict an applicable plan adopted for the purposes of reducing GHG emissions and would have no additional significant environmental effects beyond what has been previously identified in the Master EIR.

Sincerely,

Martin Rolph
Air Quality Specialist

Victor Ortiz
Senior Air Quality Specialist

Attachments:

Figure 1: Regional Location
Figure 2: Surrounding Land Uses
Figure 3: Site Plan
Figure 4: Cancer Risk
Attachment A: CalEEMod Output
Attachment B: HRA Model Input and Output

REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2021. User's Guide for CalEEMod Version 2020.4.0. Available at: http://www.caleemod.com/.

California Air Resources Board (CARB). 2021a. Overview: Diesel Exhaust and Health. Available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. Accessed June 2021.

2021b. EMFAC2021 v1.03, Online Emissions Inventory Tool. Available at: https://arb.ca.gov/emfac/emissions-inventory/.

2017. The 2017 Climate Change Scoping Plan Update. January. Available at: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf.

2015. Risk Management Guidance for Stationary Sources of Air Toxics. Available at: https://www.arb.ca.gov/toxics/rma/rmgssat.pdf.

2014. First Update to the Climate Change Scoping Plan: Building on the Framework. Available at: http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

2008. Climate Change Scoping Plan – A Framework for Change. December. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2008-scoping-plan-documents.

2005. Air Quality and Land Use Handbook: A Community Health Perspective. Available at: https://www.arb.ca.gov/ch/handbook.pdf.

Iowa Environmental Mesonet. 2019. Sacramento Executive Airport Wind Rose Plot. Available at: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=SAC&network=CA_ASOS.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis. Summary for Policymakers. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. February. Available at: https://www.ipcc.ch/report/ar4/wg1/.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Available at: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0.

Sacramento, City of. 2015a. Final Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update. Available at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Environmental-Impact-Reports/2035-GP-Update/2035-GPU-FinalMEIR_02242015.pdf?la=en.

2015b. City of Sacramento 2035 General Plan. March 3. Available at: http://www.cityofsacramento.org/Community-Development/Resources/Online-Library/2035--General-Plan.

2014. Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update. August. Available at: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Environmental-Impact-Reports/2035-GP-Update/Public-Draft-MEIR081114.pdf?la=en.

Sacramento Metropolitan Air Quality Management District (SMAQMD). 2020. Guide to Air Quality Assessment in Sacramento County. Revised April. Available at: http://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools.

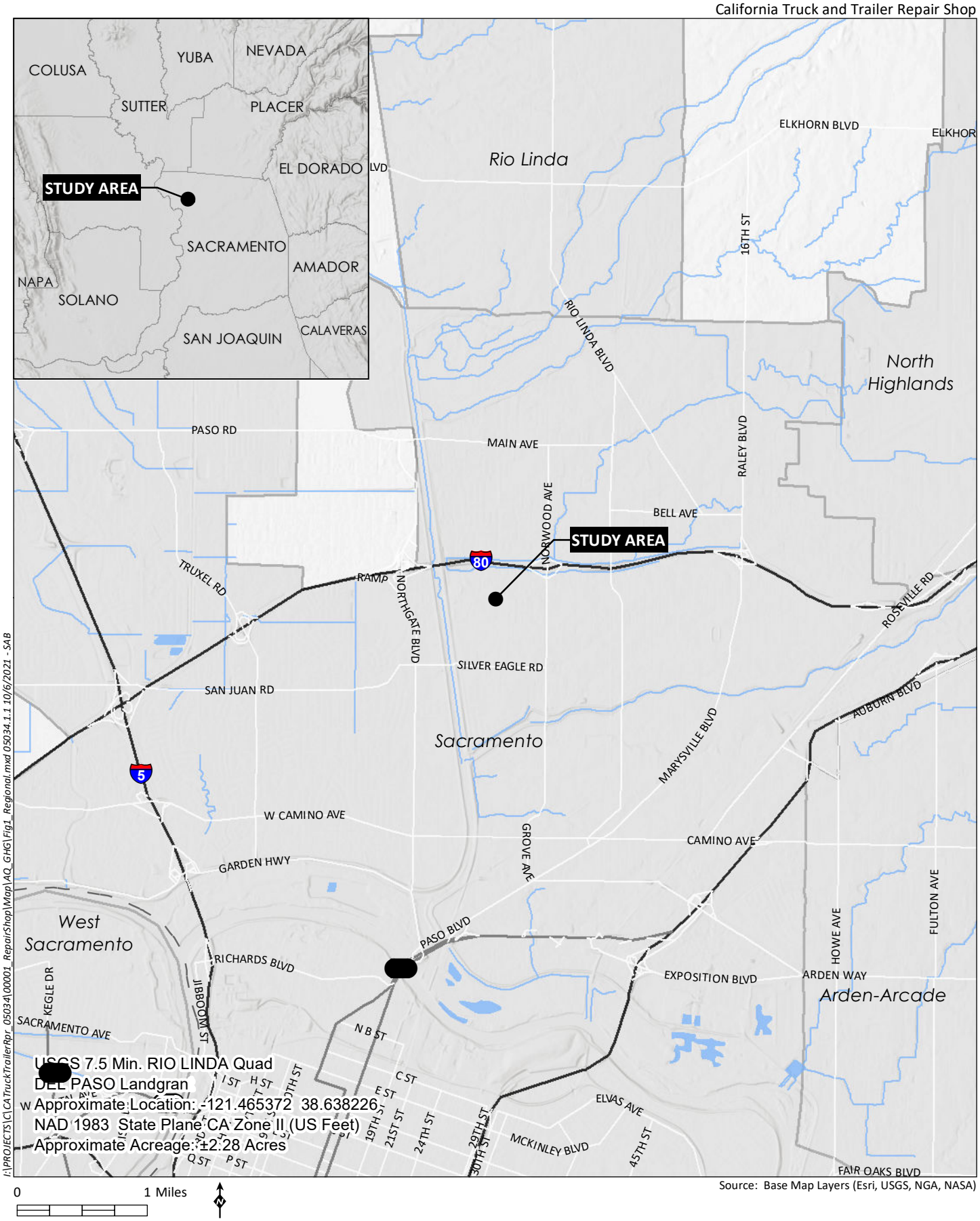
2019. AERMOD meteorological data files. Available at: http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools.

2017. Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan. July. Available at: http://www.airquality.org/ProgramCoordination/Documents/Sac%20Regional%202008%20NAAQS%20Attainment%20and%20RFP%20Plan.pdf.

1977. Rule 403 Fugitive Dust. August 3. Available at: http://www.airquality.org/ProgramCoordination/Documents/rule403.pdf.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document. Available at: https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf.

U.S. Environmental Protection Agency (USEPA). 2011. Haul Road Workgroup Recommendations. Available at: https://www.epa.gov/sites/default/files/2020-10/documents/haul_road_workgroup-final_report_package-20120302.pdf.



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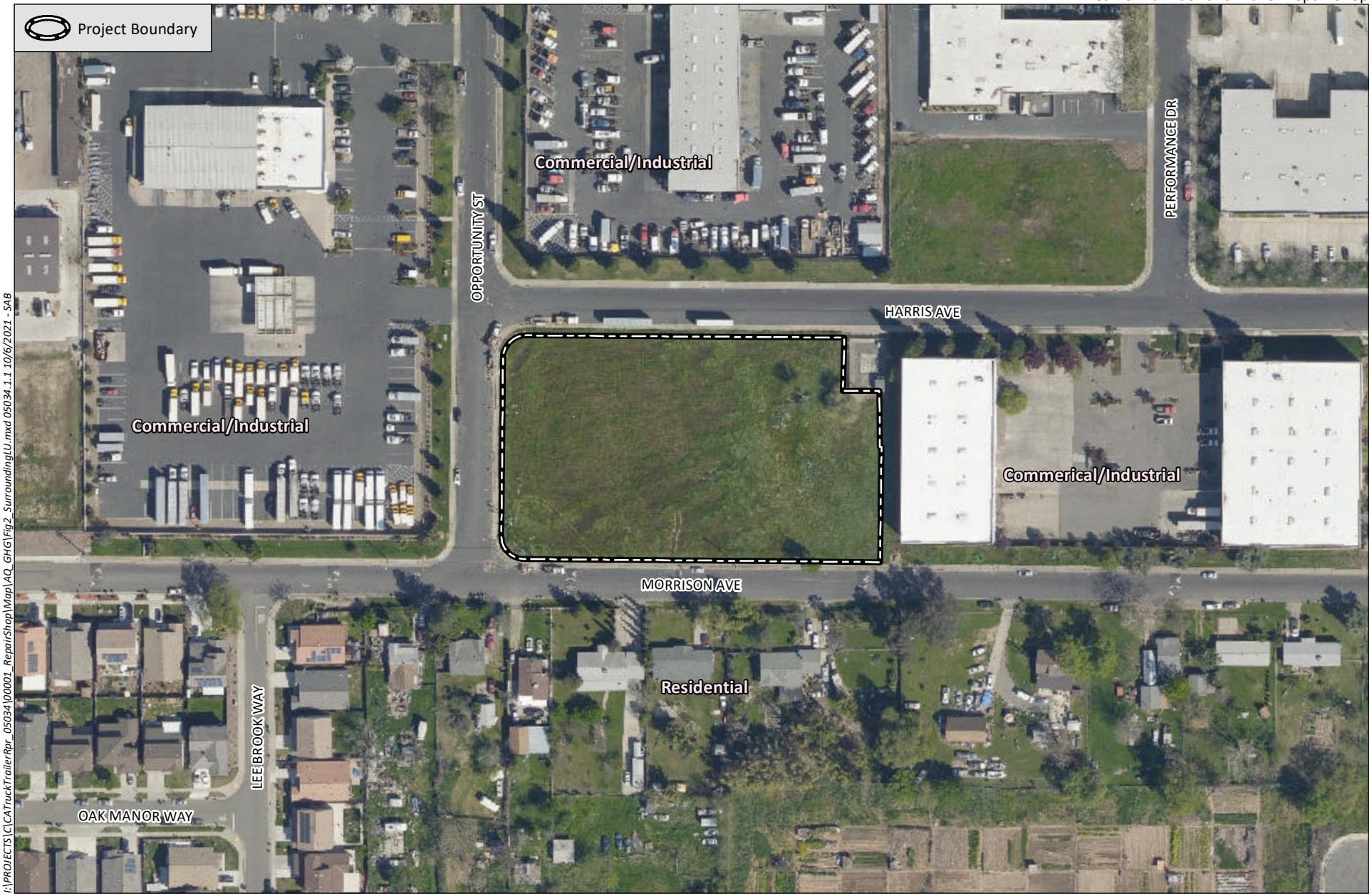
HELIX Environmental Planning

Regional Location

Figure 1



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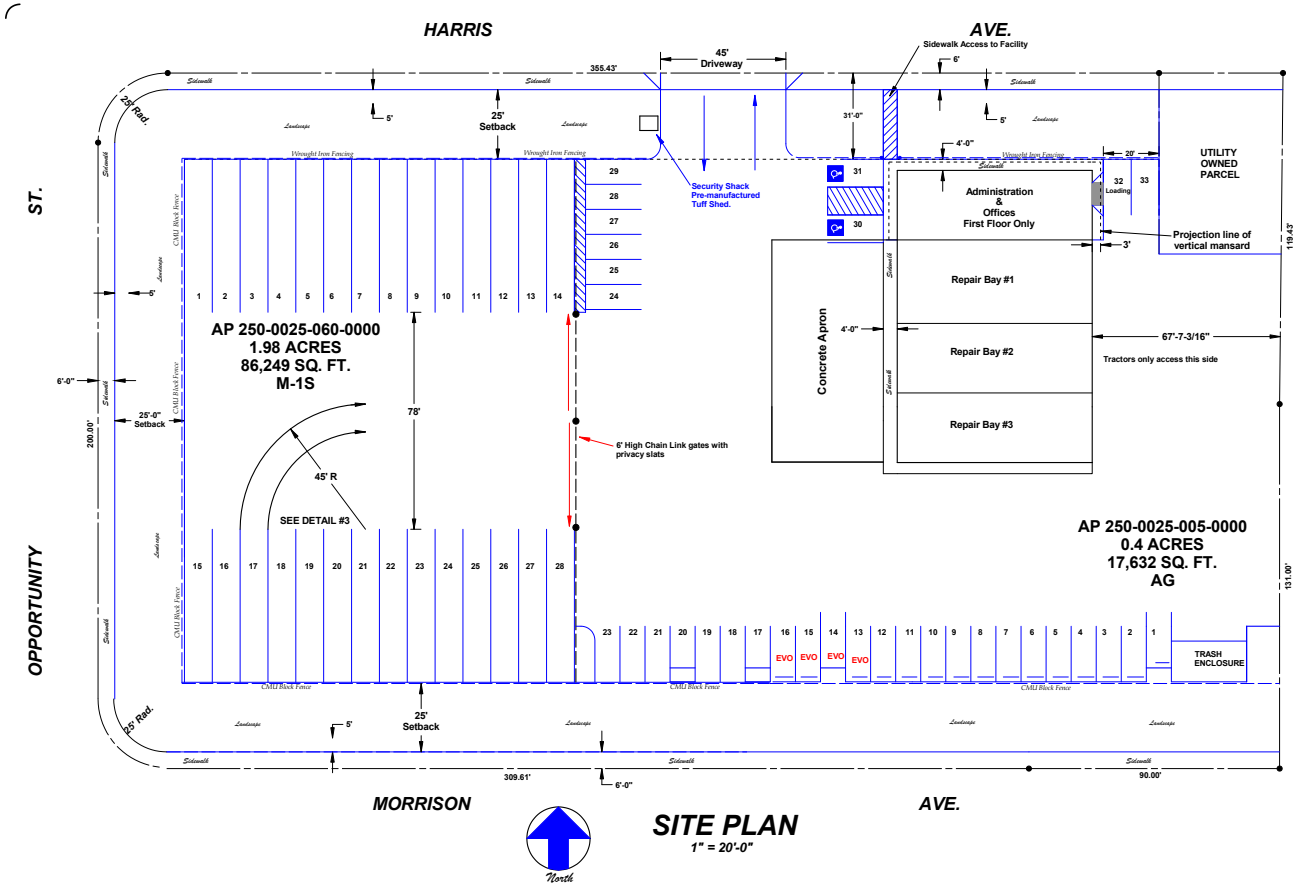
Source: Aerial (Sacramento GIS Coop, 2018)

