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Date: January 24, 2022

To: Voytek Bajsarowicz – Haley & Aldrich, Inc.

From: Graham Stephens – Sespe Consulting, Inc.

Re: **Energy Impact Assessment**
80-12 Industrial Center Project – Fairfield, California

SUMMARY

The Project consists of the construction and operation of two warehouse structures and associated parking lots, located at 300 Chadbourne Road in the City of Fairfield (City), within Solano County, California. The Project site is currently occupied by a shuttered former Walmart store. The California Environmental Quality Act (CEQA) requires an environmental analysis, including energy resources, of projects requiring discretionary approval by the local lead agency with land use authority, which in this case is the City. Pursuant to CEQA, this memorandum describes and analyzes the proposed Project’s estimated energy resource consumption and associated impacts.

Table 1 summarizes the CEQA Appendix G – Environmental Checklist Form questions that are used as criteria against which to evaluate the significance of the Project impacts related energy resources, as well as the corresponding significance thresholds determinations. The full analysis supporting the significance levels for each of the threshold criteria defined in Table 1 is detailed in the sections that follow.

Table 1: Significance Determinations

Threshold	Impact
ENG-1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less Than Significant.
ENG-2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less Than Significant.

Based on the impact assessment provided herein and the significance determinations in Table 1, the Project would have less than significant impacts in terms of energy resources.

INTRODUCTION

CEQA analyses, including those related to energy resources, take into account the existing physical setting or “baseline” against which the proposed project changes that would occur are measured. In such cases, energy consumption occurring in the existing setting are subtracted from the proposed project energy consumption to determine the extent of change or delta from the baseline. The delta is then evaluated to determine if the implementation of the project would result in one of the following impacts:

- No Impact;
- Less Than Significant Impact;
- Less Than Significant Impact with Mitigation;
- Significant Impact; or
- Significant with Overriding Considerations.

Projects that are determined to have potentially significant impacts must mitigate the impact to a less than significant level or to the maximum extent feasible.

The baseline for this Project would be the shuttered former Walmart store, which has been closed for a number of years. Because there is little to no data regarding the previous energy consumption associated with the Walmart warehouse, this energy impact assessment assumes there is no baseline energy consumption associated with the proposed Project site. This is considered the most conservative approach to take, because there would have certainly been historical energy consumption associated with the former Walmart warehouse (merchandise delivery trucks, employee vehicles, air conditioning, heating, refrigeration, generators, etc.). Therefore, the Project energy impacts have been assessed as if the Project site were a “greenfield” site that had not been developed in the past. Omitting existing (i.e., baseline) energy consumption and associated impacts is conservative because it inflates the Project impacts.

Furthermore, there are no unusual Project characteristics or processes (during Project construction or operation) that would require the use of equipment that is more energy intensive than equipment used elsewhere for comparable activities, nor would the Project require the use of equipment that would not conform to California’s current emissions standards or related fuel efficiencies. Additionally, the Project site will be developed with a series of water and energy efficiency features including the following: water efficient landscaping; 32 parking spaces with electric vehicle (EV) infrastructure; 9 parking stalls designated for clean air/carpool parking; LED light fixtures; and the addition of skylights in warehouses to reduce energy use from lighting. In addition, the proposed Project plans to develop 15% percent of the roofs with solar in the future. Furthermore, the proposed Project will be constructed consistent with CAL-Green Building Code, Title 24, which would reduce onsite GHG emissions from area and energy sources, in order to obtain a minimum rating of LEED Certified with the US Green Building Council. Overall, the construction and operation of this proposed Project would not require the creation of a new source of energy.

METHODOLOGY

In general, a project’s energy consumption is evaluated using the following three (3) sources: 1) diesel and gasoline fuel use and associated vehicle trips generated (i.e., transportation sources); 2) natural gas usage; and 3) electricity consumption. As discussed above, the Project is the development of a new warehouse facility. As such, the Project’s construction and operations activities that consume energy resources are quantified and considered in this memorandum. Moreover, it is assumed the Project does not include renewable energy sources, such solar, which would reduce the overall energy demand from conventional power sources.

As part of this energy evaluation, information and data was obtained from the Project’s Air Quality and Climate Change Impact Assessment (Air Quality Assessment) prepare by Sespe Consulting in 2022. For example, in order to quantify air emissions, one needs to know the number and type of trucks and vehicles associated with the project, the types and sizes of the land uses, etc. Specifically, the Air Quality Report used the California Emissions Estimator Model (CalEEMod) with default settings to quantify energy consumption (natural gas, electricity) and vehicle/equipment activity (gasoline, diesel) from both Project construction and operation (model output attached). The assumptions and default settings used in the modeling, as well as the results are discussed in detail in the Air Quality Assessment, and summarized within the CalEEMod output presented in Attachment 2. For this Project the land use parameters input to CalEEMod as part of the Air Quality Assessment are summarized in Table 2. Refer to Attachment 2 for the CalEEMod output file.

Table 2: CalEEMod Land Use Parameters

Land Use Type	Land Use Sub-Type	Land Use Unit Amount	Land Use Size Metric	Lot Acreage
Commercial	General Office Building	15	1,000 square feet	0.34
Commercial	General Office Building	24	1,000 square feet	0.55
Industrial	Refrigerated Warehouse-No Rail	88.4	1,000 square feet	2.03
Industrial	Refrigerated Warehouse-No Rail	201.4	1,000 square feet	4.62
Parking	Parking Lot	106	Spaces	0.95
Parking	Parking Lot	180	Spaces	1.62

Source: Air Quality Report (Sespe Consulting, 2022)/CalEEMod (version 2020.4.0). See attachments for additional detail.

Fuel Energy

The primary sources of Project fuel energy consumption (diesel and gasoline) would come from off-road equipment activity (primarily during construction) and on-road vehicular traffic (i.e., delivery trucks) and equipment used during operations to manage the warehouse (e.g., refrigeration, general HVAC, lighting, etc.). Within the CalEEMod model run, which forms the basis of this energy analysis, default values were used quantify the construction phasing and equipment, fleet mixes for each land use, and associated trip rates, among other parameters described in the appendices of the CalEEMod User Guide.¹

Off-road equipment fuel usage during the Project construction phase was calculated using of the applicable assumptions/default values obtained from the CalEEMod model run (see attachments) and the fuel usage calculations provided in the 2017 Off-Road Diesel Emission Factors spreadsheet, prepared by the California Air Resources Board (CARB).² CARB’s spreadsheet provides the following formula to calculate fuel usage from off-road equipment activity:

$$Fuel\ Used\ (gal) = Load\ Factor\ (LF) \times Horsepower\ (hp) \times Total\ Operating\ Hours \times \frac{BSFC}{Unit\ Conversion}$$

Where:

Load Factor (LF): Obtained from CalEEMod default values (see attachments).

Horsepower (hp): Obtained from CalEEMod default values (see attachments).

Total Operational Hours: Calculated by multiplying CalEEMod default daily hours by the number of working days for each construction phase.

¹ www.aqmd.gov/caleemod/home

² <https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-documentation-road>

BSFC: Brake Specific Fuel Consumption (pounds per horsepower-hour) = 0.367 lb/hp-hr
 Unit Conversion: Convert pounds to gallons = 7.109 lb/gal

Using the above formula, Table 3 below summarizes the estimated total fuel consumed by off-road equipment during the Project construction phase. As shown, the off-road equipment is estimated to consume approximately 51,459 gallons of total fuel energy.

The Project’s on-road construction-related vehicle trip fuel usage was also calculated using the default construction vehicle trip assumptions/default values from the CalEEMod model run for worker, vendor and haul truck activity. Using this data, along with the fleet average miles per gallon rates calculated using CARB’s EMFAC model (see model printouts in the attachments), total on-road fuel consumption was calculated.³ Table 3 shows the on-road construction vehicle trips modeled in CalEEMod and the associated fuel usage calculations. On-road construction-related vehicle trips are estimated to consume a total of 21,442,753 gallons of fuel.

