Perris and Ramona Warehouse
(DPR19-00012)
ENERGY ANALYSIS
CITY OF PERRIS

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TABLE OF CONTENTS

APPENDICES

LIST OF EXHIBITS

LIST OF TABLES

LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
AGSP	Airport Gateway Specific Plan
AQIA	*Perris and Ramona Warehouse Air Quality Impact Analysis*
BACM	Best Available Control Measures
BTU	British Thermal Units
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
City	City of Perris
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicles
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EMFAC	EMissions FACtor
FERC	Federal Energy Regulatory Commission
GHG	Greenhouse Gas
GWh	Gigawatt Hour
HHDT	Heavy-Heavy Duty Trucks
hp-hr-gal	Horsepower Hours Per Gallon
IEPR	Integrated Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBTU	Thousand-British Thermal Units
kWh	Kilowatt Hour
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy Duty Trucks
MDV	Medium Duty Trucks
MHDT	Medium-Heavy Duty Trucks
MMcfd	Million Cubic Feet Per Day

mpg	Miles Per Gallon
MPO	Metropolitan Planning Organization
PG&E	Pacific Gas and Electric
Project	Perris and Ramona Warehouse
PV	Photovoltaic
SCAB	South Coast Air Basin
SCE	Southern California Edison
SDAB	San Diego Air Basin
sf	Square Feet
SoCalGas	Southern California Gas
TEA-21	Transportation Equity Act for the 21st Century
TRUs	Transportation Refrigeration Units
U.S.	United States
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Perris and Ramona Warehouse Energy Analysis* is summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the 2019 California Environmental Quality Act (CEQA) Statute and Guidelines (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Energy Impact #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?	5.0	*Less Than Significant*	*n/a*
Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	5.0	*Less Than Significant*	*n/a*
Energy Impact #3: Would the Project achieve the goal of energy conservation by: • Decreasing overall per capita energy consumption. • Decreasing reliance on fossil fuels such as coal, natural gas and oil. • Increasing reliance on renewable energy sources.	5.0	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the federal and state agencies that regulate energy use and consumption through various means and programs. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of energy usage include:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- The Transportation Equity Act for the 21st Century (TEA-21
- Integrated Energy Policy Report (IEPR)
- State of California Energy Plan
- California Code Title 24, Part 6, Energy Efficiency Standards

- California Code Title 24, Part 11, California Green Building Standards Code (CALGreen)
- AB 1493 Pavley Regulations and Fuel Efficiency Standards
- California's Renewable Portfolio Standard (RPS)
- Clean Energy and Pollution Reduction Act of 2015 (SB 350)

Consistency with the above regulations are discussed in detail in section 5 of this report.

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1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Perris and Ramona Warehouse Project (Project). The purpose of this report is to ensure that energy implication is considered by the City of Riverside (Lead Agency), as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1.1 SITE LOCATION

The proposed Project is located east of the Interstate 215 (I-215) Freeway and north of Alessandro Boulevard in the City of Riverside, as shown on Exhibit 1-A. The Project site is bordered to the south by vacant land, to the east by commercial and residential uses, to the west by the I-215 Freeway, and to the north by industrial uses.

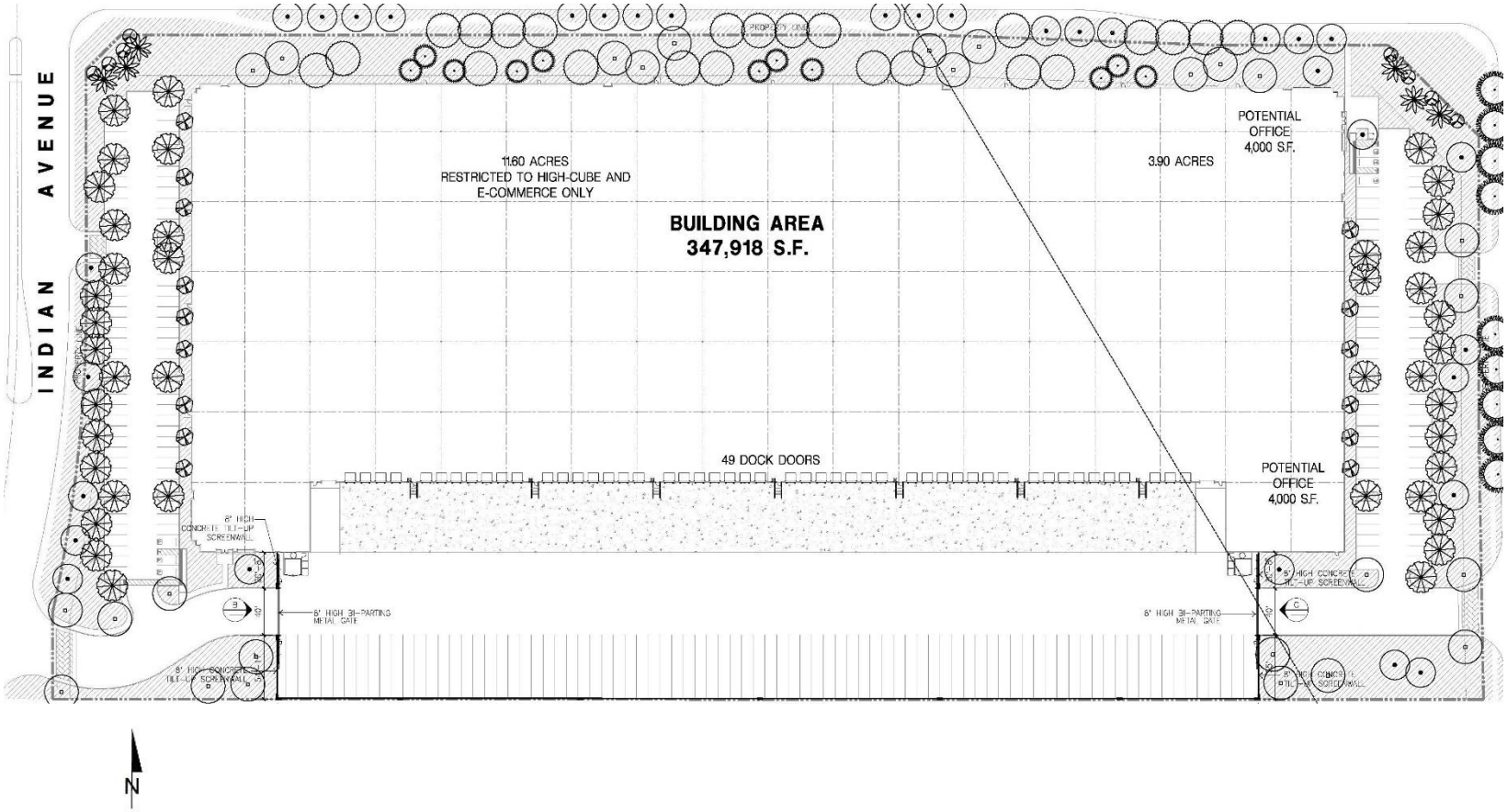
1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a 347,918-sf high-cube transload/short-term warehouse building. The Project is anticipated to be constructed in a single phase by the year 2023. At the time this study was prepared the future tenants of the proposed Project were unknown. It is expected that the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays.