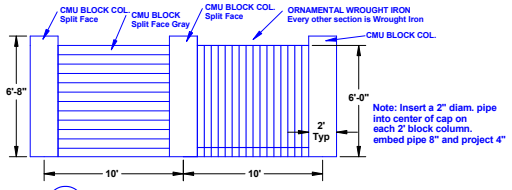
HELIX Environmental Planning

Surrounding Land Uses

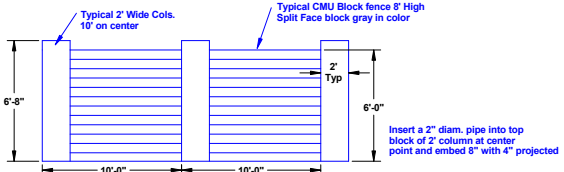
Figure 2



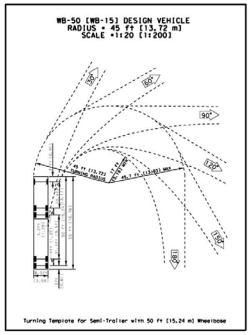
SITE PLAN
1" = 20'-0"



1 **FRONTAGE FENCING FACING HARRIS AVE.**
1/4" = 1'-0"



2 **TYPICAL CMU BLOCK FENCE**
1/4" = 1'-0"



3 **EXHIBIT 'B' DOT TURNING RADIUS**
NTS

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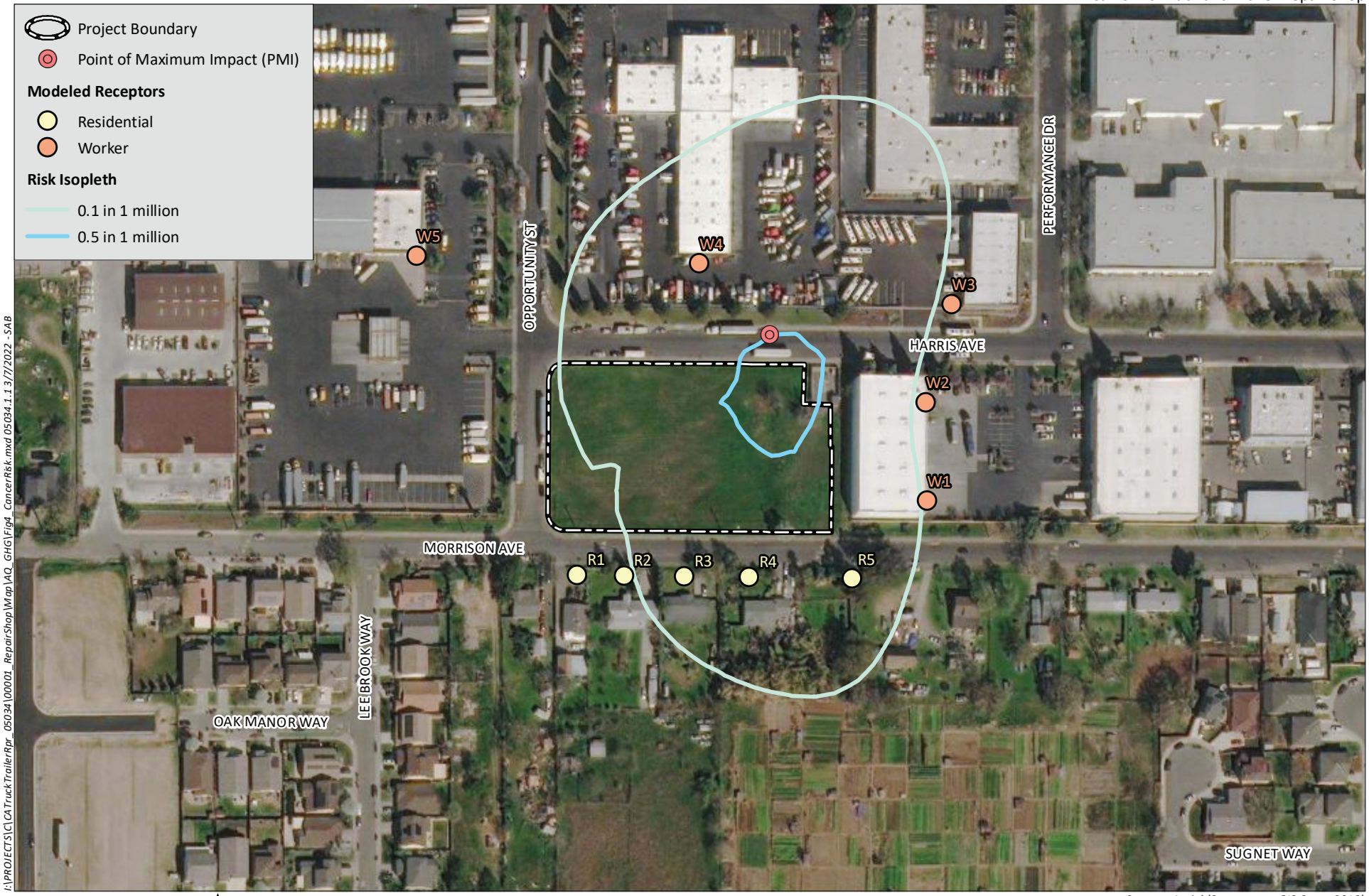
HELIX Environmental Planning

Site Plan

Figure 3



Source: Aerial (Sacramento GIS Coop, 2018)

HELIX Environmental Planning

Cancer Risk

Figure 4

Attachment A

CalEEMod Output

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

CA Truck and Trailer Repair

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	72.30	1000sqft	1.66	72,300.00	0
Automobile Care Center	9.10	1000sqft	0.18	9,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	357.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Building and parking SF per site plan.
Parking Lot = all paved surfaces (parking lot + driveway)

Construction Phase - Schedule per project applicant.
Architecural coating interior only, concurrent with last 3 weeks of building construction.

Off-road Equipment - Equipment per project applicant.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment per project applicant.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment per project applicant.
Skid Steer Loader = mini excavator.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment for assembly of prefabricated building.

Off-road Equipment -

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment -

Grading - 400 CY vegetation export duting site prep.
400 CY Class II AB import during grading for building pad.

Trips and VMT - 80 loads of aggregate and ashpalt imported during paving.
Aggregate 25 CY truck/trailer capcity and haul trip length per applicant.

Architectural Coating - Prefabricated building, no exterior paint.
50 g/L VOC limit for flat interior and exerior coatings per SMAQMD Rule 442.

Vehicle Trips - Trip rate based on maximum 6 employees and 8 client trucks, and 2 vendor trucks per day (30 one-way trips).

Fleet Mix - Fleet mix LDA, LDT1, and LDT2 for employees; MHD and HHD for vendors; and HHD for clients.

Area Coating - 50 g/L VOC limit for flat interior and exerior coatings per SMAQMD Rule 442.

Construction Off-road Equipment Mitigation - Dust mitigation to meet requirments of SMAQMD Rule 403/BMPs.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	4,550.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	4.00	25.00
tblConstructionPhase	NumDays	200.00	30.00
tblConstructionPhase	NumDays	10.00	15.00
tblFleetMix	HHD	9.3060e-003	0.56
tblFleetMix	LDA	0.54	0.28
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT2	0.18	0.07
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	6.0930e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.5070e-003	0.00
tblFleetMix	MHD	0.01	0.06

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	OBUS	9.4200e-004	0.00
tblFleetMix	SBUS	1.0060e-003	0.00
tblFleetMix	UBUS	5.4800e-004	0.00
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tblGrading	MaterialImported	0.00	400.00
tblLandUse	LotAcreage	0.21	0.18
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblTripsAndVMT	HaulingTripNumber	50.00	32.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblVehicleTrips	ST_TR	23.72	3.08
tblVehicleTrips	SU_TR	11.88	3.08
tblVehicleTrips	WD_TR	23.72	3.08

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2022	4.1746	11.0225	9.6964	0.0248	5.8576	0.4973	6.3550	2.9794	0.4577	3.4372	0.0000	2,515.3571	2,515.3571	0.4599	0.1825	2,581.2404
Maximum	**4.1746**	**11.0225**	**9.6964**	**0.0248**	**5.8576**	**0.4973**	**6.3550**	**2.9794**	**0.4577**	**3.4372**	**0.0000**	**2,515.3571**	**2,515.3571**	**0.4599**	**0.1825**	**2,581.2404**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.1746	11.0225	9.6964	0.0248	2.7014	0.4973	3.1987	1.3584	0.4577	1.8161	0.0000	2,515.3571	2,515.3571	0.4599	0.1825	2,581.2404
Maximum	**4.1746**	**11.0225**	**9.6964**	**0.0248**	**2.7014**	**0.4973**	**3.1987**	**1.3584**	**0.4577**	**1.8161**	**0.0000**	**2,515.3571**	**2,515.3571**	**0.4599**	**0.1825**	**2,581.2404**

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	53.88	0.00	49.67	54.41	0.00	47.16	0.00	0.00	0.00	0.00	0.00	0.00

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	lb/day										lb/day					
Area	0.2382	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Energy	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
Mobile	0.0317	0.6305	0.3856	1.7600e-003	0.0554	2.5800e-003	0.0580	0.0151	2.4600e-003	0.0176		189.4075	189.4075	7.5700e-003	0.0282	197.9875
Total	**0.2794**	**0.7175**	**0.4669**	**2.2800e-003**	**0.0554**	**9.2200e-003**	**0.0646**	**0.0151**	**9.1000e-003**	**0.0242**		**293.7563**	**293.7563**	**9.6200e-003**	**0.0301**	**302.9574**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2382	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Energy	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
Mobile	0.0317	0.6305	0.3856	1.7600e-003	0.0554	2.5800e-003	0.0580	0.0151	2.4600e-003	0.0176		189.4075	189.4075	7.5700e-003	0.0282	197.9875
Total	**0.2794**	**0.7175**	**0.4669**	**2.2800e-003**	**0.0554**	**9.2200e-003**	**0.0646**	**0.0151**	**9.1000e-003**	**0.0242**		**293.7563**	**293.7563**	**9.6200e-003**	**0.0301**	**302.9574**

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	1/21/2022	5	15	
2	Grading	Grading	1/24/2022	2/25/2022	5	25	
3	Underground Utilities	Trenching	2/28/2022	3/18/2022	5	15	
4	Building Construction	Building Construction	3/21/2022	4/29/2022	5	30	
5	Architectural Coating	Architectural Coating	4/11/2022	4/29/2022	5	15	
6	Paving	Paving	5/2/2022	5/13/2022	5	10	

Acres of Grading (Site Preparation Phase): 6.56

Acres of Grading (Grading Phase): 12.5

Acres of Paving: 1.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 13,650; Non-Residential Outdoor: 0; Striped Parking Area: 4,338 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	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	0	8.00	247	0.40

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
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
Site Preparation	Off-Highway Trucks	1	2.00	402	0.38
Grading	Off-Highway Trucks	1	2.00	402	0.38
Underground Utilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Skid Steer Loaders	1	8.00	65	0.37
Underground Utilities	Off-Highway Trucks	1	2.00	402	0.38
Building Construction	Aerial Lifts	2		63	0.31

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	50.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	32.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	4	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	33.00	13.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	160.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7386	0.0000	5.7386	2.9474	0.0000	2.9474			0.0000			0.0000
Off-Road	1.0299	10.3785	6.2161	0.0139		0.4920	0.4920		0.4526	0.4526		1,346.2399	1,346.2399	0.4354		1,357.1250
Total	**1.0299**	**10.3785**	**6.2161**	**0.0139**	**5.7386**	**0.4920**	**6.2306**	**2.9474**	**0.4526**	**3.4000**		**1,346.2399**	**1,346.2399**	**0.4354**		**1,357.1250**

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0135	0.6260	0.1161	2.1700e-003	0.0581	5.0100e-003	0.0632	0.0159	4.7900e-003	0.0207		236.1473	236.1473	9.4600e-003	0.0374	247.5391
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
Worker	0.0256	0.0180	0.2050	5.1000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		51.9824	51.9824	1.9900e-003	1.7300e-003	52.5488
Total	**0.0391**	**0.6439**	**0.3211**	**2.6800e-003**	**0.1190**	**5.3400e-003**	**0.1243**	**0.0321**	**5.0900e-003**	**0.0372**		**288.1297**	**288.1297**	**0.0115**	**0.0392**	**300.0879**