Table 3: Construction Phase – Fuel Consumption

CalEEMod Construction Phases	Off-Road Equipment Fuel Consumption (gallons)	On-Road Vehicle Fuel Consumption (gallons)
Demolition	3,608	1,497,511
Grading	8,916	187,611
Building Construction	35,818	18,852,409
Architectural Coating - Parking Lot Striping	232	225,133
Architectural Coating - Interior	232	225,133
Paving	2,189	4,690
Architectural Coating - Exterior Bldg 1	232	225,133
Architectural Coating - Exterior Bldg 2	232	225,133
Total Fuel Consumed (gallons):	51,459	21,442,753

Source: Air Quality Report (Sespe Consulting, 2022)/CalEEMod (version 2020.4.0). See attachments for additional detail.

The Project’s on-road operational vehicle trip fuel usage was calculated similar methodologies described above, with the default vehicle trip distance/distribution and fleet mix from the CalEEMod model run for each land use type. Using this data, along with the fleet average miles per gallon rates calculated using CARB’s EMFAC 2014 model (see model printouts attached), Table 4 presents the annual fuel usage resulting from on-road vehicles activity during the Project’s operations phase, which shows that the on-road vehicle trips would consume an estimated 95,161 gallons of fuel per year during operations.

Table 4: Operation On-Road Vehicles – Fuel Consumption

CalEEMod Operational Land Use	Annual Fuel Use (gallons)
General Office Building	26,358
Parking Lot	0
Refrigerated Warehouse-No Rail	68,803
Total (gallons/year):	95,161

Source: Air Quality Report (Sespe Consulting, 2022)/CalEEMod (version 2020.4.0). See attachments for additional detail.

³ <https://arb.ca.gov/emfac/>

Electricity & Natural Gas

Additional sources of Project energy consumption include electricity and natural gas (for building HVAC, refrigeration, etc.). The Project property would continue to be served by Pacific Gas & Electricity (PG&E). Electric and natural gas energy consumption during the Project’s operations phase was also quantified using the default data/assumptions obtained from the Air Quality Assessment, specifically using the CalEEMod (version 2020.4.0) model run for the land uses presented in Table 2. Table 5 and Table 6 presents the annual electricity and natural gas consumption, respectively, taken directly from the CalEEMod model run (see attachments).

Table 5: Operations – Electricity Consumption

CalEEMod Land Use Type	kWh per Year
General Office Building	257,550
General Office Building	412,080
Parking Lot	14,840
Parking Lot	25,200
Refrigerated Warehouse-No Rail	1,959,620
Refrigerated Warehouse-No Rail	860,132
Total Annual Electricity Consumption (kWh):	3,529,422

Source: Air Quality Report (Sespe Consulting, 2022)/CalEEMod (version 2020.4.0). See attachments for additional detail.

Table 6: Operations – Natural Gas Consumption

CalEEMod Land Use Type	kBTU per Year
General Office Building	243,000
General Office Building	388,800
Parking Lot	0
Refrigerated Warehouse-No Rail	334,152
Refrigerated Warehouse-No Rail	761,292
Total Annual Natural Gas Consumption (kBTU):	1,727,244

Source: Air Quality Report (Sespe Consulting, 2022)/CalEEMod (version 2020.4.0). See attachments for additional detail.

APPLICABLE REGULATIONS

Each local land use agency determines its own significance thresholds, and the City of Fairfield has yet to establish specific numeric criteria related to energy resources. As such, the CEQA Guidelines Appendix G Environmental Checklist Form is a primary resource in determining significance of this Project and/or general thresholds of significance to be used for projects within the City’s jurisdiction; however, the following section presents other applicable federal, state and local regulations and agency guidance connected to energy resources.

Federal

Corporate Average Fuel Standards

First enacted by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and United States Environmental Protection Agency (USEPA) jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the “maximum feasible level” with

consideration given for: 1) technological feasibility; 2) economic practicality; 3) effect of other standards on fuel economy; and 4) need for the nation to conserve energy.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type. USEPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (USEPA and NHTSA, 2016).

Energy Policy Act of 2005

The Energy Policy Act of 2005 addresses energy efficiency; renewable energy requirements; oil, natural gas and coal; alternative-fuel use; tribal energy, nuclear security; vehicles and vehicle fuels; hydropower and geothermal energy; and climate change technology. The act provides revised annual energy reduction goals (two percent per year beginning in 2006), revised renewable energy purchase goals, federal procurement of Energy Star or Federal Energy Management Program designated products, federal green building standards, and fuel cell vehicle and hydrogen energy system research and demonstration.

State

Assembly Bill 1575 (AB 1575)

In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted Assembly Bill (AB) 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require Environmental Impact Reports (EIRs) to consider the wasteful, inefficient, and unnecessary consumption of energy resources caused by a project. Since the passage of AB 1575, the California Natural Resources Agency finalized updates to the CEQA Guidelines in December 2018. New CEQA Guidelines Section 15126.2(b) treats “wasteful, inefficient, or unnecessary” energy consumption as a significant environmental impact. As a result, the following energy thresholds have been incorporated into Appendix G of the CEQA Guidelines (see Table 1):

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*
- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

As discussed above, this technical memorandum has been prepared to assess energy impacts in accordance with these CEQA Appendix G of criteria specific to energy resources.

Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323; SB 1389) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state’s electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state’s economy; and protect

public health and safety (Public Resources Code Section 25301[a]). The most recent 2020 Integrated Energy Policy Report (the 2021 Report remains in draft form pending finalization by the CEC) provides the results of the CEC's assessments of a variety of energy issues facing California, including energy efficiency, California's transition to zero-emission vehicles (ZEVs), transportation, microgrids, and repercussions of several recent events including the COVID-19 pandemic, electricity outages, and statewide wildfires. The 2020 Report also provides updates on trends in California's sources of crude oil, update on California's nuclear plants, and other energy issues.

Senate Bill 350

SB 350 was approved on October 7, 2015. SB 350 will: 1) increase the standards of the California Renewables Portfolio Standard (RPS) program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by December 31, 2030; 2) require the State Energy Resources Conservation and Development Commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030; 3) provide for the evolution of the Independent System Operator into a regional organization; and 4) require the state to reimburse local agencies and school districts for certain costs mandated by the state through procedures established by statutory provisions. Among other objectives, the State legislature intends to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

California Assembly Bill 1493 (AB 1493, Pavley)

In response to the transportation sector accounting for more than half of California's greenhouse gas (GHG) emissions, Assembly Bill (AB) 1493 (commonly referred to as CARB's Pavley regulations), enacted in 2002, requires CARB to set GHG emission standards for new passenger vehicles, light-duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase 1 of the legislation established standards for model years 2009-2016 and Phase 2 established standards for model years 2017-2025 (CARB, 2017).

Local

City of Fairfield – General Plan

The City's General Plan (August 2013), specifically the Open Space, Conservation, and Recreation Element, generally addresses resource conservation issues, including those pertaining to energy.⁴ While the majority of the General Plan policies, goals, and implementation measures related to energy are general in nature and not specific, the following policies are potentially applicable to the Project:

Objective OS 8 – Preserve and Protect Natural Resources

Policy OS 8.4 – Encourage the retrofitting of existing buildings to be energy efficient.