This analysis is intended to describe energy usage associated with the expected operational activities at the Project site. This report assumes the Project will operate 24-hours daily for seven days per week. At the time this analysis was prepared, the future tenants of the proposed Project were unknown however any tenant would operate consistent with a warehouse.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN



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2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project region.

2.1 OVERVIEW

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2018, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2020 and included (2):

- Approximately 7,967 trillion British Thermal Unit (BTU) of energy was consumed
- Approximately 681 million barrels of petroleum
- Approximately 2,137 billion cubic feet of natural gas
- Approximately 1 million short tons of coal

The California Energy Commission's (CEC) Transportation Energy Demand Forecast 2018-2030 was released in order to support the 2017 Integrated Energy Policy Report. The Transportation energy Demand Forecast 2018-2030 lays out graphs and data supporting their projections of California's future transportation energy demand. The projected inputs consider expected variable changes in fuel prices, income, population, and other variables. Predictions regarding fuel demand included:

- Gasoline demand in the transportation sector is expected to decline from approximately 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030 (3)
- Diesel demand in the transportation sector is expected to rise, increasing from approximately 3.7 billion diesel gallons in 2015 to approximately 4.7 billion in 2030 (3)
    - Data from the Department of Energy states that approximately 3.9 billion gallons of diesel fuel were consumed in 2017 (4)

The most recent data provided by the EIA for energy use in California by demand sector is from 2017 and is reported as follows:

- Approximately 40.3% transportation;
- Approximately 23.1% industrial;
- Approximately 18.0% residential; and
- Approximately 18.7% commercial (5)

In 2020, total system electric generation for California was 272,576 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 190,913 GWh which accounted for approximately 70% of the electricity it uses; the rest was imported from the Pacific Northwest (15%) and the U.S. Southwest (15%) (6). Natural gas is the main source for electricity generation at 42.97% of the total in-state electric generation system power as shown in Table 2-1.

TABLE 2-1: TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2020)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	Total California Energy Mix	Total California Power Mix
Coal	317	0.17%	194	6,963	7,157	8.76%	7,474	2.74%
Natural Gas	92,298	48.35%	70	8,654	8,724	10.68%	101,022	37.06%
Oil	30	0.02%	-	-	0	0.00%	30	0.01%
Other (Waste Heat/Petroleum Coke)	384	0.20%	125	9	134	0.16%	518	0.19%
Nuclear	16,280	8.53%	672	8,481	9,154	11.21%	25,434	9.33%
Large Hydro	17,938	9.40%	14,078	1,259	15,337	18.78%	33,275	12.21%
Unspecified	-	0.00%	12,870	1,745	14,615	17.90%	14,615	5.36%
Non-Renewable and Unspecified Totals	127,248	66.65%	28,009	27,111	55,120	67.50%	182,368	66.91%
Biomass	5,680	2.97%	975	25	1,000	1.22%	6,679	2.45%
Geothermal	11,345	5.94%	166	1,825	1,991	2.44%	13,336	4.89%
Small Hydro	3,476	1.82%	320	2	322	0.39%	3,798	1.39%
Solar	29,456	15.43%	284	6,312	6,596	8.08%	36,052	13.23%
Wind	13,708	7.18%	11,438	5,197	16,635	20.37%	30,343	11.13%
Renewable Totals	63,665	33.35%	13,184	13,359	26,543	32.50%	90,208	33.09%
System Totals	***190,913***	***100.00%***	***41,193***	***40,471***	***81,663***	***100.00%***	***272,576***	***100.00%***

Source: California Energy Commission's 2020 Total System Electric Generation

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below:

- California was the seventh-largest producer of crude oil among the 50 states in 2018, and, as of January 2019, it ranked third in oil refining capacity.
- California is the largest consumer of jet fuel among the 50 states and accounted for one-fifth of the nation's jet fuel consumption in 2018. (7)
- California's total energy consumption is second highest in the nation, but, in 2018, the state's per capita energy consumption was the fourth-lowest, due in part to its mild climate and its energy efficiency programs. (8)
- In 2018, California ranked first in the nation as a producer of electricity from solar, geothermal, and biomass resources and fourth in the nation in conventional hydroelectric power generation.
- In 2018, large- and small-scale solar photovoltaic (PV) and solar thermal installations provided 19% of California's net electricity generation (9).

As indicated above, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

2.2 ELECTRICITY

The usage associated with electricity use were calculated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0. The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California ISO studies revealed the extent to which the South California Air Basin (SCAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts (10). Similarly, the subsequent 2018 and 2019 IEPR's identify broad strategies that are aimed at maintaining electricity system reliability.

Electricity is currently provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2018 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power

generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers (11).

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California Independent Service Operator (ISO) is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (12).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, transmission file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Tables 2-2 identifies SCE's specific proportional shares of electricity sources in 2019. As indicated in Table 2-2, the 2019 SCE Power Mix has renewable energy at 35.1% of the overall energy resources. Geothermal resources are at 5.9%, wind power is at 11.5%, large hydroelectric sources are at 7.9%, solar energy is at 16.0%, and coal is at 0% (13).

TABLE 2-2: SCE 2019 POWER CONTENT MIX

Energy Resources	2019 SCE Power Mix
Eligible Renewable	**35.1%**
Biomass & Waste	0.6%
Geothermal	5.9%
Eligible Hydroelectric	1.0%
Solar	16.0%
Wind	11.5%
Coal	**0.0%**
Large Hydroelectric	**7.9%**
Natural Gas	**16.1%**
Nuclear	**8.2%**
Other	**0.1%**
Unspecified Sources of power*	32.6%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

2.3 NATURAL GAS

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

> *"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.*
>
> *California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.*
>
> *The overwhelming majority of natural gas utility customers in California are residential and small commercials customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.*

A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e. they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area.) Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border, and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the California Public Utilities Commission may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet

California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements .

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A

certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California ." (14)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

Based on information provided by the Project applicant, no natural gas will be used as a result of the project, and as such use of natural gas is not considered in the analysis.

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. In March 2019, the Department of Motor Vehicles (DMV) identified 36.4 million registered vehicles in California (15), and those vehicles consume an estimated 17.8 billion gallons of fuel each year[1]. Gasoline (and other vehicle fuels)

[1] Fuel consumptions estimated utilizing information from EMFAC2017.

are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

California's on-road transportation system includes 394,383 land miles, more than 27.5 million passenger vehicles and light trucks, and almost 8.1 million medium- and heavy-duty vehicles (15). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. Petroleum comprises about 91% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels (16). Nearly 17.8 billion gallons of on-highway fuel are burned each year, including 14.6 billion gallons of gasoline (including ethanol) and 3.2 billion gallons of diesel fuel (including biodiesel and renewable diesel). In 2019, Californians also used 194 million cubic feet of natural gas as a transportation fuel (17), or the equivalent of 183 billion gallons of gasoline.

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3 REGULATORY BACKGROUND

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

3.1 FEDERAL REGULATIONS

3.1.1 INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (ISTEA)

The ISTEA promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

3.1.2 THE TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY (TEA-21)

The TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

3.2 CALIFORNIA REGULATIONS

3.2.1 INTEGRATED ENERGY POLICY REPORT (IEPR)

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) 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 § 25301a]). The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2019 IEPR was adopted January 31, 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast (18). The 2020 IEPR Update is currently in progress but is not anticipated to be adopted until February 2021.

3.2.2 STATE OF CALIFORNIA ENERGY PLAN

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

3.2.3 CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the CEC and became effective on January 1, 2020. The 2019 Title are applicable to building permit applications submitted on or after January 1, 2020. The 2019 Title 24 standards require solar PV systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting standards for nonresidential buildings. The CEC anticipates that nonresidential buildings will use approximately 30% less energy due to lighting upgrades compared to the prior code (19).

3.2.3 CALIFORNIA CODE TITLE 24, PART 11, CALGREEN

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that became effective January 1, 2020.

Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction waste and demolition ordinances and defers to them as the ruling guidance provided they establish a minimum 65% diversion requirement.

Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the CEC) and became effective on January 1, 2020.

3.2.5 AB 1493 PAVLEY REGULATIONS AND FUEL EFFICIENCY STANDARDS

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

3.2.6 CALIFORNIA'S RENEWABLE PORTFOLIO STANDARD (RPS)

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 33% of total retail sales by 2020 (20).

3.2.7 CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

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4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

4.1 EVALUATION CRITERIA

In compliance with Appendix G of the *State CEQA Guidelines* (21), this report analyzes the project's anticipated energy use during construction and operations to determine if the Project would:

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

In addition, Appendix F of the *State CEQA Guidelines* (22), states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- Increasing reliance on renewable energy sources.

4.2 METHODOLOGY

Information from the CalEEMod Version 2016.3.2 outputs for the *Perris and Ramona Warehouse Air Quality Impact Analysis* (AQIA) (23) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands.

4.2.1 CALEEMOD

In May 2021, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the CalEEMod Version 2020.4.0. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage. (24). Accordingly, the latest version of CalEEMod has been used to determine the proposed Project's anticipated transportation and facility energy demands. Output from the annual model runs are provided in Appendices 4.1 and Appendices 4.2.

LAND USES MODELED IN CALEEMOD

The Project proposes development and operation of up to 347,918-sf high-cube transload/short-term warehouse, a 217-space parking lot (approximately 1.57 acres), 109,664-sf of landscape (approximately 2.52 acres) on a 15.52 acres site. CalEEMod land uses that most closely fit the described Project are reflected in these analyses. For purposes of analysis, the following construction and operation scenarios and land uses were modeled.

TABLE 4-1: PROJECT MODELED LAND USES

Proposed Project Land Use	Land Use Modeled in CalEEMod	Quantity	Units
High-Cube/Transload Short-Term Warehouse	Unrefrigerated Warehouse – No Rail[2]	347.918	TSF
Parking Lot	Parking Lot	217	Space
Landscape	City Park[3]	2.52	AC
Balance	Other Asphalt Surfaces[4]	150.018	TSF

4.2.2 EMISSION FACTORS MODEL

On August 19, 2019, the EPA approved the 2017 version of the EMissions FACtor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2017 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (25). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2017 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of analysis, the 2022 and 2023 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Output from the EMFAC2017 model run is provided in Appendix 4.3.

4.3 CONSTRUCTION ENERGY DEMANDS

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project.

4.3.1 CONSTRUCTION POWER COST

The total Project construction power costs is the summation of the products of the area (sf) by the construction duration and the typical power cost.

[2] For purposes of analysis, the CalEEMod land use "Unrefrigerated Warehouse – No Rail" was selected as the most appropriate land use to model the proposed 347,918-sf of high-cube transload/short-term warehouse use. For operational analysis, in order to accurately determine fuel usage associated with Project mobile operations (e.g. the different fuel usage and trip lengths associated with passenger cars and trucks), passenger cars were modeled using the CalEEMod land use category of: "Unrefrigerated Warehouse – No Rail" and trucks were modeled using the CalEEMod land use category "User Defined Industrial". It should be noted that modeling 347,918-sf "User Designed Industrial" land use, was employed to calculate fuel usage associated with truck activity and that no additional energy usage associated with area and energy were quantified.

[3] CalEEMod defines the City Park land use is as parks that are owned and operated by the City. The proposed Project includes 2.52 acres of landscaped area. The analysis utilizes the CalEEMod City Park land use designation to quantify water usage associated with the landscaped area.

[4] The remaining area of the total Project site will be modeled in CalEEMod as Other Asphalt Surfaces. Per the User's Guide, this land use category is defined as asphalt areas that are not used as a parking lot.

CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in December 2022 and will November 2023 (23). The construction schedule utilized in the analysis, shown in Table 4-2, represents a "worst-case" analysis scenario. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (26).