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	lb/day										lb/day					
Fugitive Dust					2.5824	0.0000	2.5824	1.3263	0.0000	1.3263			0.0000			0.0000
Off-Road	1.0299	10.3785	6.2161	0.0139		0.4920	0.4920		0.4526	0.4526	0.0000	1,346.2399	1,346.2399	0.4354		1,357.1250
Total	**1.0299**	**10.3785**	**6.2161**	**0.0139**	**2.5824**	**0.4920**	**3.0744**	**1.3263**	**0.4526**	**1.7789**	**0.0000**	**1,346.2399**	**1,346.2399**	**0.4354**		**1,357.1250**

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0135	0.6260	0.1161	2.1700e-003	0.0581	5.0100e-003	0.0632	0.0159	4.7900e-003	0.0207		236.1473	236.1473	9.4600e-003	0.0374	247.5391
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
Worker	0.0256	0.0180	0.2050	5.1000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		51.9824	51.9824	1.9900e-003	1.7300e-003	52.5488
Total	**0.0391**	**0.6439**	**0.3211**	**2.6800e-003**	**0.1190**	**5.3400e-003**	**0.1243**	**0.0321**	**5.0900e-003**	**0.0372**		**288.1297**	**288.1297**	**0.0115**	**0.0392**	**300.0879**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5336	0.0000	0.5336	0.0578	0.0000	0.0578			0.0000			0.0000
Off-Road	0.6919	7.7322	4.5238	0.0127		0.2827	0.2827		0.2601	0.2601		1,226.2081	1,226.2081	0.3966		1,236.1226
Total	**0.6919**	**7.7322**	**4.5238**	**0.0127**	**0.5336**	**0.2827**	**0.8163**	**0.0578**	**0.2601**	**0.3179**		**1,226.2081**	**1,226.2081**	**0.3966**		**1,236.1226**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.1700e-003	0.2404	0.0446	8.3000e-004	0.0223	1.9200e-003	0.0243	6.1100e-003	1.8400e-003	7.9500e-003		90.6806	90.6806	3.6300e-003	0.0144	95.0550
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
Worker	0.0256	0.0180	0.2050	5.1000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		51.9824	51.9824	1.9900e-003	1.7300e-003	52.5488
Total	**0.0308**	**0.2583**	**0.2496**	**1.3400e-003**	**0.0832**	**2.2500e-003**	**0.0854**	**0.0223**	**2.1400e-003**	**0.0244**		**142.6630**	**142.6630**	**5.6200e-003**	**0.0161**	**147.6038**

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	lb/day										lb/day					
Fugitive Dust					0.2401	0.0000	0.2401	0.0260	0.0000	0.0260			0.0000			0.0000
Off-Road	0.6919	7.7322	4.5238	0.0127		0.2827	0.2827		0.2601	0.2601	0.0000	1,226.2081	1,226.2081	0.3966		1,236.1226
Total	**0.6919**	**7.7322**	**4.5238**	**0.0127**	**0.2401**	**0.2827**	**0.5228**	**0.0260**	**0.2601**	**0.2861**	**0.0000**	**1,226.2081**	**1,226.2081**	**0.3966**		**1,236.1226**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.1700e-003	0.2404	0.0446	8.3000e-004	0.0223	1.9200e-003	0.0243	6.1100e-003	1.8400e-003	7.9500e-003		90.6806	90.6806	3.6300e-003	0.0144	95.0550
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
Worker	0.0256	0.0180	0.2050	5.1000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		51.9824	51.9824	1.9900e-003	1.7300e-003	52.5488
Total	**0.0308**	**0.2583**	**0.2496**	**1.3400e-003**	**0.0832**	**2.2500e-003**	**0.0854**	**0.0223**	**2.1400e-003**	**0.0244**		**142.6630**	**142.6630**	**5.6200e-003**	**0.0161**	**147.6038**

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5302	5.2710	6.6832	0.0116		0.2506	0.2506		0.2305	0.2305		1,120.9593	1,120.9593	0.3625		1,130.0229
Total	**0.5302**	**5.2710**	**6.6832**	**0.0116**		**0.2506**	**0.2506**		**0.2305**	**0.2305**		**1,120.9593**	**1,120.9593**	**0.3625**		**1,130.0229**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0320	0.0225	0.2562	6.4000e-004	0.0761	4.1000e-004	0.0765	0.0202	3.8000e-004	0.0206		64.9780	64.9780	2.4800e-003	2.1700e-003	65.6860
Total	**0.0320**	**0.0225**	**0.2562**	**6.4000e-004**	**0.0761**	**4.1000e-004**	**0.0765**	**0.0202**	**3.8000e-004**	**0.0206**		**64.9780**	**64.9780**	**2.4800e-003**	**2.1700e-003**	**65.6860**

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	lb/day										lb/day					
Off-Road	0.5302	5.2710	6.6832	0.0116		0.2506	0.2506		0.2305	0.2305	0.0000	1,120.9593	1,120.9593	0.3625		1,130.0229
Total	**0.5302**	**5.2710**	**6.6832**	**0.0116**		**0.2506**	**0.2506**		**0.2305**	**0.2305**	**0.0000**	**1,120.9593**	**1,120.9593**	**0.3625**		**1,130.0229**

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0320	0.0225	0.2562	6.4000e-004	0.0761	4.1000e-004	0.0765	0.0202	3.8000e-004	0.0206		64.9780	64.9780	2.4800e-003	2.1700e-003	65.6860
Total	**0.0320**	**0.0225**	**0.2562**	**6.4000e-004**	**0.0761**	**4.1000e-004**	**0.0765**	**0.0202**	**3.8000e-004**	**0.0206**		**64.9780**	**64.9780**	**2.4800e-003**	**2.1700e-003**	**65.6860**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3649	3.9294	2.2846	5.4700e-003		0.1827	0.1827		0.1681	0.1681		530.1459	530.1459	0.1715		534.4324
Total	**0.3649**	**3.9294**	**2.2846**	**5.4700e-003**		**0.1827**	**0.1827**		**0.1681**	**0.1681**		**530.1459**	**530.1459**	**0.1715**		**534.4324**

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0277	0.7606	0.2226	2.5700e-003	0.0783	6.9300e-003	0.0853	0.0226	6.6200e-003	0.0292		275.0728	275.0728	7.1600e-003	0.0404	287.2775
Worker	0.1057	0.0741	0.8455	2.1100e-003	0.2510	1.3600e-003	0.2524	0.0666	1.2500e-003	0.0678		214.4275	214.4275	8.1900e-003	7.1500e-003	216.7637
Total	**0.1333**	**0.8347**	**1.0681**	**4.6800e-003**	**0.3294**	**8.2900e-003**	**0.3377**	**0.0891**	**7.8700e-003**	**0.0970**		**489.5003**	**489.5003**	**0.0154**	**0.0475**	**504.0412**

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	lb/day										lb/day					
Off-Road	0.3649	3.9294	2.2846	5.4700e-003		0.1827	0.1827		0.1681	0.1681	0.0000	530.1459	530.1459	0.1715		534.4324
Total	**0.3649**	**3.9294**	**2.2846**	**5.4700e-003**		**0.1827**	**0.1827**		**0.1681**	**0.1681**	**0.0000**	**530.1459**	**530.1459**	**0.1715**		**534.4324**

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0277	0.7606	0.2226	2.5700e-003	0.0783	6.9300e-003	0.0853	0.0226	6.6200e-003	0.0292		275.0728	275.0728	7.1600e-003	0.0404	287.2775
Worker	0.1057	0.0741	0.8455	2.1100e-003	0.2510	1.3600e-003	0.2524	0.0666	1.2500e-003	0.0678		214.4275	214.4275	8.1900e-003	7.1500e-003	216.7637
Total	**0.1333**	**0.8347**	**1.0681**	**4.6800e-003**	**0.3294**	**8.2900e-003**	**0.3377**	**0.0891**	**7.8700e-003**	**0.0970**		**489.5003**	**489.5003**	**0.0154**	**0.0475**	**504.0412**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.4494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**3.6539**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0224	0.0157	0.1793	4.5000e-004	0.0533	2.9000e-004	0.0535	0.0141	2.7000e-004	0.0144		45.4846	45.4846	1.7400e-003	1.5200e-003	45.9802
Total	**0.0224**	**0.0157**	**0.1793**	**4.5000e-004**	**0.0533**	**2.9000e-004**	**0.0535**	**0.0141**	**2.7000e-004**	**0.0144**		**45.4846**	**45.4846**	**1.7400e-003**	**1.5200e-003**	**45.9802**

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	lb/day										lb/day					
Archit. Coating	3.4494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**3.6539**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0224	0.0157	0.1793	4.5000e-004	0.0533	2.9000e-004	0.0535	0.0141	2.7000e-004	0.0144		45.4846	45.4846	1.7400e-003	1.5200e-003	45.9802
Total	**0.0224**	**0.0157**	**0.1793**	**4.5000e-004**	**0.0533**	**2.9000e-004**	**0.0535**	**0.0141**	**2.7000e-004**	**0.0144**		**45.4846**	**45.4846**	**1.7400e-003**	**1.5200e-003**	**45.9802**

3.7 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.4349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1226**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**		**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0647	3.0047	0.5574	0.0104	0.2791	0.0241	0.3031	0.0764	0.0230	0.0994		1,133.5068	1,133.5068	0.0454	0.1797	1,188.1878
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
Worker	0.0416	0.0292	0.3331	8.3000e-004	0.0989	5.4000e-004	0.0994	0.0262	4.9000e-004	0.0267		84.4715	84.4715	3.2300e-003	2.8200e-003	85.3918
Total	**0.1063**	**3.0339**	**0.8904**	**0.0112**	**0.3780**	**0.0246**	**0.4026**	**0.1027**	**0.0235**	**0.1262**		**1,217.9783**	**1,217.9783**	**0.0487**	**0.1825**	**1,273.5796**

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	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.4349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1226**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**	**0.0000**	**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.7 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0647	3.0047	0.5574	0.0104	0.2791	0.0241	0.3031	0.0764	0.0230	0.0994		1,133.5068	1,133.5068	0.0454	0.1797	1,188.1878
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
Worker	0.0416	0.0292	0.3331	8.3000e-004	0.0989	5.4000e-004	0.0994	0.0262	4.9000e-004	0.0267		84.4715	84.4715	3.2300e-003	2.8200e-003	85.3918
Total	**0.1063**	**3.0339**	**0.8904**	**0.0112**	**0.3780**	**0.0246**	**0.4026**	**0.1027**	**0.0235**	**0.1262**		**1,217.9783**	**1,217.9783**	**0.0487**	**0.1825**	**1,273.5796**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Mitigated	0.0317	0.6305	0.3856	1.7600e-003	0.0554	2.5800e-003	0.0580	0.0151	2.4600e-003	0.0176		189.4075	189.4075	7.5700e-003	0.0282	197.9875
Unmitigated	0.0317	0.6305	0.3856	1.7600e-003	0.0554	2.5800e-003	0.0580	0.0151	2.4600e-003	0.0176		189.4075	189.4075	7.5700e-003	0.0282	197.9875

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	28.03	28.03	28.03	24,165	24,165
Parking Lot	0.00	0.00	0.00		
Total	28.03	28.03	28.03	24,165	24,165

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	10.00	5.00	6.50	33.00	48.00	19.00	21	51	28
Parking Lot	10.00	5.00	6.50	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
Automobile Care Center	0.280000	0.030000	0.070000	0.000000	0.000000	0.000000	0.060000	0.560000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507

5.0 Energy Detail

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
NaturalGas Unmitigated	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510

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	lb/day										lb/day					
Automobile Care Center	886.814	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
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
Total		**9.5600e-003**	**0.0869**	**0.0730**	**5.2000e-004**		**6.6100e-003**	**6.6100e-003**		**6.6100e-003**	**6.6100e-003**		**104.3310**	**104.3310**	**2.0000e-003**	**1.9100e-003**	**104.9510**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.886814	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
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
Total		**9.5600e-003**	**0.0869**	**0.0730**	**5.2000e-004**		**6.6100e-003**	**6.6100e-003**		**6.6100e-003**	**6.6100e-003**		**104.3310**	**104.3310**	**2.0000e-003**	**1.9100e-003**	**104.9510**

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	lb/day										lb/day					
Mitigated	0.2382	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Unmitigated	0.2382	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190

CA Truck and Trailer Repair - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0171					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7000e-004	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Total	**0.2382**	**8.0000e-005**	**8.3100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0178**	**0.0178**	**5.0000e-005**		**0.0190**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0171					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7000e-004	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Total	**0.2382**	**8.0000e-005**	**8.3100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0178**	**0.0178**	**5.0000e-005**		**0.0190**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

CA Truck and Trailer Repair

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	72.30	1000sqft	1.66	72,300.00	0
Automobile Care Center	9.10	1000sqft	0.18	9,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	357.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Building and parking SF per site plan.
Parking Lot = all paved surfaces (parking lot + driveway)

Construction Phase - Schedule per project applicant.
Architecural coating interior only, concurrent with last 3 weeks of building construction.