- *Program OS 8.4A – Continue implementation of the Green Building Code.*
- *Program OS 8.4B – Facilitate the efforts of Pacific Gas and Electric to educate commercial building owners and homeowners about energy efficiency measures.*

⁴ <https://www.fairfield.ca.gov/government/city-departments/community-development/planning-division/general-plan/general-plan-documents>

- *Program OS 8.4C – Implement building energy efficiency programs identified in the Climate Action Plan, when adopted.*

Policy OS 8.5 – *Require water conservation and energy efficiency techniques to be incorporated into the design of all development projects. (See Policy UD 6.2 and Policy PF 4.8)*

Fairfield Sustainability Plan 2020

The City’s Sustainable Fairfield Task Force has published the Fairfield Sustainability Plan 2020, which is a document that broadly outlines numerous programs and modules meant to guide the City, and development projects proposed within the City limits, toward sustainable practices.⁵ One of the modules found within the Sustainability Plan describes “Energy Efficiency and Energy Conservation” strategies to reduce energy consumption in homes or businesses within Fairfield. As with the General Plan, the goals and policies outlined within the Sustainability Plan are generalized and not specific to the Project; however, as described below, the Project proponents would incorporate energy saving infrastructure (e.g., LED light bulbs, etc.) and operational procedures to reduce the facilities energy consumption, as applicable and required by City regulations.

IMPACT ASSESSMENTS

As previously noted, when assessing the Project’s energy impacts, the following CEQA threshold criteria apply:

(a): *Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

As discussed above, energy use associated with the Project would be consumed in the form of fuel (diesel and gasoline), electricity and natural gas. This section will review whether these proposed Project operations have the potential to increase energy consumption above existing levels and/or create new energy inefficiencies or wastefulness.

During construction there would be a temporary consumption of energy resources required for the movement of equipment and materials. Compliance with local, state, and federal regulations would reduce short-term energy demand during the Project’s construction to the extent feasible (construction phase estimated to last approximately 1.5 years total), and Project construction would not result in a wasteful or inefficient use of energy. As summarized in Table 3 above, energy use during Project construction would be primarily in the form of fuel consumption to operate heavy equipment, vehicles, machinery, and generators. Temporary power may also be provided to construction trailers or electric construction equipment; however, minimal electricity used during Project construction is expected to be de minimis.

Once constructed, the proposed Project would also use energy resources for the operation of the warehouse and office buildings (electricity and natural gas), and for on-road vehicle trips (gasoline and diesel fuel). As shown in Table 4, Project operational fuel resource consumption is estimated to result in a worst-case net increase fuel consumption of approximately 95,161 additional gallons of fuel annually compared to the zero-baseline scenario. Compared to the CEC’s Retail Fuel Outlet Annual Reporting (CEC-A15) Results, which shows that approximately 180 million gallons of fuel was sold in Solano County during the most recent 2020 reporting year, the Project’s

⁵ <https://sustainablefairfield.org/sustainability-plan-2020/>

estimated increase in fuel consumption would constitute an approximate 0.0005% increases in total annual fuel energy consumption within the County.⁶

Similarly, as shown in Table 5 and Table 6, Project operational electricity and natural gas resource consumption is estimated to result in a worst-case net increase of approximately 3,529,422 kilowatt hours (kWh) and approximately 1,727,244 kilo-British thermal unit (kBtu) of additional annual consumption compared to the zero-baseline scenario. Per the CEC's most recent energy report, specifically the most recent "Natural Gas Consumption by County" and "Electricity Consumption by County" 2020 data sets for Solano County, non-residential sector operations consumed an estimated 2.1 billion kWh's and 1.6 billion kBtu's total in 2020.⁷ Compared to the CEC's 2020 County-wide data set, the Project's estimated increase in electricity and natural gas consumption would constitute approximate 0.002% and 0.0001% increases, respectively, in total annual consumption within the County. As such, Project activities would have a minimal effect on the local and regional fuel energy supplies and availability.

As stated above, there are no unusual Project characteristics or processes involved during construction or operations that would require the use of equipment or vehicles that would be more energy intensive than is used for comparable activities, or the use of equipment that would not conform to current emissions standards and related fuel efficiencies. As required by the City, the Project site will be developed using water and energy efficiency features as applicable, including water efficient landscaping, 32 parking spaces with EV infrastructure, nine parking stalls designated for clean air/carpool parking, LED light fixtures, and other warehouse features meant to reduce energy use from lighting (e.g., skylights, solar paneling, etc.). In addition, although not part of this Project, there are future plans to develop 15% of the warehouse roofs with solar, which would further reduce the total facility energy consumption. Lastly, the proposed Project will be constructed consistent with applicable CALGreen Building Code and Title 24 which would also reduce consumption from area and energy sources. For these reasons, the construction and operation of this proposed Project would not require the creation of a new source of energy, and compliance with applicable state and local requirements would help ensure the Project does not result in wasteful, inefficient, or unnecessary consumption of energy resources.

Lastly, equipment and vehicles used by Project workers and vendors would be subject to increasingly stringent federal and state fuel efficiency standards, which would minimize the potential for inefficient fuel usage. The Project would be required to comply with the provisions of 13 CCR Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes. Heavy equipment would also be subject to the USEPA Construction Equipment Fuel Efficiency Standard (40 Code of Federal Regulations Parts 1039, 1065, and 1068) and CARB's AB 1493 (i.e., Pavley) regulations, which would also minimize inefficient fuel consumption and ensure that the fuel efficiency of equipment and vehicles operating on- and off-site would continue to improve over time. In the interest of cost efficiency and in accordance with federal and state requirements, onsite staff and vendors would not utilize fuel in a manner that is wasteful or unnecessary during Project construction and operation phases.

For the reasons outlined above, the proposed Project would not result in a potential impact due to wasteful, inefficient, or unnecessary consumption of energy resources, and impacts would be less than significant with no mitigation required.

⁶ <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>

⁷ <http://www.ecdms.energy.ca.gov/>

(b): Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

As discussed above, in the case of energy impacts assessment in the City of Fairfield, there is not yet a specific threshold of significance. At this time, other than the generalized policies found within the General Plan, the City has not adopted local programs or policies that support energy efficiency and/or sustainability that would apply to the Project (see lack of “City of Fairfield” listings at <https://eecoordinator.info/ee-sustainability-progress-by-city-and-county/#Kern>). In accordance with the City’s General Plan, specifically the “Open Space, Conservation, and Recreation Element” (August 2013), the Project would incorporate Green Building Code and energy efficiency measures as required by the City.

As discussed under CEQA Criteria a) above, the Project’s mobile equipment and vehicles would also comply with federal, state, and regional requirements where applicable. Specifically, the USEPA and the NHTSA have adopted fuel efficiency standards for medium- and heavy-duty trucks which apply to truck fleet operators, such as the Project proponent. CARB has also adopted cleaner technology and fuel standards pursuant to AB 1493. While Phase 1 and Phase 2 regulation published by both the USEPA/NHTSA and CARB primarily apply to manufacturers of on-road vehicles and not the end user, it is assumed the Project operator and off-site vendors will ensure engines purchased are certified in accordance with the appropriate state and federal regulations. This will ensure that efficiency of mobile equipment and vehicles would continue to improve over time through compliance with increasingly stringent standards adopted by applicable regulatory agencies. The energy modeling for trucks does not take into account specific fuel reductions from these regulations, as they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

The State of California’s Energy Efficiency Strategic Plan (adopted 2008, updated January 2011) outlines specific goals and strategies to help promote energy efficiency in California’s industrial sector in three (3) areas: 1) Support industry adoption of energy efficiency by integrating energy efficiency savings with achievement of GHG goals; 2) Build market value of and demand for energy efficiency; and 3) Provide technical and public policy guidance for resource efficiency.⁸ The Energy Efficiency Strategic Plan promotes reductions in energy consumption through compliance with GHG emission reductions, water conservation, and proper waste disposal. As applicable, the Project would utilize the best available equipment to improve diesel fuel efficiency, and equipment that uses energy would implement modern design and technology to maximize efficiency improvements.

Lastly, the Project is expected to have a *de minimis* effect on local population growth (i.e., warehouse would not require a large number of new onsite employees), and the 2020 Strategic Plan contains no additional control measures with which the Project may conflict. As discussed above, the Project would continue implementing existing rules and conform with fleet turnover, further reducing the Project’s fuel energy consumption over time.