TABLE 4-2: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Site Preparation	12/06/2022	12/19/2022	10
Grading	12/20/2022	01/30/2023	30
Building Construction	01/31/2023	11/06/2023	200
Paving	10/10/2023	11/06/2023	20
Architectural Coating	08/15/2023	11/06/2023	60

PROJECT CONSTRUCTION POWER COST

The *2021 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of $2.37, which was used to calculate the Project's total construction power cost (27).

As shown on Table 4-3, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately $17,621.65.

TABLE 4-3: CONSTRUCTION POWER COST

Land Use	**Power Cost** (per 1,000 SF of construction per month)	**Size** (1,000 SF)	**Construction Duration** (months)	**Project Construction Power Cost**
High-Cube Transload/Short-term Storage	$2.37	347.918	11	$9,070.22
Parking	$2.37	68.356	11	$1,782.04
Landscape	$2.37	109.644	11	$2,858.42
Other Asphalt Surfaces	$2.37	150.018	11	$3,910.97
			CONSTRUCTION POWER COST	***$17,621.65***

4.3.2 CONSTRUCTION ELECTRICITY USAGE

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4-3) by the utility provider cost per kilowatt hour (kWh) of electricity.

PROJECT CONSTRUCTION ELECTRICITY USAGE

The SCE's general service rate schedule were used to determine the Project's electrical usage. As of June 1, 2021, SCE's general service rate is $0.11 per kilowatt hours (kWh) of electricity for industrial services (28). As shown on Table 4-4, the total electricity usage from on-site Project construction related activities is estimated to be approximately 157,900 kWh.

TABLE 4-4: CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
High-Cube Transload/Short-term Storage	$0.11	81,274
Parking	$0.11	15,968
Landscape	$0.11	25,613
Other Asphalt Surfaces	$0.11	35,045
CONSTRUCTION ELECTRICITY USAGE		***157,900***

4.3.3 CONSTRUCTION EQUIPMENT FUEL ESTIMATES

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction.

CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-4 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code. It should be noted that most pieces of equipment would likely operate for fewer hours per day. A summary of construction equipment assumptions by phase is provided at Table 4-5.

PROJECT CONSTRUCTION EQUIPMENT FUEL CONSUMPTION

Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-6. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hour per gallon (hp-hr-gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines (29). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the Project area and region[5]. As previously presented in Table 4-6, Project construction activities would consume an estimated 80,507 gallons of diesel fuel.

Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

[5] Based on Appendix A of the CalEEMod User's Guide, Construction consists of several types of off-road equipment. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel.

TABLE 4-5: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Phase Name	Equipment	Amount	Hours Per Day
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	2	8
	Crawler Tractors	4	8
	Forklifts	4	8
	Generator Sets	2	8
	Welders	2	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

TABLE 4-6: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Phase Name	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
Site Preparation	10	Crawler Tractors	212	4	8	0.43	2,917	1,577
		Rubber Tired Dozers	247	3	8	0.40	2,371	1,282
Grading	30	Crawler Tractors	212	2	8	0.43	1,459	2,365
		Excavators	158	2	8	0.38	961	1,558
		Graders	187	1	8	0.41	613	995
		Rubber Tired Dozers	247	1	8	0.40	790	1,282
		Scrapers	367	2	8	0.48	2,819	4,571
Building Construction	200	Cranes	231	2	8	0.29	1,072	11,587
		Crawler Tractors	212	4	8	0.43	2,917	31,536
		Forklifts	89	4	8	0.20	570	6,158
		Generator Sets	84	2	8	0.74	995	10,752
		Welders	46	2	8	0.45	331	3,581
Paving	20	Pavers	130	2	8	0.42	874	944
		Paving Equipment	132	2	8	0.36	760	822
		Rollers	80	2	8	0.38	486	526
Architectural Coating	60	Air Compressors	78	1	8	0.48	300	971
CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)								***80,507***

4.3.3 CONSTRUCTION TRIPS AND VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, hauling, and vendors commuting to and from the site. The number of workers, hauling, and vendor trips are presented below in Table 4-7. It should be noted that for Vendor Trips, specifically, CalEEMod only assigns Vendor Trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for Vendor Trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

TABLE 4-7: CONSTRUCTION TRIPS AND VMT

Phase Name	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Site Preparation	18	5	0
Grading	20	14	0
Building Construction	284	93	0
Paving	15	0	0
Architectural Coating	57	0	0

4.3.4 CONSTRUCTION WORKER FUEL ESTIMATES

With respect to estimated VMT for the Project, the construction worker trips would generate an estimated 903,315 VMT during the 11 months of construction (23). Based on CalEEMod methodology, it is assumed that 50% of all vendor trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1[6]), and 25% are from light-duty-trucks (LDT2[7]). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized within the AQIA.

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2017 version of the EMFAC developed by CARB. EMFAC2017 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (25). EMFAC2017 was run for the LDA, LDT1, and LDT2 vehicle class within the California sub-area for the 2022 through 2023 calendar years. Data from EMFAC2017 is shown in Appendix 4.3.

Table 4-8 provides an estimated annual fuel consumption resulting from LDAs related to the Project construction worker trips. Based on Table 4-8, it is estimated that 13,355 gallons of fuel will be consumed related to construction worker trips during full construction of the Project.

[6] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[7] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 4-8: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES – LDA

Phase Name	Duration (Days)	Worker Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022						
Site Preparation	10	9	14.7	1,323	32.77	40
Grading	9	10	14.7	1,323	32.77	40
2023						
Grading	21	10	14.7	3,087	33.79	91
Building Construction	200	142	14.7	417,480	33.79	12,357
Paving	20	8	14.7	2,352	33.79	70
Architectural Coating	60	29	14.7	25,578	33.79	757
PROJECT CONSTRUCTION WORKER (LDA) FUEL CONSUMPTION						***13,355***

Table 4-9 provides an estimated annual fuel consumption resulting from LDT1s related to the Project construction worker trips. Based on Table 4-9, it is estimated that 7,967 gallons of fuel will be consumed related to construction worker trips during full construction of the Project.