Off-road Equipment - Equipment per project applicant.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment per project applicant.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment per project applicant.
Skid Steer Loader = mini excavator.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment for assembly of prefabricated building.

Off-road Equipment -

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment -

Grading - 400 CY vegetation export duting site prep.
400 CY Class II AB import during grading for building pad.

Trips and VMT - 80 loads of aggregate and ashpalt imported during paving.
Aggregate 25 CY truck/trailer capcity and haul trip length per applicant.

Architectural Coating - Prefabricated building, no exterior paint.
50 g/L VOC limit for flat interior and exerior coatings per SMAQMD Rule 442.

Vehicle Trips - Trip rate based on maximum 6 employees and 8 client trucks, and 2 vendor trucks per day (30 one-way trips).

Fleet Mix - Fleet mix LDA, LDT1, and LDT2 for employees; MHD and HHD for vendors; and HHD for clients.

Area Coating - 50 g/L VOC limit for flat interior and exerior coatings per SMAQMD Rule 442.

Construction Off-road Equipment Mitigation - Dust mitigation to meet requirments of SMAQMD Rule 403/BMPs.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	4,550.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	4.00	25.00
tblConstructionPhase	NumDays	200.00	30.00
tblConstructionPhase	NumDays	10.00	15.00
tblFleetMix	HHD	9.3060e-003	0.56
tblFleetMix	LDA	0.54	0.28
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT2	0.18	0.07
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	6.0930e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.5070e-003	0.00
tblFleetMix	MHD	0.01	0.06

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	OBUS	9.4200e-004	0.00
tblFleetMix	SBUS	1.0060e-003	0.00
tblFleetMix	UBUS	5.4800e-004	0.00
tblGrading	MaterialExported	0.00	400.00
tblGrading	MaterialImported	0.00	400.00
tblLandUse	LotAcreage	0.21	0.18
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblTripsAndVMT	HaulingTripNumber	50.00	32.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblVehicleTrips	ST_TR	23.72	3.08
tblVehicleTrips	SU_TR	11.88	3.08
tblVehicleTrips	WD_TR	23.72	3.08

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2022	4.1919	10.9727	9.7366	0.0249	5.8576	0.4973	6.3550	2.9794	0.4577	3.4371	0.0000	2,525.7201	2,525.7201	0.4596	0.1821	2,591.4769
Maximum	**4.1919**	**10.9727**	**9.7366**	**0.0249**	**5.8576**	**0.4973**	**6.3550**	**2.9794**	**0.4577**	**3.4371**	**0.0000**	**2,525.7201**	**2,525.7201**	**0.4596**	**0.1821**	**2,591.4769**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.1919	10.9727	9.7366	0.0249	2.7014	0.4973	3.1987	1.3584	0.4577	1.8161	0.0000	2,525.7201	2,525.7201	0.4596	0.1821	2,591.4769
Maximum	**4.1919**	**10.9727**	**9.7366**	**0.0249**	**2.7014**	**0.4973**	**3.1987**	**1.3584**	**0.4577**	**1.8161**	**0.0000**	**2,525.7201**	**2,525.7201**	**0.4596**	**0.1821**	**2,591.4769**

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	53.88	0.00	49.67	54.41	0.00	47.16	0.00	0.00	0.00	0.00	0.00	0.00

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	lb/day										lb/day					
Area	0.2382	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Energy	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
Mobile	0.0387	0.5902	0.3637	1.7700e-003	0.0554	2.5100e-003	0.0579	0.0151	2.3900e-003	0.0175		190.7295	190.7295	7.2500e-003	0.0279	199.2347
Total	**0.2865**	**0.6772**	**0.4451**	**2.2900e-003**	**0.0554**	**9.1500e-003**	**0.0646**	**0.0151**	**9.0300e-003**	**0.0241**		**295.0784**	**295.0784**	**9.3000e-003**	**0.0298**	**304.2047**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2382	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Energy	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
Mobile	0.0387	0.5902	0.3637	1.7700e-003	0.0554	2.5100e-003	0.0579	0.0151	2.3900e-003	0.0175		190.7295	190.7295	7.2500e-003	0.0279	199.2347
Total	**0.2865**	**0.6772**	**0.4451**	**2.2900e-003**	**0.0554**	**9.1500e-003**	**0.0646**	**0.0151**	**9.0300e-003**	**0.0241**		**295.0784**	**295.0784**	**9.3000e-003**	**0.0298**	**304.2047**

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	1/21/2022	5	15	
2	Grading	Grading	1/24/2022	2/25/2022	5	25	
3	Underground Utilities	Trenching	2/28/2022	3/18/2022	5	15	
4	Building Construction	Building Construction	3/21/2022	4/29/2022	5	30	
5	Architectural Coating	Architectural Coating	4/11/2022	4/29/2022	5	15	
6	Paving	Paving	5/2/2022	5/13/2022	5	10	

Acres of Grading (Site Preparation Phase): 6.56

Acres of Grading (Grading Phase): 12.5

Acres of Paving: 1.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 13,650; Non-Residential Outdoor: 0; Striped Parking Area: 4,338 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	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	0	8.00	247	0.40

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
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
Site Preparation	Off-Highway Trucks	1	2.00	402	0.38
Grading	Off-Highway Trucks	1	2.00	402	0.38
Underground Utilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Skid Steer Loaders	1	8.00	65	0.37
Underground Utilities	Off-Highway Trucks	1	2.00	402	0.38
Building Construction	Aerial Lifts	2		63	0.31

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	50.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	32.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	4	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	33.00	13.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	160.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7386	0.0000	5.7386	2.9474	0.0000	2.9474			0.0000			0.0000
Off-Road	1.0299	10.3785	6.2161	0.0139		0.4920	0.4920		0.4526	0.4526		1,346.2399	1,346.2399	0.4354		1,357.1250
Total	**1.0299**	**10.3785**	**6.2161**	**0.0139**	**5.7386**	**0.4920**	**6.2306**	**2.9474**	**0.4526**	**3.4000**		**1,346.2399**	**1,346.2399**	**0.4354**		**1,357.1250**

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0139	0.5795	0.1138	2.1700e-003	0.0581	4.9900e-003	0.0631	0.0159	4.7800e-003	0.0207		236.1132	236.1132	9.4800e-003	0.0374	247.5034
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
Worker	0.0290	0.0146	0.2366	5.7000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		58.4601	58.4601	1.7400e-003	1.5100e-003	58.9537
Total	**0.0428**	**0.5941**	**0.3504**	**2.7400e-003**	**0.1190**	**5.3200e-003**	**0.1243**	**0.0321**	**5.0800e-003**	**0.0372**		**294.5734**	**294.5734**	**0.0112**	**0.0389**	**306.4571**

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	lb/day										lb/day					
Fugitive Dust					2.5824	0.0000	2.5824	1.3263	0.0000	1.3263			0.0000			0.0000
Off-Road	1.0299	10.3785	6.2161	0.0139		0.4920	0.4920		0.4526	0.4526	0.0000	1,346.2399	1,346.2399	0.4354		1,357.1250
Total	**1.0299**	**10.3785**	**6.2161**	**0.0139**	**2.5824**	**0.4920**	**3.0744**	**1.3263**	**0.4526**	**1.7789**	**0.0000**	**1,346.2399**	**1,346.2399**	**0.4354**		**1,357.1250**

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0139	0.5795	0.1138	2.1700e-003	0.0581	4.9900e-003	0.0631	0.0159	4.7800e-003	0.0207		236.1132	236.1132	9.4800e-003	0.0374	247.5034
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
Worker	0.0290	0.0146	0.2366	5.7000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		58.4601	58.4601	1.7400e-003	1.5100e-003	58.9537
Total	**0.0428**	**0.5941**	**0.3504**	**2.7400e-003**	**0.1190**	**5.3200e-003**	**0.1243**	**0.0321**	**5.0800e-003**	**0.0372**		**294.5734**	**294.5734**	**0.0112**	**0.0389**	**306.4571**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5336	0.0000	0.5336	0.0578	0.0000	0.0578			0.0000			0.0000
Off-Road	0.6919	7.7322	4.5238	0.0127		0.2827	0.2827		0.2601	0.2601		1,226.2081	1,226.2081	0.3966		1,236.1226
Total	**0.6919**	**7.7322**	**4.5238**	**0.0127**	**0.5336**	**0.2827**	**0.8163**	**0.0578**	**0.2601**	**0.3179**		**1,226.2081**	**1,226.2081**	**0.3966**		**1,236.1226**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.3200e-003	0.2225	0.0437	8.3000e-004	0.0223	1.9200e-003	0.0242	6.1100e-003	1.8300e-003	7.9500e-003		90.6675	90.6675	3.6400e-003	0.0144	95.0413
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
Worker	0.0290	0.0146	0.2366	5.7000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		58.4601	58.4601	1.7400e-003	1.5100e-003	58.9537
Total	**0.0343**	**0.2372**	**0.2803**	**1.4000e-003**	**0.0832**	**2.2500e-003**	**0.0854**	**0.0223**	**2.1300e-003**	**0.0244**		**149.1276**	**149.1276**	**5.3800e-003**	**0.0159**	**153.9950**

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	lb/day										lb/day					
Fugitive Dust					0.2401	0.0000	0.2401	0.0260	0.0000	0.0260			0.0000			0.0000
Off-Road	0.6919	7.7322	4.5238	0.0127		0.2827	0.2827		0.2601	0.2601	0.0000	1,226.2081	1,226.2081	0.3966		1,236.1226
Total	**0.6919**	**7.7322**	**4.5238**	**0.0127**	**0.2401**	**0.2827**	**0.5228**	**0.0260**	**0.2601**	**0.2861**	**0.0000**	**1,226.2081**	**1,226.2081**	**0.3966**		**1,236.1226**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.3200e-003	0.2225	0.0437	8.3000e-004	0.0223	1.9200e-003	0.0242	6.1100e-003	1.8300e-003	7.9500e-003		90.6675	90.6675	3.6400e-003	0.0144	95.0413
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
Worker	0.0290	0.0146	0.2366	5.7000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		58.4601	58.4601	1.7400e-003	1.5100e-003	58.9537
Total	**0.0343**	**0.2372**	**0.2803**	**1.4000e-003**	**0.0832**	**2.2500e-003**	**0.0854**	**0.0223**	**2.1300e-003**	**0.0244**		**149.1276**	**149.1276**	**5.3800e-003**	**0.0159**	**153.9950**

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5302	5.2710	6.6832	0.0116		0.2506	0.2506		0.2305	0.2305		1,120.9593	1,120.9593	0.3625		1,130.0229
Total	**0.5302**	**5.2710**	**6.6832**	**0.0116**		**0.2506**	**0.2506**		**0.2305**	**0.2305**		**1,120.9593**	**1,120.9593**	**0.3625**		**1,130.0229**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0362	0.0183	0.2958	7.2000e-004	0.0761	4.1000e-004	0.0765	0.0202	3.8000e-004	0.0206		73.0752	73.0752	2.1700e-003	1.8900e-003	73.6921
Total	**0.0362**	**0.0183**	**0.2958**	**7.2000e-004**	**0.0761**	**4.1000e-004**	**0.0765**	**0.0202**	**3.8000e-004**	**0.0206**		**73.0752**	**73.0752**	**2.1700e-003**	**1.8900e-003**	**73.6921**

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	lb/day										lb/day					
Off-Road	0.5302	5.2710	6.6832	0.0116		0.2506	0.2506		0.2305	0.2305	0.0000	1,120.9593	1,120.9593	0.3625		1,130.0229
Total	**0.5302**	**5.2710**	**6.6832**	**0.0116**		**0.2506**	**0.2506**		**0.2305**	**0.2305**	**0.0000**	**1,120.9593**	**1,120.9593**	**0.3625**		**1,130.0229**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0362	0.0183	0.2958	7.2000e-004	0.0761	4.1000e-004	0.0765	0.0202	3.8000e-004	0.0206		73.0752	73.0752	2.1700e-003	1.8900e-003	73.6921
Total	**0.0362**	**0.0183**	**0.2958**	**7.2000e-004**	**0.0761**	**4.1000e-004**	**0.0765**	**0.0202**	**3.8000e-004**	**0.0206**		**73.0752**	**73.0752**	**2.1700e-003**	**1.8900e-003**	**73.6921**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3649	3.9294	2.2846	5.4700e-003		0.1827	0.1827		0.1681	0.1681		530.1459	530.1459	0.1715		534.4324
Total	**0.3649**	**3.9294**	**2.2846**	**5.4700e-003**		**0.1827**	**0.1827**		**0.1681**	**0.1681**		**530.1459**	**530.1459**	**0.1715**		**534.4324**

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0281	0.7081	0.2132	2.5700e-003	0.0783	6.8800e-003	0.0852	0.0226	6.5800e-003	0.0291		275.1049	275.1049	7.1900e-003	0.0403	287.2903
Worker	0.1196	0.0604	0.9760	2.3700e-003	0.2510	1.3600e-003	0.2524	0.0666	1.2500e-003	0.0678		241.1481	241.1481	7.1600e-003	6.2300e-003	243.1841
Total	**0.1477**	**0.7685**	**1.1892**	**4.9400e-003**	**0.3294**	**8.2400e-003**	**0.3376**	**0.0891**	**7.8300e-003**	**0.0970**		**516.2529**	**516.2529**	**0.0144**	**0.0465**	**530.4743**