In summary, the Project construction and operations activities would not result in significant increase in energy consumption over the existing environmental baseline, and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the Project impacts are less than significant, with no mitigation required.

⁸ <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/energy-efficiency-strategic-plan>

ATTACHMENTS

1. Project Energy Calculations & Summary Data
2. CalEEMod Model Run Output

ATTACHMENT 1

Project Energy Calculations & Summary Data

Fuel Energy

Construction Phase Summary					
Phase Name	Phase Type	Start Date	End Date	Days per Week	Total Phase Days
Demolition	Demolition	1/1/2022	1/28/2022	5	20
Grading	Grading	1/29/2022	3/11/2022	5	30
Building Construction	Building Construction	3/12/2022	5/5/2023	5	300
Architectural Coating - Parking Lot Striping	Architectural Coating	5/20/2022	6/16/2022	5	20
Architectural Coating - Interior	Architectural Coating	3/1/2023	3/28/2023	5	20
Paving	Paving	4/22/2023	5/19/2023	5	20
Architectural Coating - Exterior Bldg 1	Architectural Coating	5/20/2023	6/16/2023	5	20
Architectural Coating - Exterior Bldg 2	Architectural Coating	6/17/2023	7/14/2023	5	20

Source: CalEEMod (version 2020.4.0) / Air Quality and Climate Change Impact Assessment (Sespe Consulting, 2022)

Construction Activity - Off-Road Equipment							
Phase Name	OffRoad Equipment Type	Unit Amount	Usage Hours/Day	Horsepower	Load Factor	Total Operational Hours ^A	Total Fuel Use (gal) ^B
Demolition	Concrete/Industrial Saws	1	8	81	0.73	160	488
Demolition	Excavators	3	8	158	0.38	480	1,488
Demolition	Rubber Tired Dozers	2	8	247	0.4	320	1,632
Demolition	Tractors/Loaders/Backhoes	0	0	97	0.37	0	0
Grading	Excavators	2	8	158	0.38	480	1,488
Grading	Graders	1	8	187	0.41	240	950
Grading	Rubber Tired Dozers	1	8	247	0.4	240	1,224
Grading	Scrapers	2	8	367	0.48	480	4,365
Grading	Tractors/Loaders/Backhoes	2	8	97	0.37	480	889
Building Construction	Cranes	1	7	231	0.29	2,100	7,263
Building Construction	Forklifts	3	8	89	0.2	7,200	6,616
Building Construction	Generator Sets	1	8	84	0.74	2,400	7,702
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	6,300	11,673
Building Construction	Welders	1	8	46	0.45	2,400	2,565
Architectural Coating - Parking Lot Striping	Air Compressors	1	6	78	0.48	120	232
Architectural Coating - Interior	Air Compressors	1	6	78	0.48	120	232
Paving	Pavers	2	8	130	0.42	320	902
Paving	Paving Equipment	2	8	132	0.36	320	785
Paving	Rollers	2	8	80	0.38	320	502
Architectural Coating - Exterior Bldg 1	Air Compressors	1	6	78	0.48	120	232
Architectural Coating - Exterior Bldg 2	Air Compressors	1	6	78	0.48	120	232

Source: CalEEMod (version 2020.4.0) / Air Quality and Climate Change Impact Assessment (Sespe Consulting, 2022) **Total Fuel Use - Off-Road Construction Equipment: 51,459 gallons**

A - Total Operational Hours = # of Equipment Units x Usage Hours/Day x Total Phase Days

B - Total Fuel Use = Load Factor x Horsepower x Total Operational Hours X (Brake Specific Fuel Consumption [0.367] / Pounds to Gallons Conversion [7.109]). Source: CARB's Off-Road Diesel Engine Emissions Factors (https://ww3.arb.ca.gov/msei/ordiesel/ordas_ef_fcf_2017_v7.xlsx)

Construction Activity - On-Road Equipment															
Phase Name	Trips per Day			Miles per Trip			Total Vehicle Miles Travelled (VMT) per Construction Phase			Average Miles/Gallon (per EMFAC)			Fuel Consumed (gallons)		
	Worker Trips per Day	Vendor Trips per Day	Hauling Trips per Day	Worker Trip Length (mi)	Vendor Trip Length (mi)	Hauling Trip Length (mi)	Worker	Vendor	Hauling	Worker (LD_Mix)	Vendor (HDT_Mix)	Hauling (HHDT)	Worker	Vendor	Hauling
Demolition	15	0	646	10.8	7.3	20	3,240	0	258,400	29.0	11.1	5.4	93,805	0	1,403,705
Grading	20	0	0	10.8	7.3	20	6,480	0	0	29.0	11.1	5.4	187,611	0	0
Building Construction	182	73	0	10.8	7.3	20	589,680	159,870	0	29.0	11.1	5.4	17,072,586	1,779,823	0
Architectural Coating - Parking Lot Striping	36	0	0	10.8	7.3	20	7,776	0	0	29.0	11.1	5.4	225,133	0	0
Architectural Coating - Interior	36	0	0	10.8	7.3	20	7,776	0	0	29.0	11.1	5.4	225,133	0	0
Paving	15	0	0	10.8	7.3	20	162	0	0	29.0	11.1	5.4	4,690	0	0
Architectural Coating - Exterior Bldg 1	36	0	0	10.8	7.3	20	7,776	0	0	29.0	11.1	5.4	225,133	0	0
Architectural Coating - Exterior Bldg 2	36	0	0	10.8	7.3	20	7,776	0	0	29.0	11.1	5.4	225,133	0	0

Source: CalEEMod (version 2020.4.0) / CARB's EMFAC2014 Web Database (<https://arb.ca.gov/emfac/2014/>)

Total Fuel Use - On-Road Vehicles (gallons): 18,259,225
Total Fuel Use - On-Road Vehicles (gallons): 21,442,753

Operational Energy Consumption

Fuel Energy

Operation Phase Trips (CalEEMod)					
Land Use	Average Daily Trip Rate			Annual VMT	Annual VMT per Land Use
	Weekday	Saturday	Sunday		
General Office Building	146	33	11	264,290	687,153
General Office Building	234	53	17	422,863	
Parking Lot	0	0	0	0	0
Parking Lot	0	0	0	0	
Refrigerated Warehouse-No Rail	187	187	187	547,140	1,793,678
Refrigerated Warehouse-No Rail	427	427	427	1,246,538	
TOTAL:	994	701	642	2,480,831	2,480,831

Source: CalEEMod (version 2020.4.0) / Air Quality and Climate Change Impact Assessment (Sespe Consulting, 2022)

Trip Type Information (CalEEMod)									
Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.5	7.3	7.3	33	48	19	77	19	4
General Office Building	9.5	7.3	7.3	33	48	19	77	19	4
Parking Lot	9.5	7.3	7.3	0	0	0	0	0	0
Parking Lot	9.5	7.3	7.3	0	0	0	0	0	0
Refrigerated Warehouse-No Rail	9.5	7.3	7.3	59	0	41	92	5	3
Refrigerated Warehouse-No Rail	9.5	7.3	7.3	59	0	41	92	5	3

Source: CalEEMod (version 2020.4.0) / Air Quality and Climate Change Impact Assessment (Sespe Consulting, 2022)

Fleet Mix (CalEEMod)													
Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.554526	0.053831	0.16593	0.132086	0.027621	0.006783	0.007681	0.01487	0.000982	0.000404	0.029673	0.000793	0.004819
Parking Lot	0.554526	0.053831	0.16593	0.132086	0.027621	0.006783	0.007681	0.01487	0.000982	0.000404	0.029673	0.000793	0.004819
Refrigerated Warehouse-No Rail	0.554526	0.053831	0.16593	0.132086	0.027621	0.006783	0.007681	0.01487	0.000982	0.000404	0.029673	0.000793	0.004819

Source: CalEEMod (version 2020.4.0) / Air Quality and Climate Change Impact Assessment (Sespe Consulting, 2022)