TABLE 4-9: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES – LDT1

Phase Name	Duration (Days)	Worker Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022						
Site Preparation	10	5	14.7	735	27.55	27
Grading	9	5	14.7	662	27.55	24
2023						
Grading	21	5	14.7	1,544	28.38	54
Building Construction	200	71	14.7	208,740	28.38	7,355
Paving	20	4	14.7	1,176	28.38	41
Architectural Coating	60	15	14.7	13,230	28.38	466
PROJECT CONSTRUCTION WORKER (LDT1) FUEL CONSUMPTION						***7,967***

Table 4-10 provides an estimated annual fuel consumption resulting from LDT2s related to the Project construction worker trips. Based on Table 4-10, it is estimated that 8,369 gallons of fuel will be consumed related to construction worker trips during full construction of the Project.

TABLE 4-10: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES – LDT2

Phase Name	Duration (Days)	Worker Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022						
Site Preparation	10	5	14.7	735	26.03	28
Grading	9	5	14.7	662	26.03	25
2023						
Grading	21	5	14.7	1,544	27.02	57
Building Construction	200	71	14.7	208,740	27.02	7,725
Paving	20	4	14.7	1,176	27.02	44
Architectural Coating	60	15	14.7	13,230	27.02	490
PROJECT CONSTRUCTION WORKER (LDT2) FUEL CONSUMPTION						***8,369***

It should be noted that construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

4.3.5 CONSTRUCTION VENDOR FUEL ESTIMATES

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 133,032 VMT along area roadways for the Project over the duration of construction activity (23). It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHDT) and 50% are from heavy-heavy duty trucks (HHDT). These assumptions are consistent with the CalEEMod defaults utilized within the within the AQIA (23). Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2017. EMFAC2017 was run for the MHDT and HHDT vehicle classes within the California sub-area for the 2022 through 2023 calendar years. Data from EMFAC2017 is shown in Appendix 4.3.

Based on Table 4-11, it is estimated that 6,196 gallons of fuel will be consumed related to construction vendor trips (MHDTs) during full construction of the Project.

TABLE 4-11: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES – MHDT (1 OF 2)

Phase Name	Duration (Days)	Vendor Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022						
Site Preparation	10	3	6.9	207	10.34	20
Grading	9	7	6.9	435	10.34	42

TABLE 4-11: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES – MHDT (2 OF 2)

Phase Name	Duration (Days)	Vendor Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2023						
Grading	21	7	6.9	1,014	10.74	94
Building Construction	200	47	6.9	64,860	10.74	6,040
Paving	20	0	6.9	0	10.74	0
Architectural Coating	60	0	6.9	0	10.74	0
PROJECT CONSTRUCTION VENDOR (MHDT) FUEL CONSUMPTION						***6,196***

Tables 4-12 shows the estimated fuel economy of HHDTs accessing the Project site. Based on Tables 4-12, fuel consumption from construction vendor trips (HHDTs) will total approximately 8,950 gallons.

It should be noted that Project construction vendor trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

TABLE 4-12: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES – HHDT

Phase Name	Duration (Days)	Vendor Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022						
Site Preparation	10	3	6.9	207	7.06	29
Grading	9	7	6.9	435	7.06	62
2023						
Grading	21	7	6.9	1,014	7.44	136
Building Construction	200	47	6.9	64,860	7.44	8,723
Paving	20	0	6.9	0	7.44	0
Architectural Coating	60	0	6.9	0	7.44	0
PROJECT CONSTRUCTION VENDOR (HHDT) FUEL CONSUMPTION						***8,950***

4.3.6 CONSTRUCTION ENERGY EFFICIENCY/CONSERVATION MEASURES

Starting in 2014, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. These requirements ensure fleets gradually turnover the oldest and dirtiest equipment to newer, cleaner models and prevent fleets from adding older, dirtier equipment. As such, the equipment used for Project construction would conform to CARB regulations and California emissions standards. It should also be noted that there are no unusual Project characteristics or construction processes that would require

the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

Construction contractors would be required to comply with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additional construction-source energy efficiencies would occur due to required California regulations and best available control measures (BACM). For example, CCR Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Section 2449(d)(3) requires that grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling." In this manner, construction equipment operators are required to be informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

4.4 OPERATIONAL ENERGY DEMANDS

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by passenger car and truck vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

4.4.1 TRANSPORTATION ENERGY DEMANDS

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. The VMT per vehicle class can be determined by evaluated in the vehicle fleet mix and the total VMT.

As with worker and vendors trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2017 developed by CARB (25). EMFAC2017 was run for the Riverside County area for the 2022 and 2023 calendar years. Data from EMFAC2017 is shown in Appendix 4.3.

As summarized on Table 4-13 the Project will result in 2,647,522 annual VMT and an estimated annual fuel consumption of 175,471 gallons of fuel.

TABLE 4-13: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION

Vehicle Type	Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
LDA	907,975	33.79	26,874
LDT1	95,054	28.38	3,349
LDT2	293,043	27.02	10,845
MDV	239,447	21.45	11,161
MCY	40,827	37.90	1,077
LHDT1	143,430	14.58	9,838
LHDT2	39,419	15.26	2,584
MHDT	235,123	10.74	21,895
HHDT	653,203	7.44	87,848
TOTAL (ALL VEHICLES)	***2,647,522***	-	***175,471***

4.4.2 FACILITY ENERGY DEMANDS

CALGREEN STANDARDS

Pursuant to Section 5.106.5.3.2 of the CALGreen Code, 7 parking spaces will provide conduits for the charging of electric vehicles. As shown in Table 4-14, in the event that 7 EV parking spaces are installed, this will result in a 49,392 kWh/year. However, as shown in Table 4-15, though the Project's energy usage will be increased with the installation of the EV parking spaces, there will be a decrease in annual VMT of 197,568 miles/yr and thus an overall savings in fuel demand.

TABLE 4-14: ELECTRICTY DEMAND FROM EV CHARGING STATIONS

Parameters	Amount	Unit
Annual Energy Delivery per Parking Space[1]	7,056	kWh/charging station/year
Number of Parking Spaces Provided Chargers	7	charging stations
ANNUAL EV CHARGING STATION ELECTRICITY DEMAND[2]	***49,392***	***kWh/year***

[1] Annual Energy Delivery and VMT reduction based on an average monthly energy delivery of 588 kWh per charging station for conventional Level 2 chargers, as estimated by the CEC.
Available at: https://www.energy.ca.gov/2018publications/CEC-500-2018-020/CEC-500-2018-020.pdf.
[2] Annual EV charging station electricity demand calculated by multiplying the Annual Energy Delivery per Parking Space by the Number of Parking Spaces Provided Chargers.