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	lb/day										lb/day					
Off-Road	0.3649	3.9294	2.2846	5.4700e-003		0.1827	0.1827		0.1681	0.1681	0.0000	530.1459	530.1459	0.1715		534.4324
Total	**0.3649**	**3.9294**	**2.2846**	**5.4700e-003**		**0.1827**	**0.1827**		**0.1681**	**0.1681**	**0.0000**	**530.1459**	**530.1459**	**0.1715**		**534.4324**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0281	0.7081	0.2132	2.5700e-003	0.0783	6.8800e-003	0.0852	0.0226	6.5800e-003	0.0291		275.1049	275.1049	7.1900e-003	0.0403	287.2903
Worker	0.1196	0.0604	0.9760	2.3700e-003	0.2510	1.3600e-003	0.2524	0.0666	1.2500e-003	0.0678		241.1481	241.1481	7.1600e-003	6.2300e-003	243.1841
Total	**0.1477**	**0.7685**	**1.1892**	**4.9400e-003**	**0.3294**	**8.2400e-003**	**0.3376**	**0.0891**	**7.8300e-003**	**0.0970**		**516.2529**	**516.2529**	**0.0144**	**0.0465**	**530.4743**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.4494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**3.6539**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0254	0.0128	0.2070	5.0000e-004	0.0533	2.9000e-004	0.0535	0.0141	2.7000e-004	0.0144		51.1526	51.1526	1.5200e-003	1.3200e-003	51.5845
Total	**0.0254**	**0.0128**	**0.2070**	**5.0000e-004**	**0.0533**	**2.9000e-004**	**0.0535**	**0.0141**	**2.7000e-004**	**0.0144**		**51.1526**	**51.1526**	**1.5200e-003**	**1.3200e-003**	**51.5845**

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	lb/day										lb/day					
Archit. Coating	3.4494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**3.6539**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0254	0.0128	0.2070	5.0000e-004	0.0533	2.9000e-004	0.0535	0.0141	2.7000e-004	0.0144		51.1526	51.1526	1.5200e-003	1.3200e-003	51.5845
Total	**0.0254**	**0.0128**	**0.2070**	**5.0000e-004**	**0.0533**	**2.9000e-004**	**0.0535**	**0.0141**	**2.7000e-004**	**0.0144**		**51.1526**	**51.1526**	**1.5200e-003**	**1.3200e-003**	**51.5845**

3.7 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.4349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1226**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**		**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0665	2.7815	0.5461	0.0104	0.2791	0.0240	0.3031	0.0764	0.0229	0.0994		1,133.3435	1,133.3435	0.0455	0.1797	1,188.0163
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
Worker	0.0471	0.0238	0.3845	9.3000e-004	0.0989	5.4000e-004	0.0994	0.0262	4.9000e-004	0.0267		94.9977	94.9977	2.8200e-003	2.4500e-003	95.7998
Total	**0.1136**	**2.8053**	**0.9306**	**0.0113**	**0.3780**	**0.0245**	**0.4025**	**0.1027**	**0.0234**	**0.1261**		**1,228.3413**	**1,228.3413**	**0.0483**	**0.1821**	**1,283.8161**

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	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.4349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1226**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**	**0.0000**	**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.7 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0665	2.7815	0.5461	0.0104	0.2791	0.0240	0.3031	0.0764	0.0229	0.0994		1,133.3435	1,133.3435	0.0455	0.1797	1,188.0163
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
Worker	0.0471	0.0238	0.3845	9.3000e-004	0.0989	5.4000e-004	0.0994	0.0262	4.9000e-004	0.0267		94.9977	94.9977	2.8200e-003	2.4500e-003	95.7998
Total	**0.1136**	**2.8053**	**0.9306**	**0.0113**	**0.3780**	**0.0245**	**0.4025**	**0.1027**	**0.0234**	**0.1261**		**1,228.3413**	**1,228.3413**	**0.0483**	**0.1821**	**1,283.8161**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Mitigated	0.0387	0.5902	0.3637	1.7700e-003	0.0554	2.5100e-003	0.0579	0.0151	2.3900e-003	0.0175		190.7295	190.7295	7.2500e-003	0.0279	199.2347
Unmitigated	0.0387	0.5902	0.3637	1.7700e-003	0.0554	2.5100e-003	0.0579	0.0151	2.3900e-003	0.0175		190.7295	190.7295	7.2500e-003	0.0279	199.2347

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	28.03	28.03	28.03	24,165	24,165
Parking Lot	0.00	0.00	0.00		
Total	28.03	28.03	28.03	24,165	24,165

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	10.00	5.00	6.50	33.00	48.00	19.00	21	51	28
Parking Lot	10.00	5.00	6.50	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
Automobile Care Center	0.280000	0.030000	0.070000	0.000000	0.000000	0.000000	0.060000	0.560000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507

5.0 Energy Detail

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
NaturalGas Unmitigated	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510

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	lb/day										lb/day					
Automobile Care Center	886.814	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
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
Total		**9.5600e-003**	**0.0869**	**0.0730**	**5.2000e-004**		**6.6100e-003**	**6.6100e-003**		**6.6100e-003**	**6.6100e-003**		**104.3310**	**104.3310**	**2.0000e-003**	**1.9100e-003**	**104.9510**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.886814	9.5600e-003	0.0869	0.0730	5.2000e-004		6.6100e-003	6.6100e-003		6.6100e-003	6.6100e-003		104.3310	104.3310	2.0000e-003	1.9100e-003	104.9510
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
Total		**9.5600e-003**	**0.0869**	**0.0730**	**5.2000e-004**		**6.6100e-003**	**6.6100e-003**		**6.6100e-003**	**6.6100e-003**		**104.3310**	**104.3310**	**2.0000e-003**	**1.9100e-003**	**104.9510**

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	lb/day										lb/day					
Mitigated	0.2382	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Unmitigated	0.2382	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190

CA Truck and Trailer Repair - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0171					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7000e-004	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Total	**0.2382**	**8.0000e-005**	**8.3100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0178**	**0.0178**	**5.0000e-005**		**0.0190**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0171					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7000e-004	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0178	0.0178	5.0000e-005		0.0190
Total	**0.2382**	**8.0000e-005**	**8.3100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0178**	**0.0178**	**5.0000e-005**		**0.0190**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CA Truck and Trailer Repair - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

CA Truck and Trailer Repair

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	72.30	1000sqft	1.66	72,300.00	0
Automobile Care Center	9.10	1000sqft	0.18	9,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	357.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Building and parking SF per site plan.
Parking Lot = all paved surfaces (parking lot + driveway)

Construction Phase - Schedule per project applicant.
Architecural coating interior only, concurrent with last 3 weeks of building construction.

Off-road Equipment - Equipment per project applicant.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment per project applicant.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment per project applicant.
Skid Steer Loader = mini excavator.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment for assembly of prefabricated building.

Off-road Equipment -

CA Truck and Trailer Repair - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment -

Grading - 400 CY vegetation export duting site prep.
400 CY Class II AB import during grading for building pad.

Trips and VMT - 80 loads of aggregate and ashpalt imported during paving.
Aggregate 25 CY truck/trailer capcity and haul trip length per applicant.

Architectural Coating - Prefabricated building, no exterior paint.
50 g/L VOC limit for flat interior and exerior coatings per SMAQMD Rule 442.

Vehicle Trips - Trip rate based on maximum 6 employees and 8 client trucks, and 2 vendor trucks per day (30 one-way trips).

Fleet Mix - Fleet mix LDA, LDT1, and LDT2 for employees; MHD and HHD for vendors; and HHD for clients.

Area Coating - 50 g/L VOC limit for flat interior and exerior coatings per SMAQMD Rule 442.

Construction Off-road Equipment Mitigation - Dust mitigation to meet requirments of SMAQMD Rule 403/BMPs.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	4,550.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	4.00	25.00
tblConstructionPhase	NumDays	200.00	30.00
tblConstructionPhase	NumDays	10.00	15.00
tblFleetMix	HHD	9.3060e-003	0.56
tblFleetMix	LDA	0.54	0.28
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT2	0.18	0.07
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	6.0930e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.5070e-003	0.00
tblFleetMix	MHD	0.01	0.06

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	OBUS	9.4200e-004	0.00
tblFleetMix	SBUS	1.0060e-003	0.00
tblFleetMix	UBUS	5.4800e-004	0.00
tblGrading	MaterialExported	0.00	400.00
tblGrading	MaterialImported	0.00	400.00
tblLandUse	LotAcreage	0.21	0.18
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblTripsAndVMT	HaulingTripNumber	50.00	32.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblVehicleTrips	ST_TR	23.72	3.08
tblVehicleTrips	SU_TR	11.88	3.08
tblVehicleTrips	WD_TR	23.72	3.08

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0624	0.3526	0.2740	6.9000e-004	0.0591	0.0145	0.0736	0.0254	0.0134	0.0388	0.0000	62.3500	62.3500	0.0148	1.9400e-003	63.2977
Maximum	**0.0624**	**0.3526**	**0.2740**	**6.9000e-004**	**0.0591**	**0.0145**	**0.0736**	**0.0254**	**0.0134**	**0.0388**	**0.0000**	**62.3500**	**62.3500**	**0.0148**	**1.9400e-003**	**63.2977**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0624	0.3526	0.2740	6.9000e-004	0.0318	0.0145	0.0463	0.0128	0.0134	0.0262	0.0000	62.3500	62.3500	0.0148	1.9400e-003	63.2977
Maximum	**0.0624**	**0.3526**	**0.2740**	**6.9000e-004**	**0.0318**	**0.0145**	**0.0463**	**0.0128**	**0.0134**	**0.0262**	**0.0000**	**62.3500**	**62.3500**	**0.0148**	**1.9400e-003**	**63.2977**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**46.24**	**0.00**	**37.13**	**49.49**	**0.00**	**32.35**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-3-2022**	**4-2-2022**	0.2489	0.2489
2	**4-3-2022**	**7-2-2022**	0.1312	0.1312
		Highest	0.2489	0.2489

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	0.0434	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0200e-003	2.0200e-003	1.0000e-005	0.0000	2.1500e-003
Energy	1.7500e-003	0.0159	0.0133	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	43.2806	43.2806	2.7300e-003	6.1000e-004	43.5298
Mobile	6.1300e-003	0.1117	0.0668	3.2000e-004	9.7700e-003	4.6000e-004	0.0102	2.6700e-003	4.4000e-004	3.1100e-003	0.0000	31.2422	31.2422	1.2200e-003	4.6200e-003	32.6498
Waste						0.0000	0.0000		0.0000	0.0000	7.0560	0.0000	7.0560	0.4170	0.0000	17.4809
Water						0.0000	0.0000		0.0000	0.0000	0.3029	0.9909	1.2938	1.1300e-003	6.7000e-004	1.5217
Total	**0.0513**	**0.1276**	**0.0811**	**4.2000e-004**	**9.7700e-003**	**1.6700e-003**	**0.0114**	**2.6700e-003**	**1.6500e-003**	**4.3200e-003**	**7.3589**	**75.5157**	**82.8745**	**0.4221**	**5.9000e-003**	**95.1844**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0434	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0200e-003	2.0200e-003	1.0000e-005	0.0000	2.1500e-003
Energy	1.7500e-003	0.0159	0.0133	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	43.2806	43.2806	2.7300e-003	6.1000e-004	43.5298
Mobile	6.1300e-003	0.1117	0.0668	3.2000e-004	9.7700e-003	4.6000e-004	0.0102	2.6700e-003	4.4000e-004	3.1100e-003	0.0000	31.2422	31.2422	1.2200e-003	4.6200e-003	32.6498
Waste						0.0000	0.0000		0.0000	0.0000	7.0560	0.0000	7.0560	0.4170	0.0000	17.4809
Water						0.0000	0.0000		0.0000	0.0000	0.3029	0.9909	1.2938	1.1300e-003	6.7000e-004	1.5217
Total	**0.0513**	**0.1276**	**0.0811**	**4.2000e-004**	**9.7700e-003**	**1.6700e-003**	**0.0114**	**2.6700e-003**	**1.6500e-003**	**4.3200e-003**	**7.3589**	**75.5157**	**82.8745**	**0.4221**	**5.9000e-003**	**95.1844**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	1/21/2022	5	15	
2	Grading	Grading	1/24/2022	2/25/2022	5	25	
3	Underground Utilities	Trenching	2/28/2022	3/18/2022	5	15	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	3/21/2022	4/29/2022	5	30	
5	Architectural Coating	Architectural Coating	4/11/2022	4/29/2022	5	15	
6	Paving	Paving	5/2/2022	5/13/2022	5	10	

Acres of Grading (Site Preparation Phase): 6.56

Acres of Grading (Grading Phase): 12.5

Acres of Paving: 1.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 13,650; Non-Residential Outdoor: 0; Striped Parking Area: 4,338 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	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	0	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Off-Highway Trucks	1	2.00	402	0.38
Grading	Off-Highway Trucks	1	2.00	402	0.38
Underground Utilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Skid Steer Loaders	1	8.00	65	0.37
Underground Utilities	Off-Highway Trucks	1	2.00	402	0.38
Building Construction	Aerial Lifts	2		63	0.31