Operational Activity - On-Road Vehicles										
Vehicle Type	EMFAC Miles/Gallon	General Office Building			Parking Lot			Refrigerated Warehouse-No Rail		
		% Distribution	Total Miles	Fuel Use (gallons)	% Distribution	Total Miles	Fuel Use (gallons)	% Distribution	Total Miles	Fuel Use (gallons)
LDA	35.21	55%	381,044	10,822	55%	0	0	55%	994,641	28,250
LDT1	27.36	5%	36,990	1,352	5%	0	0	5%	96,555	3,529
LDT2	27.10	17%	114,019	4,208	17%	0	0	17%	297,625	10,984
MDV	20.28	13%	90,763	4,475	13%	0	0	13%	236,920	11,681
LHD1	13.66	3%	18,980	1,390	3%	0	0	3%	49,543	3,627
LHD2	12.51	1%	4,661	373	1%	0	0	1%	12,167	972
MHD	7.46	1%	5,278	707	1%	0	0	1%	13,777	1,846
HHD	5.56	1%	10,218	1,836	1%	0	0	1%	26,672	4,794
OBUS	7.00	0%	675	96	0%	0	0	0%	1,761	252
UBUS	4.79	0%	278	58	0%	0	0	0%	725	151
MCY	35.35	3%	20,390	577	3%	0	0	3%	53,224	1,506
SBUS	9.56	0%	545	57	0%	0	0	0%	1,422	149
MH	8.13	0%	3,311	407	0%	0	0	0%	8,644	1,063
Total (gallons):				26,358	Total (gallons):		0	Total (gallons):		68,803
Total Annual Fuel Use (Gallons) - On-Road Vehicle				95,161						

Natural Gas

Energy by Land Use - Natural Gas (CalEEMod)	
Land Use	kBTU/yr
General Office Building	243,000
General Office Building	388,800
Parking Lot	0
Refrigerated Warehouse-No Rail	334,152
Refrigerated Warehouse-No Rail	761,292
Total (kBTU per Year):	1,727,244

Source: CalEEMod (version 2020.4.0) / Air Quality and Climate Change Impact Assessment (Sespe Consulting, 2022)

Electricity

Energy by Land Use - Electricity (CalEEMod)	
Land Use	kWh/yr
Unmitigated	
General Office Building	257,550
General Office Building	412,080
Parking Lot	14,840
Parking Lot	25,200
Refrigerated Warehouse-No Rail	1,959,620
Refrigerated Warehouse-No Rail	860,132
Total (kWh per Year):	3,529,422

Source: CalEEMod (version 2020.4.0) / Air Quality and Climate Change Impact Assessment (Sespe Consulting, 2022)

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Solano

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

EMFAC 2014 Model - Data Output									
Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	Fuel_Consumption
Solano	2022	HHDT	Aggregated	Aggregated	GAS	25.67947155	3770.512186	513.7948667	0.788537682
Solano	2022	HHDT	Aggregated	Aggregated	DSL	4538.001907	713288.0877	0	117.2604066
Solano	2022	LDA	Aggregated	Aggregated	GAS	236656.1194	8970323.503	1490718.002	299.1940531
Solano	2022	LDA	Aggregated	Aggregated	DSL	2597.594457	102814.0516	16194.91724	2.681159471
Solano	2022	LDA	Aggregated	Aggregated	ELEC	8624.840024	449998.9674	56145.21522	0
Solano	2022	LDT1	Aggregated	Aggregated	GAS	17311.7169	581390.365	104844.017	23.12077839
Solano	2022	LDT1	Aggregated	Aggregated	DSL	24.79572627	554.0405251	126.5600086	0.01989959
Solano	2022	LDT1	Aggregated	Aggregated	ELEC	12.47862847	354.4678502	75.18982468	0
Solano	2022	LDT2	Aggregated	Aggregated	GAS	73836.52931	2819106.023	465486.5669	125.4016334
Solano	2022	LDT2	Aggregated	Aggregated	DSL	124.8282833	5333.757115	801.4125452	0.178284957
Solano	2022	LHDT1	Aggregated	Aggregated	GAS	4586.172245	129558.3044	68327.13305	13.42625573
Solano	2022	LHDT1	Aggregated	Aggregated	DSL	5128.548206	163612.2063	64510.68472	9.342106007
Solano	2022	LHDT2	Aggregated	Aggregated	GAS	719.5113782	25911.12276	10719.64746	2.919246494
Solano	2022	LHDT2	Aggregated	Aggregated	DSL	1619.358088	60572.67474	20369.48759	3.797856342
Solano	2022	MHDT	Aggregated	Aggregated	GAS	530.2000333	30904.82414	10608.24227	4.750647682
Solano	2022	MHDT	Aggregated	Aggregated	DSL	2525.262613	121647.7641	0	14.64916516

Total Gallons	Miles per Gallon	Vehicle Category	Average Miles/Gallon
788.54	4.78	Hauling (HHDT)	5.4
117,260.41	6.08		
299,194.05	29.98	Worker (LD_Mix)	29.0
2,681.16	38.35		
0.00	---		
23,120.78	25.15		
19.90	27.84		
0.00	---		
125,401.63	22.48	Vendor (HDT_Mix)	11.1
178.28	29.92		
13,426.26	9.65		
9,342.11	17.51		
2,919.25	8.88		
3,797.86	15.95		
4,750.65	6.51		
14,649.17	8.30		

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Solano

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

EMFAC 2014 Model - Data Output									
Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	Fuel_Consumption
Solano	2023	HHDT	Aggregated	Aggregated	GAS	26.12910136	3879.209335	522.7910601	0.803243739
Solano	2023	HHDT	Aggregated	Aggregated	DSL	4487.481794	733573.5151	0	116.4692831
Solano	2023	LDA	Aggregated	Aggregated	GAS	239708.7236	9019008.448	1510512.31	291.6720555
Solano	2023	LDA	Aggregated	Aggregated	DSL	2724.347122	106504.7912	17021.90725	2.696627573
Solano	2023	LDA	Aggregated	Aggregated	ELEC	11089.53156	564236.4107	72146.21609	0
Solano	2023	LDT1	Aggregated	Aggregated	GAS	17103.46587	577242.9038	103727.7904	22.13371943
Solano	2023	LDT1	Aggregated	Aggregated	DSL	23.39895271	523.3314935	119.2745178	0.018273374
Solano	2023	LDT1	Aggregated	Aggregated	ELEC	11.65388579	334.9735936	70.1247818	0
Solano	2023	LDT2	Aggregated	Aggregated	GAS	74917.02081	2850160.215	472576.2643	122.0807736
Solano	2023	LDT2	Aggregated	Aggregated	DSL	133.4616753	5577.496147	855.8087703	0.180805538
Solano	2023	LHDT1	Aggregated	Aggregated	GAS	4330.050538	120967.947	64511.30124	12.49376957
Solano	2023	LHDT1	Aggregated	Aggregated	DSL	5009.168077	158305.9186	63009.03288	8.976409036
Solano	2023	LHDT2	Aggregated	Aggregated	GAS	705.3957407	25415.36755	10509.3455	2.846184171
Solano	2023	LHDT2	Aggregated	Aggregated	DSL	1615.759458	60134.8783	20324.22136	3.736550776
Solano	2023	MCY	Aggregated	Aggregated	GAS	12510.20441	102495.1065	25017.90677	2.89937797
Solano	2023	MDV	Aggregated	Aggregated	GAS	53597.86243	1726083.377	329874.6462	101.6622512
Solano	2023	MDV	Aggregated	Aggregated	DSL	893.752838	36331.10591	5681.909722	1.540244078
Solano	2023	MH	Aggregated	Aggregated	GAS	1510.17902	12023.19285	151.0783091	1.811530044
Solano	2023	MH	Aggregated	Aggregated	DSL	395.2454715	3270.283372	39.52454715	0.339744185
Solano	2023	MHDT	Aggregated	Aggregated	GAS	533.0081546	31301.58056	10664.42716	4.783635603
Solano	2023	MHDT	Aggregated	Aggregated	DSL	2513.075111	122254.1161	0	14.58106239
Solano	2023	OBUS	Aggregated	Aggregated	GAS	285.3685371	17757.38958	5709.65369	2.670746447
Solano	2023	OBUS	Aggregated	Aggregated	DSL	446.4577533	35888.79451	0	4.877377333
Solano	2023	SBUS	Aggregated	Aggregated	GAS	75.25932664	4059.531106	301.0373066	0.342837605
Solano	2023	SBUS	Aggregated	Aggregated	DSL	156.9871952	5946.084901	0	0.817634908
Solano	2023	UBUS	Aggregated	Aggregated	GAS	96.45105538	15412.4715	385.8042215	3.088055677
Solano	2023	UBUS	Aggregated	Aggregated	DSL	120.7745664	19095.28995	483.0982655	4.159316313