TABLE 4-15: VMT REDUCTION FROM EV CHARGING STATIONS

Parameters	Amount	Unit
SCE Electricity Emission Factor[1]	0.18	$MTCO_2e/MWh$
Fuel Economy of Electric Vehicle[2]	0.25	kWh/miles
Annual Energy Delivery per Parking Space	7,056	kWh/charging station/year
Annual VMT Reduction per Parking Space[3]	28,224	miles/charging station/yr
Number of Parking Spaces Provided Chargers	7	charging stations
ANNUAL VMT REDUCTION FROM ALL STATIONS[4]	***197,568***	***miles/yr***

[1] CO_2e weighted intensity factor for SCE accounts for CO_2 and CH_4 emissions rates and converted from lbs/MWh to MT/MWh.
[2] U.S. Department of Energy, 2013. Benefits and Considerations of Electricity as a Vehicle Fuel. Available at: https://afdc.energy.gov/fuels/electricity_benefits.html
[3] Annual VMT reduction calculated as the annual energy delivery divided by the fuel economy of an EV.
[4] Calculated by multiplying the Annual VMT Reductions per Parking Space and Number of Parking Spaces Provided Chargers.

PROPOSED PROJECT

Project building operations activities would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied to the Project by SCE. As previously stated, the analysis herein assumes compliance with the 2019 Title 24 and CALGreen standards. Annual natural gas and electricity demands of the Project are summarized in Table 4-16 and provided in Appendix 4.2.

TABLE 4-16: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY (1 OF 2)

Natural Gas Demand	kBTU/year
High-Cube Transload/Short-term Storage Warehouse	699,315
Parking	0
TOTAL PROPOSED PROJECT NATURAL GAS DEMAND	***699,315***

kBTU – kilo-British Thermal Units

TABLE 4-16: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY (2 OF 2)

Electricity Demand	kWh/year
High-Cube Transload/Short-term Storage Warehouse	807,170
Parking	23,925
TOTAL PROJECT ELECTRICITY DEMAND	***831,095***
CHARGING STATION ELECTRICITY DEMAND	*91,869*
TOTAL PROJECT ELECTRICITY DEMAND	***922,964***

kBTU – kilo-British Thermal Units

4.4.3 Operational Energy Efficiency/Conservation Measures

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title24, California Green Building Standards Code).

Enhanced Vehicle Fuel Efficiencies

Project annual fuel consumption estimates presented previously in Table 4-13 represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands.

The Property Owner/Developer would comply with the City's transportation demand management ordinance (see Chapter 17.78 of the Development Code).

4.5 Summary

4.5.1 Construction Energy Demands

The estimated power cost of on-site electricity usage during the construction of the Project is assumed to be approximately $17,621.65. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be approximately 157,900 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 80,507 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's

proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. BACMs inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the Project would result in the estimated fuel consumption of 29,692 gallons of fuel. Additionally, fuel consumption from construction vendor trips (MHDTs and HHDTs) will total approximately 15,147 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2019 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements (18). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

4.5.2 Operational Energy Demands

Transportation Energy Demands

Annual vehicular trips and related VMT generated by the operation of the Project would result in a fuel demand of 175,471 gallons of fuel.

Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other industrial uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Ed., 2017); and CalEEMod. As such, Project operations would not result in excessive and wasteful vehicle trips and VMT, nor excess and wasteful vehicle energy consumption compared to other industrial uses.

It should be noted that the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks are being tested this year and SCAQMD is looking to integrate this new technology into large-scale truck operations. The following state strategies reduce GHG emissions from the medium and heavy-duty trucks:

- CARB's Mobile Source Strategy focuses on reducing GHGs through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks.
- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25 percent by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.
- CARB's On-Road Truck and Bus Regulation (2010) requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023 nearly all trucks and buses will need to have 2010 model year engines or equivalent (30).
- CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions.

The proposed Project would implement project design features that would facilitate the accessibility, parking, and loading of trucks on site.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. The Project would implement sidewalks, facilitating and encouraging pedestrian access. Facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. In compliance with the California Green Building Standards Code and City requirements, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

FACILITY ENERGY DEMANDS

Project facility operational energy demands are estimated at: 699,315 kBTU/year of natural gas; and 922,964 kWh/year of electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied by SCE. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other industrial uses of similar scale and configuration.

Lastly, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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5 CONCLUSIONS

5.1 ENERGY IMPACT 1

Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

As supported by the preceding analyses, Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

5.2 ENERGY IMPACT 2

Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The Project's consistency with the applicable state and local plans is discussed below.

CONSISTENCY WITH ISTEA

Transportation and access to the Project site is provided by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site.

CONSISTENCY WITH TEA-21

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.

CONSISTENCY WITH IEPR

Electricity would be provided to the Project by SCE. SCE's *Clean Power and Electrification Pathway* (CPEP) white paper builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2019 IEPR.

Additionally, the Project will comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary. As such, development of the proposed Project would support the goals presented in the 2019 IEPR.

CONSISTENCY WITH STATE OF CALIFORNIA ENERGY PLAN

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and takes advantage of existing infrastructure systems. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.

CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

The 2019 version of Title 24 was adopted by the CEC and became effective on January 1, 2020. It should be noted that the analysis herein assumes compliance with the 2019 Title 24 Standards. It should be noted that the CEC anticipates that nonresidential buildings will use approximately 30% less energy compared to the prior code (19). The proposed Project would be subject to Title 24 standards.

CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 11, CALGREEN

As previously stated, CCR, Title 24, Part 11: CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that became effective January 1, 2020. The proposed Project would be subject to CALGreen standards.

CONSISTENCY WITH AB 1493

AB 1493 is not applicable to the Project as it is a statewide measure establishing vehicle emissions standards. No feature of the Project would interfere with implementation of the requirements under AB 1493.

CONSISTENCY WITH RPS

California's RPS is not applicable to the Project as it is a statewide measure that establishes a renewable energy mix. No feature of the Project would interfere with implementation of the requirements under RPS.

CONSISTENCY WITH SB 350

The proposed Project would use energy from SCE, which have committed to diversify their portfolio of energy sources by increasing energy from wind and solar sources. No feature of the Project would interfere with implementation of SB 350. Additionally, the Project would be designed and constructed to implement the energy efficiency measures for new industrial developments and would include several measures designed to reduce energy consumption.