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	50.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	32.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	4	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	33.00	13.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	160.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0430	0.0000	0.0430	0.0221	0.0000	0.0221	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7200e-003	0.0778	0.0466	1.0000e-004		3.6900e-003	3.6900e-003		3.3900e-003	3.3900e-003	0.0000	9.1597	9.1597	2.9600e-003	0.0000	9.2337
Total	**7.7200e-003**	**0.0778**	**0.0466**	**1.0000e-004**	**0.0430**	**3.6900e-003**	**0.0467**	**0.0221**	**3.3900e-003**	**0.0255**	**0.0000**	**9.1597**	**9.1597**	**2.9600e-003**	**0.0000**	**9.2337**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	4.6000e-003	8.6000e-004	2.0000e-005	4.2000e-004	4.0000e-005	4.6000e-004	1.2000e-004	4.0000e-005	1.5000e-004	0.0000	1.6066	1.6066	6.0000e-005	2.5000e-004	1.6841
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.5100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3629	0.3629	1.0000e-005	1.0000e-005	0.3664
Total	**2.8000e-004**	**4.7200e-003**	**2.3700e-003**	**2.0000e-005**	**8.6000e-004**	**4.0000e-005**	**9.0000e-004**	**2.4000e-004**	**4.0000e-005**	**2.7000e-004**	**0.0000**	**1.9694**	**1.9694**	**7.0000e-005**	**2.6000e-004**	**2.0505**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0194	0.0000	0.0194	9.9500e-003	0.0000	9.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7200e-003	0.0778	0.0466	1.0000e-004		3.6900e-003	3.6900e-003		3.3900e-003	3.3900e-003	0.0000	9.1597	9.1597	2.9600e-003	0.0000	9.2337
Total	**7.7200e-003**	**0.0778**	**0.0466**	**1.0000e-004**	**0.0194**	**3.6900e-003**	**0.0231**	**9.9500e-003**	**3.3900e-003**	**0.0133**	**0.0000**	**9.1597**	**9.1597**	**2.9600e-003**	**0.0000**	**9.2337**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	4.6000e-003	8.6000e-004	2.0000e-005	4.2000e-004	4.0000e-005	4.6000e-004	1.2000e-004	4.0000e-005	1.5000e-004	0.0000	1.6066	1.6066	6.0000e-005	2.5000e-004	1.6841
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.5100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3629	0.3629	1.0000e-005	1.0000e-005	0.3664
Total	**2.8000e-004**	**4.7200e-003**	**2.3700e-003**	**2.0000e-005**	**8.6000e-004**	**4.0000e-005**	**9.0000e-004**	**2.4000e-004**	**4.0000e-005**	**2.7000e-004**	**0.0000**	**1.9694**	**1.9694**	**7.0000e-005**	**2.6000e-004**	**2.0505**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.6700e-003	0.0000	6.6700e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6500e-003	0.0967	0.0566	1.6000e-004		3.5300e-003	3.5300e-003		3.2500e-003	3.2500e-003	0.0000	13.9050	13.9050	4.5000e-003	0.0000	14.0174
Total	**8.6500e-003**	**0.0967**	**0.0566**	**1.6000e-004**	**6.6700e-003**	**3.5300e-003**	**0.0102**	**7.2000e-004**	**3.2500e-003**	**3.9700e-003**	**0.0000**	**13.9050**	**13.9050**	**4.5000e-003**	**0.0000**	**14.0174**

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	7.0000e-005	2.9500e-003	5.5000e-004	1.0000e-005	2.7000e-004	2.0000e-005	2.9000e-004	7.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.0282	1.0282	4.0000e-005	1.6000e-004	1.0778
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.0000e-004	2.5200e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6048	0.6048	2.0000e-005	2.0000e-005	0.6107
Total	**3.8000e-004**	**3.1500e-003**	**3.0700e-003**	**2.0000e-005**	**1.0000e-003**	**2.0000e-005**	**1.0300e-003**	**2.7000e-004**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**1.6330**	**1.6330**	**6.0000e-005**	**1.8000e-004**	**1.6885**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.0000e-003	0.0000	3.0000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6500e-003	0.0967	0.0566	1.6000e-004		3.5300e-003	3.5300e-003		3.2500e-003	3.2500e-003	0.0000	13.9050	13.9050	4.5000e-003	0.0000	14.0174
Total	**8.6500e-003**	**0.0967**	**0.0566**	**1.6000e-004**	**3.0000e-003**	**3.5300e-003**	**6.5300e-003**	**3.2000e-004**	**3.2500e-003**	**3.5700e-003**	**0.0000**	**13.9050**	**13.9050**	**4.5000e-003**	**0.0000**	**14.0174**

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	7.0000e-005	2.9500e-003	5.5000e-004	1.0000e-005	2.7000e-004	2.0000e-005	2.9000e-004	7.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.0282	1.0282	4.0000e-005	1.6000e-004	1.0778
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.0000e-004	2.5200e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6048	0.6048	2.0000e-005	2.0000e-005	0.6107
Total	**3.8000e-004**	**3.1500e-003**	**3.0700e-003**	**2.0000e-005**	**1.0000e-003**	**2.0000e-005**	**1.0300e-003**	**2.7000e-004**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**1.6330**	**1.6330**	**6.0000e-005**	**1.8000e-004**	**1.6885**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9800e-003	0.0395	0.0501	9.0000e-005		1.8800e-003	1.8800e-003		1.7300e-003	1.7300e-003	0.0000	7.6269	7.6269	2.4700e-003	0.0000	7.6886
Total	**3.9800e-003**	**0.0395**	**0.0501**	**9.0000e-005**		**1.8800e-003**	**1.8800e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**7.6269**	**7.6269**	**2.4700e-003**	**0.0000**	**7.6886**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.8900e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4536	0.4536	2.0000e-005	1.0000e-005	0.4580
Total	**2.3000e-004**	**1.5000e-004**	**1.8900e-003**	**0.0000**	**5.5000e-004**	**0.0000**	**5.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4536**	**0.4536**	**2.0000e-005**	**1.0000e-005**	**0.4580**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9800e-003	0.0395	0.0501	9.0000e-005		1.8800e-003	1.8800e-003		1.7300e-003	1.7300e-003	0.0000	7.6269	7.6269	2.4700e-003	0.0000	7.6885
Total	**3.9800e-003**	**0.0395**	**0.0501**	**9.0000e-005**		**1.8800e-003**	**1.8800e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**7.6269**	**7.6269**	**2.4700e-003**	**0.0000**	**7.6885**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.8900e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4536	0.4536	2.0000e-005	1.0000e-005	0.4580
Total	**2.3000e-004**	**1.5000e-004**	**1.8900e-003**	**0.0000**	**5.5000e-004**	**0.0000**	**5.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4536**	**0.4536**	**2.0000e-005**	**1.0000e-005**	**0.4580**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4700e-003	0.0589	0.0343	8.0000e-005		2.7400e-003	2.7400e-003		2.5200e-003	2.5200e-003	0.0000	7.2141	7.2141	2.3300e-003	0.0000	7.2724
Total	**5.4700e-003**	**0.0589**	**0.0343**	**8.0000e-005**		**2.7400e-003**	**2.7400e-003**		**2.5200e-003**	**2.5200e-003**	**0.0000**	**7.2141**	**7.2141**	**2.3300e-003**	**0.0000**	**7.2724**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2000e-004	0.0112	3.2600e-003	4.0000e-005	1.1400e-003	1.0000e-004	1.2500e-003	3.3000e-004	1.0000e-004	4.3000e-004	0.0000	3.7434	3.7434	1.0000e-004	5.5000e-004	3.9093
Worker	1.5300e-003	9.9000e-004	0.0125	3.0000e-005	3.6400e-003	2.0000e-005	3.6600e-003	9.7000e-004	2.0000e-005	9.9000e-004	0.0000	2.9936	2.9936	1.0000e-004	9.0000e-005	3.0230
Total	**1.9500e-003**	**0.0122**	**0.0158**	**7.0000e-005**	**4.7800e-003**	**1.2000e-004**	**4.9100e-003**	**1.3000e-003**	**1.2000e-004**	**1.4200e-003**	**0.0000**	**6.7370**	**6.7370**	**2.0000e-004**	**6.4000e-004**	**6.9324**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4700e-003	0.0589	0.0343	8.0000e-005		2.7400e-003	2.7400e-003		2.5200e-003	2.5200e-003	0.0000	7.2141	7.2141	2.3300e-003	0.0000	7.2724
Total	**5.4700e-003**	**0.0589**	**0.0343**	**8.0000e-005**		**2.7400e-003**	**2.7400e-003**		**2.5200e-003**	**2.5200e-003**	**0.0000**	**7.2141**	**7.2141**	**2.3300e-003**	**0.0000**	**7.2724**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2000e-004	0.0112	3.2600e-003	4.0000e-005	1.1400e-003	1.0000e-004	1.2500e-003	3.3000e-004	1.0000e-004	4.3000e-004	0.0000	3.7434	3.7434	1.0000e-004	5.5000e-004	3.9093
Worker	1.5300e-003	9.9000e-004	0.0125	3.0000e-005	3.6400e-003	2.0000e-005	3.6600e-003	9.7000e-004	2.0000e-005	9.9000e-004	0.0000	2.9936	2.9936	1.0000e-004	9.0000e-005	3.0230
Total	**1.9500e-003**	**0.0122**	**0.0158**	**7.0000e-005**	**4.7800e-003**	**1.2000e-004**	**4.9100e-003**	**1.3000e-003**	**1.2000e-004**	**1.4200e-003**	**0.0000**	**6.7370**	**6.7370**	**2.0000e-004**	**6.4000e-004**	**6.9324**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0259					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5300e-003	0.0106	0.0136	2.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	1.9149	1.9149	1.2000e-004	0.0000	1.9181
Total	**0.0274**	**0.0106**	**0.0136**	**2.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**1.9149**	**1.9149**	**1.2000e-004**	**0.0000**	**1.9181**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.1000e-004	1.3200e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3175	0.3175	1.0000e-005	1.0000e-005	0.3206
Total	**1.6000e-004**	**1.1000e-004**	**1.3200e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3175**	**0.3175**	**1.0000e-005**	**1.0000e-005**	**0.3206**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0259					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5300e-003	0.0106	0.0136	2.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	1.9149	1.9149	1.2000e-004	0.0000	1.9181
Total	**0.0274**	**0.0106**	**0.0136**	**2.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**1.9149**	**1.9149**	**1.2000e-004**	**0.0000**	**1.9181**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.1000e-004	1.3200e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3175	0.3175	1.0000e-005	1.0000e-005	0.3206
Total	**1.6000e-004**	**1.1000e-004**	**1.3200e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3175**	**0.3175**	**1.0000e-005**	**1.0000e-005**	**0.3206**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315
Paving	2.1700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.6100e-003**	**0.0339**	**0.0440**	**7.0000e-005**		**1.7400e-003**	**1.7400e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9315**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0147	2.7500e-003	5.0000e-005	1.3500e-003	1.2000e-004	1.4700e-003	3.7000e-004	1.1000e-004	4.9000e-004	0.0000	5.1411	5.1411	2.1000e-004	8.1000e-004	5.3891
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.3000e-004	1.6400e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3931	0.3931	1.0000e-005	1.0000e-005	0.3970
Total	**5.3000e-004**	**0.0149**	**4.3900e-003**	**5.0000e-005**	**1.8300e-003**	**1.2000e-004**	**1.9500e-003**	**5.0000e-004**	**1.1000e-004**	**6.2000e-004**	**0.0000**	**5.5342**	**5.5342**	**2.2000e-004**	**8.2000e-004**	**5.7860**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314
Paving	2.1700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.6100e-003**	**0.0339**	**0.0440**	**7.0000e-005**		**1.7400e-003**	**1.7400e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9314**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0147	2.7500e-003	5.0000e-005	1.3500e-003	1.2000e-004	1.4700e-003	3.7000e-004	1.1000e-004	4.9000e-004	0.0000	5.1411	5.1411	2.1000e-004	8.1000e-004	5.3891
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.3000e-004	1.6400e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3931	0.3931	1.0000e-005	1.0000e-005	0.3970
Total	**5.3000e-004**	**0.0149**	**4.3900e-003**	**5.0000e-005**	**1.8300e-003**	**1.2000e-004**	**1.9500e-003**	**5.0000e-004**	**1.1000e-004**	**6.2000e-004**	**0.0000**	**5.5342**	**5.5342**	**2.2000e-004**	**8.2000e-004**	**5.7860**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.1300e-003	0.1117	0.0668	3.2000e-004	9.7700e-003	4.6000e-004	0.0102	2.6700e-003	4.4000e-004	3.1100e-003	0.0000	31.2422	31.2422	1.2200e-003	4.6200e-003	32.6498
Unmitigated	6.1300e-003	0.1117	0.0668	3.2000e-004	9.7700e-003	4.6000e-004	0.0102	2.6700e-003	4.4000e-004	3.1100e-003	0.0000	31.2422	31.2422	1.2200e-003	4.6200e-003	32.6498

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	28.03	28.03	28.03	24,165	24,165
Parking Lot	0.00	0.00	0.00		
Total	28.03	28.03	28.03	24,165	24,165