Total Gallons	Miles per Gallon	Vehicle Category	Average Miles/Gallon
803.24	4.83		
116,469.28	6.30	HHD	5.56
291,672.06	30.92		
2,696.63	39.50	LDA	35.21
0.00	---		
22,133.72	26.08		
18.27	28.64	LDT1	27.36
0.00	---		
122,080.77	23.35	LDT2	27.10
180.81	30.85		
12,493.77	9.68	LHD1	13.66
8,976.41	17.64		
2,846.18	8.93	LHD2	12.51
3,736.55	16.09		
2,899.38	35.35	MCY	35.35
101,662.25	16.98	MDV	20.28
1,540.24	23.59		
1,811.53	6.64	MH	8.13
339.74	9.63		
4,783.64	6.54	MHD	7.46
14,581.06	8.38		
2,670.75	6.65	OBUS	7.00
4,877.38	7.36		
342.84	11.84	SBUS	9.56
817.63	7.27		
3,088.06	4.99	UBUS	4.79
4,159.32	4.59		

ATTACHMENT 2

CalEEMod Model Run Output

Chadbourne Industrial Center - Solano-San Francisco County, Annual

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

**Chadbourne Industrial Center
Solano-San Francisco County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	15.00	1000sqft	0.34	15,000.00	0
General Office Building	24.00	1000sqft	0.55	24,000.00	0
Refrigerated Warehouse-No Rail	88.40	1000sqft	2.03	88,400.00	0
Refrigerated Warehouse-No Rail	201.40	1000sqft	4.62	201,400.00	0
Parking Lot	106.00	Space	0.95	42,400.00	0
Parking Lot	180.00	Space	1.62	72,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Parking lot spaces required per the City of Fairfield, CA Municipal Code, Chapter 25, Section 25.34 - Parking and Loading.

Construction Phase -

Off-road Equipment -

Demolition - Measured on Google Earth Pro

Grading -

Chadbourne Industrial Center - Solano-San Francisco County, Annual

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

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	164,400.00	112,700.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	164,400.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	164,400.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	164,400.00	51,700.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	493,200.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	493,200.00	58,500.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	493,200.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	493,200.00	0.00
tblArchitecturalCoating	ConstArea_Parking	6,864.00	0.00
tblArchitecturalCoating	ConstArea_Parking	6,864.00	0.00
tblArchitecturalCoating	ConstArea_Parking	6,864.00	114,400.00
tblArchitecturalCoating	ConstArea_Parking	6,864.00	0.00

2.0 Emissions Summary

Chadbourne Industrial Center - Solano-San Francisco County, Annual

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

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	0.7391	3.0157	3.0079	7.4700e-003	0.4222	0.1291	0.5513	0.1236	0.1209	0.2445	0.0000	672.2675	672.2675	0.1000	0.0296	683.5945
2023	0.8275	0.9521	1.1916	2.8700e-003	0.0965	0.0400	0.1365	0.0262	0.0377	0.0638	0.0000	258.5762	258.5762	0.0339	0.0110	262.7046
Maximum	0.8275	3.0157	3.0079	7.4700e-003	0.4222	0.1291	0.5513	0.1236	0.1209	0.2445	0.0000	672.2675	672.2675	0.1000	0.0296	683.5945

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	0.7391	3.0157	3.0079	7.4700e-003	0.4222	0.1291	0.5513	0.1236	0.1209	0.2445	0.0000	672.2671	672.2671	0.1000	0.0296	683.5940
2023	0.8275	0.9521	1.1916	2.8700e-003	0.0965	0.0400	0.1365	0.0262	0.0377	0.0638	0.0000	258.5760	258.5760	0.0339	0.0110	262.7044
Maximum	0.8275	3.0157	3.0079	7.4700e-003	0.4222	0.1291	0.5513	0.1236	0.1209	0.2445	0.0000	672.2671	672.2671	0.1000	0.0296	683.5940

Chadbourne Industrial Center - Solano-San Francisco County, Annual

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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	1.1380	1.1380
2	4-1-2022	6-30-2022	1.1422	1.1422
3	7-1-2022	9-30-2022	0.7345	0.7345
4	10-1-2022	12-31-2022	0.7455	0.7455
5	1-1-2023	3-31-2023	0.8047	0.8047
6	4-1-2023	6-30-2023	0.7670	0.7670
7	7-1-2023	9-30-2023	0.2042	0.2042
		Highest	1.1422	1.1422

Chadbourne Industrial Center - Solano-San Francisco County, Annual

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	tons/yr										MT/yr					
Area	1.4659	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Energy	9.3100e-003	0.0847	0.0711	5.1000e-004		6.4300e-003	6.4300e-003		6.4300e-003	6.4300e-003	0.0000	418.7279	418.7279	0.0546	8.0900e-003	422.5047
Mobile	0.4930	0.6687	4.5708	9.4400e-003	0.9201	7.9400e-003	0.9280	0.2458	7.4400e-003	0.2533	0.0000	879.2804	879.2804	0.0566	0.0448	894.0446
Waste						0.0000	0.0000		0.0000	0.0000	62.6593	0.0000	62.6593	3.7031	0.0000	155.2356
Water						0.0000	0.0000		0.0000	0.0000	23.4603	38.3975	61.8577	2.4158	0.0577	139.4321
Total	1.9682	0.7535	4.6476	9.9500e-003	0.9201	0.0144	0.9345	0.2458	0.0139	0.2597	86.1195	1,336.4168	1,422.5363	6.2301	0.1105	1,611.2288

Chadbourne Industrial Center - Solano-San Francisco County, Annual

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	1.4659	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Energy	9.3100e-003	0.0847	0.0711	5.1000e-004		6.4300e-003	6.4300e-003		6.4300e-003	6.4300e-003	0.0000	418.7279	418.7279	0.0546	8.0900e-003	422.5047
Mobile	0.4930	0.6687	4.5708	9.4400e-003	0.9201	7.9400e-003	0.9280	0.2458	7.4400e-003	0.2533	0.0000	879.2804	879.2804	0.0566	0.0448	894.0446
Waste						0.0000	0.0000		0.0000	0.0000	62.6593	0.0000	62.6593	3.7031	0.0000	155.2356
Water						0.0000	0.0000		0.0000	0.0000	23.4603	38.3975	61.8577	2.4158	0.0577	139.4321
Total	1.9682	0.7535	4.6476	9.9500e-003	0.9201	0.0144	0.9345	0.2458	0.0139	0.2597	86.1195	1,336.4168	1,422.5363	6.2301	0.1105	1,611.2288

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Grading	Grading	1/29/2022	3/11/2022	5	30	
3	Building Construction	Building Construction	3/12/2022	5/5/2023	5	300	