As shown above, the Project would not conflict with any of the state or local plans. As such, a less than significant impact is expected.

5.3 ENERGY IMPACT 3

Would the Project achieve the goal of energy conservation by:

- ***Decreasing overall per capita energy consumption.***
- ***Decreasing reliance on fossil fuels such as coal, natural gas and oil.***
- ***Increasing reliance on renewable energy sources.***

As previously stated, the proposed Project is subject to California Building Code requirements. New buildings must achieve compliance with 2019 Building and Energy Efficiency Standards and the 2019 California Green Building Standards requirements. The CEC anticipates that nonresidential buildings will use approximately 30% less energy due to lighting upgrades compared to the prior code (19). It should be noted that though the Project will comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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6 REFERENCES

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7 CERTIFICATIONS

The contents of this energy analysis report represent an accurate depiction of the environmental impacts associated with the proposed Perris and Ramona Warehouse. The information contained in this energy analysis report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 4.1:

CALEEMOD PROJECT CONSTRUCTION EMISSIONS MODEL OUTPUTS

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

Perris and Ramona Warehouse (Construction - Unmitigated)

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	347.92	1000sqft	7.99	347,918.00	0
Parking Lot	217.00	Space	1.57	68,356.00	0
City Park	2.52	Acre	2.52	109,644.00	0
Other Asphalt Surfaces	150.02	1000sqft	3.44	150,018.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 15.52 acres

Construction Phase - Construction anticipated to start in December 2022 and end in Novemeber 2023

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday

Grading - This analysis conservatively assumes that 16 acres will be graded per day

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

Trips and VMT - Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction

Architectural Coating - Rule 1113

Vehicle Trips - Construction run only

Energy Use - Construction run only

Water And Wastewater - Construction run only

Solid Waste - Construction run only

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	300.00	200.00
tblConstructionPhase	PhaseEndDate	6/17/2024	11/14/2023
tblConstructionPhase	PhaseEndDate	4/22/2024	11/6/2023
tblConstructionPhase	PhaseEndDate	2/27/2023	1/30/2023
tblConstructionPhase	PhaseEndDate	5/20/2024	11/6/2023
tblConstructionPhase	PhaseEndDate	1/16/2023	12/19/2022
tblConstructionPhase	PhaseStartDate	5/21/2024	8/23/2023
tblConstructionPhase	PhaseStartDate	2/28/2023	1/31/2023
tblConstructionPhase	PhaseStartDate	1/17/2023	12/20/2022
tblConstructionPhase	PhaseStartDate	4/23/2024	10/10/2023
tblConstructionPhase	PhaseStartDate	1/3/2023	12/6/2022
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	120.00	480.00

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

tblGrading	AcresOfGrading	35.00	160.00
tblLandUse	LandUseSquareFeet	86,800.00	68,356.00
tblLandUse	LandUseSquareFeet	109,771.20	109,644.00
tblLandUse	LotAcreage	1.95	1.57
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	0.22	0.00
tblSolidWaste	SolidWasteGenerationRate	327.04	0.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	VendorTripNumber	111.00	93.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TTP	48.00	0.00

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

tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	80,456,500.00	0.00
tblWater	OutdoorWaterUseRate	3,002,533.00	0.00

2.0 Emissions Summary

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast 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	0.0424	0.4698	0.2387	6.4000e-004	0.4593	0.0194	0.4788	0.1019	0.0179	0.1198	0.0000	56.3538	56.3538	0.0173	2.7000e-004	56.8668
2023	2.0171	5.0127	4.3903	0.0123	0.7123	0.2015	0.9139	0.1684	0.1887	0.3570	0.0000	1,093.9351	1,093.9351	0.1846	0.0303	1,107.5694
Maximum	**2.0171**	**5.0127**	**4.3903**	**0.0123**	**0.7123**	**0.2015**	**0.9139**	**0.1684**	**0.1887**	**0.3570**	**0.0000**	**1,093.9351**	**1,093.9351**	**0.1846**	**0.0303**	**1,107.5694**

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	0.0424	0.4698	0.2387	6.4000e-004	0.1807	0.0194	0.2001	0.0402	0.0179	0.0580	0.0000	56.3537	56.3537	0.0173	2.7000e-004	56.8668
2023	2.0171	5.0127	4.3903	0.0123	0.5185	0.2015	0.7200	0.1304	0.1887	0.3191	0.0000	1,093.9343	1,093.9343	0.1846	0.0303	1,107.5686
Maximum	**2.0171**	**5.0127**	**4.3903**	**0.0123**	**0.5185**	**0.2015**	**0.7200**	**0.1304**	**0.1887**	**0.3191**	**0.0000**	**1,093.9343**	**1,093.9343**	**0.1846**	**0.0303**	**1,107.5686**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.33**	**0.00**	**33.93**	**36.89**	**0.00**	**20.91**	**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	**12-6-2022**	**3-5-2023**	1.5933	1.5933
2	**3-6-2023**	**6-5-2023**	1.6136	1.6136
3	**6-6-2023**	**9-5-2023**	1.8643	1.8643
4	**9-6-2023**	**9-30-2023**	0.8879	0.8879
		Highest	1.8643	1.8643

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	1.4375	8.0000e-005	9.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0178	0.0178	5.0000e-005	0.0000	0.0190
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.4375**	**8.0000e-005**	**9.1600e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0178**	**0.0178**	**5.0000e-005**	**0.0000**	**0.0190**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast 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	1.4375	8.0000e-005	9.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0178	0.0178	5.0000e-005	0.0000	0.0190
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.4375**	**8.0000e-005**	**9.1600e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0178**	**0.0178**	**5.0000e-005**	**0.0000**	**0.0190**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/6/2022	12/19/2022	5	10	
2	Grading	Grading	12/20/2022	1/30/2023	5	30	
3	Building Construction	Building Construction	1/31/2023	11/6/2023	5	200	

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

4	Paving	Paving	10/10/2023	11/6/2023	5	20	
5	Architectural Coating	Architectural Coating	8/15/2023	11/6/2023	5	60	

Acres of Grading (Site Preparation Phase): 160

Acres of Grading (Grading Phase): 480

Acres of Paving: 5.01

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 521,877; Non-Residential Outdoor: 173,959; Striped Parking Area: 13,102 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Building Construction	Cranes	2	8.00	231	0.29
Grading	Crawler Tractors	2	8.00	212	0.43
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
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
Building Construction	Crawler Tractors	4	8.00	212	0.43
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