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	10.00	5.00	6.50	33.00	48.00	19.00	21	51	28
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.280000	0.030000	0.070000	0.000000	0.000000	0.000000	0.060000	0.560000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	26.0074	26.0074	2.4000e-003	2.9000e-004	26.1540
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	26.0074	26.0074	2.4000e-003	2.9000e-004	26.1540
NaturalGas Mitigated	1.7500e-003	0.0159	0.0133	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	17.2732	17.2732	3.3000e-004	3.2000e-004	17.3758
NaturalGas Unmitigated	1.7500e-003	0.0159	0.0133	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	17.2732	17.2732	3.3000e-004	3.2000e-004	17.3758

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Automobile Care Center	323687	1.7500e-003	0.0159	0.0133	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	17.2732	17.2732	3.3000e-004	3.2000e-004	17.3758
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		**1.7500e-003**	**0.0159**	**0.0133**	**1.0000e-004**		**1.2100e-003**	**1.2100e-003**		**1.2100e-003**	**1.2100e-003**	**0.0000**	**17.2732**	**17.2732**	**3.3000e-004**	**3.2000e-004**	**17.3758**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	323687	1.7500e-003	0.0159	0.0133	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	17.2732	17.2732	3.3000e-004	3.2000e-004	17.3758
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		**1.7500e-003**	**0.0159**	**0.0133**	**1.0000e-004**		**1.2100e-003**	**1.2100e-003**		**1.2100e-003**	**1.2100e-003**	**0.0000**	**17.2732**	**17.2732**	**3.3000e-004**	**3.2000e-004**	**17.3758**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	134862	21.8985	2.0200e-003	2.4000e-004	22.0219
Parking Lot	25305	4.1090	3.8000e-004	5.0000e-005	4.1321
Total		**26.0074**	**2.4000e-003**	**2.9000e-004**	**26.1540**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	134862	21.8985	2.0200e-003	2.4000e-004	22.0219
Parking Lot	25305	4.1090	3.8000e-004	5.0000e-005	4.1321
Total		**26.0074**	**2.4000e-003**	**2.9000e-004**	**26.1540**

6.0 Area Detail

CA Truck and Trailer Repair - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0434	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0200e-003	2.0200e-003	1.0000e-005	0.0000	2.1500e-003
Unmitigated	0.0434	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0200e-003	2.0200e-003	1.0000e-005	0.0000	2.1500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0402					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0200e-003	2.0200e-003	1.0000e-005	0.0000	2.1500e-003
Total	**0.0434**	**1.0000e-005**	**1.0400e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0200e-003**	**2.0200e-003**	**1.0000e-005**	**0.0000**	**2.1500e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0402					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0200e-003	2.0200e-003	1.0000e-005	0.0000	2.1500e-003
Total	**0.0434**	**1.0000e-005**	**1.0400e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0200e-003**	**2.0200e-003**	**1.0000e-005**	**0.0000**	**2.1500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.2938	1.1300e-003	6.7000e-004	1.5217
Unmitigated	1.2938	1.1300e-003	6.7000e-004	1.5217

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.856138 / 0.52473	1.2938	1.1300e-003	6.7000e-004	1.5217
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.2938**	**1.1300e-003**	**6.7000e-004**	**1.5217**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.856138 / 0.52473	1.2938	1.1300e-003	6.7000e-004	1.5217
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.2938**	**1.1300e-003**	**6.7000e-004**	**1.5217**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.0560	0.4170	0.0000	17.4809
Unmitigated	7.0560	0.4170	0.0000	17.4809

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	34.76	7.0560	0.4170	0.0000	17.4809
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**7.0560**	**0.4170**	**0.0000**	**17.4809**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	34.76	7.0560	0.4170	0.0000	17.4809
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**7.0560**	**0.4170**	**0.0000**	**17.4809**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment B

HRA Model Input and Output

DPM Emissions

lb/VMT	2.91650E-04
Idling lb/min	2.43042E-05
Circulation lb/m @ 5 mph	1.81223E-07

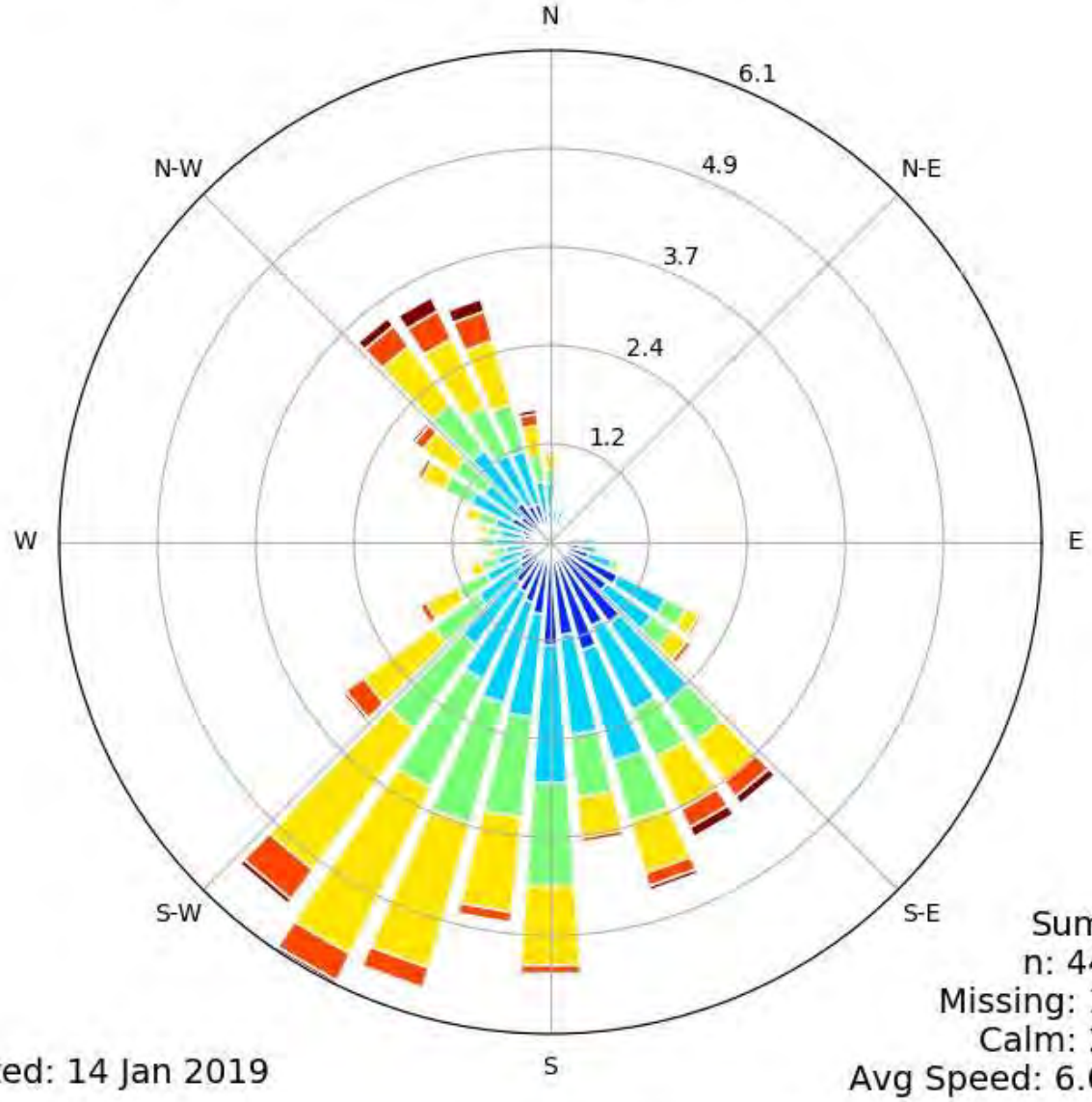
Max hour emissions (3 Trucks)		
	Distance (m)	**DPM (lb)**
5 min idling spot	-	3.645627E-04
Circulation 1	86.6	4.708173E-05
Circulation 2	64.8	3.522975E-05
Circulation 3	132	7.176431E-05
Circulation 4	78	4.240618E-05

Annual emissions (8 trucks/day, 6 days per week)		
5 min idling spot	-	0.304149
Circulation 1	86.6	0.039280
Circulation 2	64.8	0.029392
Circulation 3	132	0.059872
Circulation 4	78	0.035379

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for CVMT and EVMT, tons/year for Emissions, 1000 gallons/year for Fuel Consumption, mph for Speed, kWh/day for Energy Consumption

Region	Calendar Yea	Vehicle Cat	Model Year	Speed	Fuel	Total VMT	PM10_RUNEX
Sacramento	2023	HHDT	Aggregate	5	Diesel	1920820	0.280103664

[SAC] SACRAMENTO/EXECUTIV
Windrose Plot [All Year]
Period of Record: 01 Jan 1970 - 14 Jan 2019



Summary
n: 444759
Missing: 17816
Calm: 20.6%
Avg Speed: 6.6 mph

Generated: 14 Jan 2019

Wind Speed [mph]
2-5 5-7 7-10 10-15 15-20 20+

Control Pathway

Dispersion Options

Titles

C:\Users\martinr\Desktop\HRA\CATruck_AERMOD\CATruck_AERMOD.isc

Dispersion Options

- [■] Regulatory Default
- [ ] Non-Default Options

Dispersion Coefficient

Rural

Output Type

- [■] Concentration
- [ ] Total Deposition (Dry & Wet)
- [ ] Dry Deposition
- [ ] Wet Deposition

Plume Depletion

- [ ] Dry Removal
- [ ] Wet Removal

Output Warnings

- [ ] No Output Warnings
- [ ] Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

SO2

Averaging Time Options

Hours: [■] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 6 [ ] 8 [ ] 12 [ ] 24

- [ ] Month
- [■] Period
- [ ] Annual

- [ ] 1-Hour SO2 Non-NAAQS
- [■] 1-Hour SO2 NAAQS

Exponential Decay

Option not available

Terrain Height Options

- [ ] Flat
- [■] Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

- [■] Yes
- [ ] No

Default Height = 1.20 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: CATruck_AERMOD.err

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	IDLE2	633584.74	4277747.61	10.65	3.84	1.00000	366.00	51.71	0.10
POINT	IDLE1	633533.44	4277730.77	10.19	3.84	1.00000	366.00	51.71	0.10
POINT	IDLE3	633553.05	4277772.59	10.31	3.84	1.00000	366.00	51.71	0.10

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME
Source: CIRC1

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.59	1.00000		633571.44	4277790.12	10.40	3.11
			633570.92	4277758.02	10.25	3.11
			633561.90	4277753.16	10.15	3.11
			633547.32	4277754.20	10.08	3.11
			633534.14	4277744.14	10.12	3.11
			633533.27	4277731.12	10.18	3.11

Source Type: LINE VOLUME
Source: CIRC2

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.59	1.00000		633533.27	4277730.77	10.18	3.11
			633534.48	4277745.00	10.12	3.11
			633573.87	4277744.66	10.44	3.11
			633584.46	4277748.13	10.66	3.11

Source Type: LINE VOLUME
Source: CIRC3

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.59	1.00000		633611.18	4277755.41	10.52	3.11
			633619.34	4277755.07	10.55	3.11
			633619.34	4277730.60	10.53	3.11
			633579.95	4277731.64	10.45	3.11
			633570.58	4277751.42	10.18	3.11
			633551.84	4277752.98	10.09	3.11
			633552.70	4277772.25	10.39	3.11

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: CIRC4

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.59	1.00000		633553.05	4277772.42	10.41	3.11
			633554.79	4277755.76	10.08	3.11
			633582.38	4277756.28	10.62	3.11
			633582.90	4277789.94	10.56	3.11

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
CIRC1	L0000048	633571.37	4277785.82	10.47	3.11	0.10000	8.59		4.00	2.89
	L0000049	633571.23	4277777.23	10.51	3.11	0.10000	8.59		4.00	2.89
	L0000050	633571.10	4277768.64	10.48	3.11	0.10000	8.59		4.00	2.89
	L0000051	633570.96	4277760.05	10.44	3.11	0.10000	8.59		4.00	2.89
	L0000052	633565.15	4277754.91	10.32	3.11	0.10000	8.59		4.00	2.89
	L0000053	633557.02	4277753.51	10.19	3.11	0.10000	8.59		4.00	2.89
	L0000054	633548.45	4277754.12	10.14	3.11	0.10000	8.59		4.00	2.89
	L0000055	633541.39	4277749.67	10.10	3.11	0.10000	8.59		4.00	2.89
	L0000056	633534.56	4277744.46	10.13	3.11	0.10000	8.59		4.00	2.89
	L0000057	633533.60	4277736.10	10.17	3.11	0.10000	8.59		4.00	2.89

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
CIRC2	L0000058	633533.63	4277735.05	10.17	3.11	0.12500	8.59		4.00	2.89
	L0000059	633534.37	4277743.61	10.13	3.11	0.12500	8.59		4.00	2.89
	L0000060	633541.68	4277744.94	10.11	3.11	0.12500	8.59		4.00	2.89
	L0000061	633550.27	4277744.86	10.11	3.11	0.12500	8.59		4.00	2.89
	L0000062	633558.86	4277744.79	10.10	3.11	0.12500	8.59		4.00	2.89
	L0000063	633567.45	4277744.71	10.28	3.11	0.12500	8.59		4.00	2.89
	L0000064	633575.93	4277745.33	10.48	3.11	0.12500	8.59		4.00	2.89
	L0000065	633584.10	4277748.01	10.66	3.11	0.12500	8.59		4.00	2.89