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

4	Architectural Coating - Parking Lot Striping	Architectural Coating	5/20/2022	6/16/2022	5	20
5	Architectural Coating - Interior	Architectural Coating	3/1/2023	3/28/2023	5	20
6	Paving	Paving	4/22/2023	5/19/2023	5	20
7	Architectural Coating - Exterior Bldg 1	Architectural Coating	5/20/2023	6/16/2023	5	20
8	Architectural Coating - Exterior Bldg 2	Architectural Coating	6/17/2023	7/14/2023	5	20

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 2.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 114,400 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0		97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

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Architectural Coating - Parking Lot Striping	Air Compressors	1	6.00	78	0.48
Architectural Coating - Interior	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating - Exterior Bldg 1	Air Compressors	1	6.00	78	0.48
Architectural Coating - Exterior Bldg 2	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	646.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	182.00	73.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating - Parking Lot Striping	1	36.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating - Interior	1	36.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating - Exterior Bldg 1	1	36.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating - Exterior Bldg 2	1	36.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0699	0.0000	0.0699	0.0106	0.0000	0.0106	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004	0.0699	0.0124	0.0823	0.0106	0.0116	0.0221	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3100e-003	0.0505	0.0103	2.0000e-004	5.5000e-003	4.9000e-004	5.9900e-003	1.5100e-003	4.7000e-004	1.9800e-003	0.0000	19.2408	19.2408	1.2000e-004	3.0300e-003	20.1456
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.2000e-004	3.6000e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9997	0.9997	3.0000e-005	3.0000e-005	1.0092
Total	1.7600e-003	0.0508	0.0139	2.1000e-004	6.6900e-003	5.0000e-004	7.1900e-003	1.8300e-003	4.8000e-004	2.3000e-003	0.0000	20.2405	20.2405	1.5000e-004	3.0600e-003	21.1548

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3.2 Demolition - 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					0.0699	0.0000	0.0699	0.0106	0.0000	0.0106	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004	0.0699	0.0124	0.0823	0.0106	0.0116	0.0221	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3100e-003	0.0505	0.0103	2.0000e-004	5.5000e-003	4.9000e-004	5.9900e-003	1.5100e-003	4.7000e-004	1.9800e-003	0.0000	19.2408	19.2408	1.2000e-004	3.0300e-003	20.1456
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.2000e-004	3.6000e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9997	0.9997	3.0000e-005	3.0000e-005	1.0092
Total	1.7600e-003	0.0508	0.0139	2.1000e-004	6.6900e-003	5.0000e-004	7.1900e-003	1.8300e-003	4.8000e-004	2.3000e-003	0.0000	20.2405	20.2405	1.5000e-004	3.0600e-003	21.1548

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3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633
Total	0.0544	0.5827	0.4356	9.3000e-004	0.1381	0.0245	0.1626	0.0548	0.0226	0.0774	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-004	6.4000e-004	7.2000e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.4000e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.9994	1.9994	6.0000e-005	6.0000e-005	2.0183
Total	9.0000e-004	6.4000e-004	7.2000e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.4000e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.9994	1.9994	6.0000e-005	6.0000e-005	2.0183

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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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632
Total	0.0544	0.5827	0.4356	9.3000e-004	0.1381	0.0245	0.1626	0.0548	0.0226	0.0774	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-004	6.4000e-004	7.2000e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.4000e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.9994	1.9994	6.0000e-005	6.0000e-005	2.0183
Total	9.0000e-004	6.4000e-004	7.2000e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.4000e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.9994	1.9994	6.0000e-005	6.0000e-005	2.0183

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3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3115	243.3115	0.0583	0.0000	244.7688
Total	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3115	243.3115	0.0583	0.0000	244.7688

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0187	0.4290	0.1416	1.6600e-003	0.0506	5.0000e-003	0.0556	0.0146	4.7800e-003	0.0194	0.0000	158.6127	158.6127	1.2200e-003	0.0227	165.4131
Worker	0.0570	0.0409	0.4587	1.3800e-003	0.1518	8.4000e-004	0.1526	0.0404	7.7000e-004	0.0411	0.0000	127.3589	127.3589	4.0600e-003	3.7200e-003	128.5679
Total	0.0757	0.4699	0.6003	3.0400e-003	0.2023	5.8400e-003	0.2081	0.0550	5.5500e-003	0.0605	0.0000	285.9716	285.9716	5.2800e-003	0.0264	293.9809

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3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3112	243.3112	0.0583	0.0000	244.7685
Total	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3112	243.3112	0.0583	0.0000	244.7685

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0187	0.4290	0.1416	1.6600e-003	0.0506	5.0000e-003	0.0556	0.0146	4.7800e-003	0.0194	0.0000	158.6127	158.6127	1.2200e-003	0.0227	165.4131
Worker	0.0570	0.0409	0.4587	1.3800e-003	0.1518	8.4000e-004	0.1526	0.0404	7.7000e-004	0.0411	0.0000	127.3589	127.3589	4.0600e-003	3.7200e-003	128.5679
Total	0.0757	0.4699	0.6003	3.0400e-003	0.2023	5.8400e-003	0.2081	0.0550	5.5500e-003	0.0605	0.0000	285.9716	285.9716	5.2800e-003	0.0264	293.9809

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3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.6473	0.7310	1.2100e-003		0.0315	0.0315		0.0296	0.0296	0.0000	104.3121	104.3121	0.0248	0.0000	104.9325
Total	0.0708	0.6473	0.7310	1.2100e-003		0.0315	0.0315		0.0296	0.0296	0.0000	104.3121	104.3121	0.0248	0.0000	104.9325

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-003	0.1461	0.0518	6.8000e-004	0.0217	9.2000e-004	0.0226	6.2600e-003	8.8000e-004	7.1400e-003	0.0000	65.4275	65.4275	3.6000e-004	9.3200e-003	68.2126
Worker	0.0226	0.0154	0.1814	5.7000e-004	0.0650	3.4000e-004	0.0654	0.0173	3.1000e-004	0.0176	0.0000	53.1653	53.1653	1.5700e-003	1.4700e-003	53.6432
Total	0.0268	0.1615	0.2332	1.2500e-003	0.0867	1.2600e-003	0.0880	0.0236	1.1900e-003	0.0248	0.0000	118.5929	118.5929	1.9300e-003	0.0108	121.8558

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3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.6473	0.7310	1.2100e-003		0.0315	0.0315		0.0296	0.0296	0.0000	104.3120	104.3120	0.0248	0.0000	104.9324
Total	0.0708	0.6473	0.7310	1.2100e-003		0.0315	0.0315		0.0296	0.0296	0.0000	104.3120	104.3120	0.0248	0.0000	104.9324

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-003	0.1461	0.0518	6.8000e-004	0.0217	9.2000e-004	0.0226	6.2600e-003	8.8000e-004	7.1400e-003	0.0000	65.4275	65.4275	3.6000e-004	9.3200e-003	68.2126
Worker	0.0226	0.0154	0.1814	5.7000e-004	0.0650	3.4000e-004	0.0654	0.0173	3.1000e-004	0.0176	0.0000	53.1653	53.1653	1.5700e-003	1.4700e-003	53.6432
Total	0.0268	0.1615	0.2332	1.2500e-003	0.0867	1.2600e-003	0.0880	0.0236	1.1900e-003	0.0248	0.0000	118.5929	118.5929	1.9300e-003	0.0108	121.8558

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

3.5 Architectural Coating - Parking Lot Striping - 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	0.3977					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.3997	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	7.7000e-004	8.6400e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3992	2.3992	8.0000e-005	7.0000e-005	2.4220
Total	1.0700e-003	7.7000e-004	8.6400e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3992	2.3992	8.0000e-005	7.0000e-005	2.4220

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

3.5 Architectural Coating - Parking Lot Striping - 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	0.3977					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.3997	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	7.7000e-004	8.6400e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3992	2.3992	8.0000e-005	7.0000e-005	2.4220
Total	1.0700e-003	7.7000e-004	8.6400e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3992	2.3992	8.0000e-005	7.0000e-005	2.4220