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
CIRC3	L0000066	633615.47	4277755.23	10.65	3.11	0.06667	8.59		4.00	2.89

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
CIRC3	L0000067	633619.34	4277750.34	10.64	3.11	0.06667	8.59		4.00	2.89
	L0000068	633619.34	4277741.75	10.59	3.11	0.06667	8.59		4.00	2.89
	L0000069	633619.34	4277733.16	10.57	3.11	0.06667	8.59		4.00	2.89
	L0000070	633613.31	4277730.76	10.47	3.11	0.06667	8.59		4.00	2.89
	L0000071	633604.72	4277730.99	10.42	3.11	0.06667	8.59		4.00	2.89
	L0000072	633596.13	4277731.21	10.50	3.11	0.06667	8.59		4.00	2.89
	L0000073	633587.54	4277731.44	10.57	3.11	0.06667	8.59		4.00	2.89
	L0000074	633579.52	4277732.54	10.51	3.11	0.06667	8.59		4.00	2.89
	L0000075	633575.84	4277740.30	10.46	3.11	0.06667	8.59		4.00	2.89
	L0000076	633572.17	4277748.06	10.40	3.11	0.06667	8.59		4.00	2.89
	L0000077	633565.72	4277751.83	10.30	3.11	0.06667	8.59		4.00	2.89
	L0000078	633557.16	4277752.54	10.18	3.11	0.06667	8.59		4.00	2.89
	L0000079	633551.98	4277756.23	10.18	3.11	0.06667	8.59		4.00	2.89
	L0000080	633552.37	4277764.81	10.24	3.11	0.06667	8.59		4.00	2.89

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
CIRC4	L0000081	633553.50	4277768.15	10.28	3.11	0.11111	8.59		4.00	2.89
	L0000082	633554.39	4277759.60	10.22	3.11	0.11111	8.59		4.00	2.89
	L0000083	633559.51	4277755.85	10.24	3.11	0.11111	8.59		4.00	2.89
	L0000084	633568.10	4277756.01	10.37	3.11	0.11111	8.59		4.00	2.89
	L0000085	633576.69	4277756.17	10.51	3.11	0.11111	8.59		4.00	2.89
	L0000086	633582.42	4277759.19	10.59	3.11	0.11111	8.59		4.00	2.89
	L0000087	633582.55	4277767.78	10.57	3.11	0.11111	8.59		4.00	2.89
	L0000088	633582.69	4277776.37	10.54	3.11	0.11111	8.59		4.00	2.89
	L0000089	633582.82	4277784.96	10.53	3.11	0.11111	8.59		4.00	2.89

Source Pathway

Building Downwash Information

Source ID: IDLE2

Heights [m] (10 to 360 deg)						
10-60 deg	9.14	9.14	9.14	9.14	9.14	9.14
70-120 deg	9.14	9.14	9.14	9.14	9.14	9.14
130-180 deg	9.14	9.14	9.14	9.14	9.14	9.14
190-240 deg	9.14	9.14	9.14	9.14	9.14	9.14
250-300 deg	9.14	9.14	9.14	9.14	9.14	9.14
310-360 deg	9.14	9.14	9.14	9.14	9.14	9.14
Widths [m] (10 to 360 deg)						
10-60 deg	26.83	31.51	35.24	37.89	39.40	39.70
70-120 deg	38.80	36.72	33.53	36.72	38.80	39.70
130-180 deg	39.40	37.89	35.24	31.51	26.83	21.33
190-240 deg	26.83	31.51	35.24	37.89	39.40	39.70
250-300 deg	38.80	36.72	33.53	36.72	38.80	39.70
310-360 deg	39.40	37.89	35.24	31.51	26.83	21.33
Lengths [m] (10 to 360 deg)						
10-60 deg	36.72	38.80	39.70	39.40	37.89	35.24
70-120 deg	31.51	26.83	21.33	26.83	31.51	35.24
130-180 deg	37.89	39.40	39.70	38.80	36.72	33.53
190-240 deg	36.72	38.80	39.70	39.40	37.89	35.24
250-300 deg	31.51	26.83	21.33	26.83	31.51	35.24
310-360 deg	37.89	39.40	39.70	38.80	36.72	33.53
Along Flow [m] (10 to 360 deg)						
10-60 deg	-3.61	-2.76	-1.83	-0.85	0.16	1.16
70-120 deg	2.13	3.04	3.85	-1.28	-6.37	-11.26
130-180 deg	-15.81	-19.89	-23.35	-26.11	-28.08	-29.19
190-240 deg	-33.12	-36.04	-37.87	-38.55	-38.05	-36.40
250-300 deg	-33.65	-29.87	-25.18	-25.55	-25.15	-23.98
310-360 deg	-22.08	-19.51	-16.35	-12.69	-8.65	-4.34
Across Flow [m] (10 to 360 deg)						
10-60 deg	-12.14	-9.39	-6.36	-3.13	0.19	3.50
70-120 deg	6.71	9.72	12.43	14.76	16.64	18.02
130-180 deg	18.85	19.11	18.78	17.89	16.45	14.51
190-240 deg	12.14	9.39	6.36	3.13	-0.19	-3.50
250-300 deg	-6.71	-9.72	-12.43	-14.76	-16.64	-18.02
310-360 deg	-18.85	-19.11	-18.78	-17.89	-16.45	-14.51

Source ID: IDLE1

Heights [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00

70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	0.00	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Widths [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00
70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	0.00	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Lengths [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00
70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	0.00	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Along Flow [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00
70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	0.00	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Across Flow [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00
70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	0.00	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: **IDLE3**

Heights [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00
70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	9.14	9.14	9.14	9.14	9.14
310-360 deg	9.14	0.00	0.00	0.00	0.00	0.00

Source Pathway

Widths [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00
70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	36.72	33.53	36.72	38.80	39.70
310-360 deg	39.40	0.00	0.00	0.00	0.00	0.00
Lengths [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00
70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	26.83	21.33	26.83	31.51	35.24
310-360 deg	37.89	0.00	0.00	0.00	0.00	0.00
Along Flow [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00
70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	-56.74	-56.87	-61.10	-63.47	-63.91
310-360 deg	-62.41	0.00	0.00	0.00	0.00	0.00
Across Flow [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	0.00	0.00
70-120 deg	0.00	0.00	0.00	0.00	0.00	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	20.39	12.55	4.34	-4.01	-12.23
310-360 deg	-20.08	0.00	0.00	0.00	0.00	0.00

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Variable Emissions

Hour / Day-of-Week Emission Rate Variation

Scenario: Scenario 1

Source ID: CIRC1

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
10:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
11:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
12:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
13:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
14:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
15:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
16:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
17:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
18:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
19:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: CIRC2

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
10:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
11:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
12:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
13:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
14:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
15:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
16:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
17:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
18:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
19:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

Scenario: Scenario 1

Source ID: CIRC3

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
10:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
11:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
12:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
13:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
14:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
15:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
16:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
17:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
18:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
19:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: CIRC4

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
10:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
11:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
12:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
13:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
14:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
15:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
16:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
17:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
18:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
19:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: IDLE1

Scenario: Scenario 1

Source ID: **IDLE1**

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
10:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
11:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
12:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
13:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
14:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
15:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
16:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
17:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
18:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
19:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: **IDLE2**

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
10:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
11:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
12:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
13:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
14:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
15:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
16:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
17:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
18:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
19:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: **IDLE3**

Source Pathway

Scenario: Scenario 1

Source ID: **IDLE3**

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
10:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
11:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
12:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
13:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
14:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
15:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
16:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
17:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
18:00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
19:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	633300.00	4277580.00	55	35	10.00	10.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	633493.71	4277695.72		10.12	
2	633513.66	4277694.86		10.31	
3	633534.48	4277694.33		10.19	
4	633587.13	4277693.11		10.34	
5	633635.51	4277692.79		10.43	
6	633668.39	4277726.01		10.53	
7	633668.39	4277767.86		10.89	
8	633682.80	4277817.57		10.41	
9	633569.52	4277837.63		9.54	
10	633442.83	4277841.13		8.92	

Plant Boundary Receptors

Meteorology Pathway

Met Input Data

Surface Met Data

Filename: ..\14-18.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: ..\14-18.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 7.30 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2014			SACRAMENTO/EXECUTIVE ARPT
Upper Air		2014			OAKLAND/WSO AP

Data Period

Data Period to Process

Start Date: 1/1/2014 Start Hour: 1 End Date: 12/25/2018 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐		No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: CATruck_AERMOD.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
Period	ALL	N/A	PE00GALL.PLT

Output File of US NAAQS

Path for US NAAQS: CATruck_AERMOD.AD

HARP Project Summary Report 10 /9/2021 6:23:27 AM

PROJECT INFORMATION
HARP Version: 21081
Project Name: CATRUCK RISK
HARP Database: NA

FACILITY INFORMATION
Origin
X (m):0
Y (m):0
Zone:1
No. of Sources:0
No. of Buildings:0

EMISSION INVENTORY
No. of Pollutants:7
No. of Background Pollutant s:0

Emissions

ScrID	StkID	ProID	PolID	PolAbbrev	Multi	Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF
IDLE1	0	0	9901	DieselExhPl	1	0.304149	0.000365	1
IDLE2	0	0	9901	DieselExhPl	1	0.304149	0.000365	1
IDLE3	0	0	9901	DieselExhPl	1	0.304149	0.000365	1
CIRC1	0	0	9901	DieselExhPl	1	0.03928	4.71E-05	1
CIRC2	0	0	9901	DieselExhPl	1	0.029392	3.52E-05	1
CIRC3	0	0	9901	DieselExhPl	1	0.059872	7.18E-05	1
CIRC4	0	0	9901	DieselExhPl	1	0.035379	4.24E-05	1

Background

PolID	PolAbbrev	Conc (ug/m^3)	MWAF

Ground level concentration fil es (\gl c\)

9901MAXHR.txt
9901PER.txt

POLLUTANT HEALTH INFORMA TIO N
Health Table Version: HEALT H21 221
Official: True

PolID	PolAbbrev	InhCa	ncer	OralCa	AcuteREL	InhChronic	REL	OralCl	EL	InhChro	REL
9901	DieselExhPM	1.1				5					

Residential Cancer risk

*HARP - HRACalc v21081 10/4/2021 10:45:14 AM - Cancer Risk

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
R1	ALL		633493.7	4277696	4.44E-08	30YrCancerDerived_InhSoilDermMMilk_FAH3to70
R2	ALL		633513.7	4277695	5.74E-08	30YrCancerDerived_InhSoilDermMMilk_FAH3to70
R3	ALL		633534.5	4277694	8.72E-08	30YrCancerDerived_InhSoilDermMMilk_FAH3to70
R4	ALL		633587.1	4277693	1.83E-07	30YrCancerDerived_InhSoilDermMMilk_FAH3to70
R5	ALL		633635.5	4277693	1.53E-07	30YrCancerDerived_InhSoilDermMMilk_FAH3to70

Residential Non-Cancer Chronic Risk

*HARP - HRACalc v21081 10/4/2021 10:47:25 AM - Chronic Risk

REC	GRP	NETID	X	Y	SCENARIO	MAXHI
R1	ALL		633493.71	4277695.72	NonCancerChronicDerived_InhSoilDermMMilk	1.30E-05
R2	ALL		633513.66	4277694.86	NonCancerChronicDerived_InhSoilDermMMilk	1.68E-05
R3	ALL		633534.48	4277694.33	NonCancerChronicDerived_InhSoilDermMMilk	2.56E-05
R4	ALL		633587.13	4277693.11	NonCancerChronicDerived_InhSoilDermMMilk	5.37E-05
R5	ALL		633635.51	4277692.79	NonCancerChronicDerived_InhSoilDermMMilk	4.50E-05

Worker Cancer Risk

*HARP - HRACalc v21081 10/4/2021 10:46:29 AM - Cancer Risk

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
W1	ALL		633668.39	4277726.01	8.77E-09	25YrCancerDerived_InhSoilDerm
W2	ALL		633668.39	4277767.86	7.89E-09	25YrCancerDerived_InhSoilDerm
W3	ALL		633682.8	4277817.57	7.25E-09	25YrCancerDerived_InhSoilDerm
W4	ALL		633569.52	4277837.63	1.90E-08	25YrCancerDerived_InhSoilDerm
W5	ALL		633442.83	4277841.13	3.10E-09	25YrCancerDerived_InhSoilDerm

Worker Non-Cancer Chronic Risk

*HARP - HRACalc v21081 10/4/2021 10:48:12 AM - Chronic Risk

REC	GRP	NETID	X	Y	SCENARIO	MAXHI
W1	ALL		633668.39	4277726.01	NonCancerChronicDerived_InhSoilDerm	2.84E-05
W2	ALL		633668.39	4277767.86	NonCancerChronicDerived_InhSoilDerm	2.55E-05
W3	ALL		633682.8	4277817.57	NonCancerChronicDerived_InhSoilDerm	2.34E-05
W4	ALL		633569.52	4277837.63	NonCancerChronicDerived_InhSoilDerm	6.16E-05
W5	ALL		633442.83	4277841.13	NonCancerChronicDerived_InhSoilDerm	1.00E-05