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

3.6 Architectural Coating - Interior - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1356					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.1375	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579
Total	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579

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

3.6 Architectural Coating - Interior - 2023

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	0.1356					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.1375	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579
Total	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579

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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 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	3.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0137	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.8000e-004	3.3200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9737	0.9737	3.0000e-005	3.0000e-005	0.9825
Total	4.1000e-004	2.8000e-004	3.3200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9737	0.9737	3.0000e-005	3.0000e-005	0.9825

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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 - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	3.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0137	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.8000e-004	3.3200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9737	0.9737	3.0000e-005	3.0000e-005	0.9825
Total	4.1000e-004	2.8000e-004	3.3200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9737	0.9737	3.0000e-005	3.0000e-005	0.9825

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

3.8 Architectural Coating - Exterior Bldg 1 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1797					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.1816	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579
Total	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579

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

3.8 Architectural Coating - Exterior Bldg 1 - 2023

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	0.1797					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.1816	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579
Total	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579

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

3.9 Architectural Coating - Exterior Bldg 2 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3918					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.3937	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579
Total	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579

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

3.9 Architectural Coating - Exterior Bldg 2 - 2023

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	0.3918					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.3937	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579
Total	9.9000e-004	6.8000e-004	7.9700e-003	3.0000e-005	2.8600e-003	1.0000e-005	2.8700e-003	7.6000e-004	1.0000e-005	7.7000e-004	0.0000	2.3369	2.3369	7.0000e-005	6.0000e-005	2.3579

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4930	0.6687	4.5708	9.4400e-003	0.9201	7.9400e-003	0.9280	0.2458	7.4400e-003	0.2533	0.0000	879.2804	879.2804	0.0566	0.0448	894.0446
Unmitigated	0.4930	0.6687	4.5708	9.4400e-003	0.9201	7.9400e-003	0.9280	0.2458	7.4400e-003	0.2533	0.0000	879.2804	879.2804	0.0566	0.0448	894.0446

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	146.10	33.15	10.50	264,290	264,290
General Office Building	233.76	53.04	16.80	422,863	422,863
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	187.41	187.41	187.41	547,140	547,140
Refrigerated Warehouse-No Rail	426.97	426.97	426.97	1,246,538	1,246,538
Total	994.24	700.57	641.68	2,480,831	2,480,831

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

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Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Refrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.554526	0.053831	0.165930	0.132086	0.027621	0.006783	0.007681	0.014870	0.000982	0.000404	0.029673	0.000793	0.004819
Parking Lot	0.554526	0.053831	0.165930	0.132086	0.027621	0.006783	0.007681	0.014870	0.000982	0.000404	0.029673	0.000793	0.004819
Refrigerated Warehouse-No Rail	0.554526	0.053831	0.165930	0.132086	0.027621	0.006783	0.007681	0.014870	0.000982	0.000404	0.029673	0.000793	0.004819

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	326.5556	326.5556	0.0528	6.4000e-003	329.7847
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	326.5556	326.5556	0.0528	6.4000e-003	329.7847
Natural Gas Mitigated	9.3100e-003	0.0847	0.0711	5.1000e-004		6.4300e-003	6.4300e-003		6.4300e-003	6.4300e-003	0.0000	92.1723	92.1723	1.7700e-003	1.6900e-003	92.7201
Natural Gas Unmitigated	9.3100e-003	0.0847	0.0711	5.1000e-004		6.4300e-003	6.4300e-003		6.4300e-003	6.4300e-003	0.0000	92.1723	92.1723	1.7700e-003	1.6900e-003	92.7201

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	243000	1.3100e-003	0.0119	0.0100	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	12.9674	12.9674	2.5000e-004	2.4000e-004	13.0445
General Office Building	388800	2.1000e-003	0.0191	0.0160	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.7479	20.7479	4.0000e-004	3.8000e-004	20.8711
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
Refrigerated Warehouse-No Rail	334152	1.8000e-003	0.0164	0.0138	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	17.8316	17.8316	3.4000e-004	3.3000e-004	17.9376
Refrigerated Warehouse-No Rail	761292	4.1100e-003	0.0373	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003	0.0000	40.6254	40.6254	7.8000e-004	7.4000e-004	40.8669
Total		9.3200e-003	0.0847	0.0711	5.0000e-004		6.4400e-003	6.4400e-003		6.4400e-003	6.4400e-003	0.0000	92.1723	92.1723	1.7700e-003	1.6900e-003	92.7201

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	388800	2.1000e-003	0.0191	0.0160	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.7479	20.7479	4.0000e-004	3.8000e-004	20.8711
General Office Building	243000	1.3100e-003	0.0119	0.0100	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	12.9674	12.9674	2.5000e-004	2.4000e-004	13.0445
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
Refrigerated Warehouse-No Rail	334152	1.8000e-003	0.0164	0.0138	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	17.8316	17.8316	3.4000e-004	3.3000e-004	17.9376
Refrigerated Warehouse-No Rail	761292	4.1100e-003	0.0373	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003	0.0000	40.6254	40.6254	7.8000e-004	7.4000e-004	40.8669
Total		9.3200e-003	0.0847	0.0711	5.0000e-004		6.4400e-003	6.4400e-003		6.4400e-003	6.4400e-003	0.0000	92.1723	92.1723	1.7700e-003	1.6900e-003	92.7201

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	257550	23.8295	3.8600e-003	4.7000e-004	24.0651
General Office Building	412080	38.1272	6.1700e-003	7.5000e-004	38.5042
Parking Lot	14840	1.3731	2.2000e-004	3.0000e-005	1.3866
Parking Lot	25200	2.3316	3.8000e-004	5.0000e-005	2.3547
Refrigerated Warehouse-No Rail	1.95962e+006	181.3116	0.0293	3.5600e-003	183.1045
Refrigerated Warehouse-No Rail	860132	79.5827	0.0129	1.5600e-003	80.3696
Total		326.5556	0.0528	6.4200e-003	329.7847

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	257550	23.8295	3.8600e-003	4.7000e-004	24.0651
General Office Building	412080	38.1272	6.1700e-003	7.5000e-004	38.5042
Parking Lot	14840	1.3731	2.2000e-004	3.0000e-005	1.3866
Parking Lot	25200	2.3316	3.8000e-004	5.0000e-005	2.3547
Refrigerated Warehouse-No Rail	1.95962e+006	181.3116	0.0293	3.5600e-003	183.1045
Refrigerated Warehouse-No Rail	860132	79.5827	0.0129	1.5600e-003	80.3696
Total		326.5556	0.0528	6.4200e-003	329.7847

6.0 Area Detail

6.1 Mitigation Measures Area

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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	tons/yr										MT/yr					
Mitigated	1.4659	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Unmitigated	1.4659	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1738					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2915					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.2000e-004	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Total	1.4659	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1738					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2915					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.2000e-004	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Total	1.4659	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	61.8577	2.4158	0.0577	139.4321
Unmitigated	61.8577	2.4158	0.0577	139.4321

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	6.93162 / 4.24841	7.0451	0.2267	5.4300e-003	14.3290
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	67.0162 / 0	54.8126	2.1892	0.0522	125.1031
Total		61.8577	2.4158	0.0577	139.4321

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	6.93162 / 4.24841	7.0451	0.2267	5.4300e-003	14.3290
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	67.0162 / 0	54.8126	2.1892	0.0522	125.1031
Total		61.8577	2.4158	0.0577	139.4321

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	62.6593	3.7031	0.0000	155.2356
Unmitigated	62.6593	3.7031	0.0000	155.2356

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	36.27	7.3625	0.4351	0.0000	18.2402
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	272.41	55.2968	3.2680	0.0000	136.9954
Total		62.6593	3.7031	0.0000	155.2356

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	36.27	7.3625	0.4351	0.0000	18.2402
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	272.41	55.2968	3.2680	0.0000	136.9954
Total		62.6593	3.7031	0.0000	155.2356

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