Building Construction	Welders	2	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	284.00	93.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	57.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1752	0.0000	0.1752	0.0588	0.0000	0.0588	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2517	0.0999	2.8000e-004		0.0108	0.0108		9.9200e-003	9.9200e-003	0.0000	24.9873	24.9873	8.0800e-003	0.0000	25.1894
Total	**0.0224**	**0.2517**	**0.0999**	**2.8000e-004**	**0.1752**	**0.0108**	**0.1860**	**0.0588**	**9.9200e-003**	**0.0687**	**0.0000**	**24.9873**	**24.9873**	**8.0800e-003**	**0.0000**	**25.1894**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.0000e-005	1.1100e-003	3.7000e-004	0.0000	1.6000e-004	2.0000e-005	1.7000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.4378	0.4378	0.0000	6.0000e-005	0.4573
Worker	3.1000e-004	2.4000e-004	3.0700e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7822	0.7822	2.0000e-005	2.0000e-005	0.7892
Total	**3.5000e-004**	**1.3500e-003**	**3.4400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.2200**	**1.2200**	**2.0000e-005**	**8.0000e-005**	**1.2465**

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					0.0683	0.0000	0.0683	0.0229	0.0000	0.0229	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2517	0.0999	2.8000e-004		0.0108	0.0108		9.9200e-003	9.9200e-003	0.0000	24.9873	24.9873	8.0800e-003	0.0000	25.1893
Total	**0.0224**	**0.2517**	**0.0999**	**2.8000e-004**	**0.0683**	**0.0108**	**0.0791**	**0.0229**	**9.9200e-003**	**0.0329**	**0.0000**	**24.9873**	**24.9873**	**8.0800e-003**	**0.0000**	**25.1893**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.0000e-005	1.1100e-003	3.7000e-004	0.0000	1.6000e-004	2.0000e-005	1.7000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.4378	0.4378	0.0000	6.0000e-005	0.4573
Worker	3.1000e-004	2.4000e-004	3.0700e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7822	0.7822	2.0000e-005	2.0000e-005	0.7892
Total	**3.5000e-004**	**1.3500e-003**	**3.4400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.2200**	**1.2200**	**2.0000e-005**	**8.0000e-005**	**1.2465**

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					0.2816	0.0000	0.2816	0.0424	0.0000	0.0424	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0192	0.2136	0.1313	3.2000e-004		8.5800e-003	8.5800e-003		7.8900e-003	7.8900e-003	0.0000	28.2610	28.2610	9.1400e-003	0.0000	28.4895
Total	**0.0192**	**0.2136**	**0.1313**	**3.2000e-004**	**0.2816**	**8.5800e-003**	**0.2902**	**0.0424**	**7.8900e-003**	**0.0503**	**0.0000**	**28.2610**	**28.2610**	**9.1400e-003**	**0.0000**	**28.4895**

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

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	2.8000e-003	9.4000e-004	1.0000e-005	4.0000e-004	4.0000e-005	4.4000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	1.1032	1.1032	1.0000e-005	1.6000e-004	1.1523
Worker	3.1000e-004	2.4000e-004	3.0700e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7822	0.7822	2.0000e-005	2.0000e-005	0.7892
Total	**4.1000e-004**	**3.0400e-003**	**4.0100e-003**	**2.0000e-005**	**1.3900e-003**	**5.0000e-005**	**1.4300e-003**	**3.7000e-004**	**4.0000e-005**	**4.2000e-004**	**0.0000**	**1.8855**	**1.8855**	**3.0000e-005**	**1.8000e-004**	**1.9415**

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					0.1098	0.0000	0.1098	0.0165	0.0000	0.0165	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0192	0.2136	0.1313	3.2000e-004		8.5800e-003	8.5800e-003		7.8900e-003	7.8900e-003	0.0000	28.2610	28.2610	9.1400e-003	0.0000	28.4895
Total	**0.0192**	**0.2136**	**0.1313**	**3.2000e-004**	**0.1098**	**8.5800e-003**	**0.1184**	**0.0165**	**7.8900e-003**	**0.0244**	**0.0000**	**28.2610**	**28.2610**	**9.1400e-003**	**0.0000**	**28.4895**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	2.8000e-003	9.4000e-004	1.0000e-005	4.0000e-004	4.0000e-005	4.4000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	1.1032	1.1032	1.0000e-005	1.6000e-004	1.1523
Worker	3.1000e-004	2.4000e-004	3.0700e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7822	0.7822	2.0000e-005	2.0000e-005	0.7892
Total	**4.1000e-004**	**3.0400e-003**	**4.0100e-003**	**2.0000e-005**	**1.3900e-003**	**5.0000e-005**	**1.4300e-003**	**3.7000e-004**	**4.0000e-005**	**4.2000e-004**	**0.0000**	**1.8855**	**1.8855**	**3.0000e-005**	**1.8000e-004**	**1.9415**

3.3 Grading - 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					
Fugitive Dust					0.3178	0.0000	0.3178	0.0622	0.0000	0.0622	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0410	0.4375	0.2947	7.5000e-004		0.0175	0.0175		0.0161	0.0161	0.0000	65.9221	65.9221	0.0213	0.0000	66.4551
Total	**0.0410**	**0.4375**	**0.2947**	**7.5000e-004**	**0.3178**	**0.0175**	**0.3353**	**0.0622**	**0.0161**	**0.0784**	**0.0000**	**65.9221**	**65.9221**	**0.0213**	**0.0000**	**66.4551**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6000e-004	5.0400e-003	2.0100e-003	3.0000e-005	9.3000e-004	4.0000e-005	9.7000e-004	2.7000e-004	4.0000e-005	3.1000e-004	0.0000	2.4733	2.4733	2.0000e-005	3.7000e-004	2.5829
Worker	6.8000e-004	5.0000e-004	6.5900e-003	2.0000e-005	2.3100e-003	1.0000e-005	2.3200e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.7773	1.7773	4.0000e-005	5.0000e-005	1.7923
Total	**8.4000e-004**	**5.5400e-003**	**8.6000e-003**	**5.0000e-005**	**3.2400e-003**	**5.0000e-005**	**3.2900e-003**	**8.8000e-004**	**5.0000e-005**	**9.3000e-004**	**0.0000**	**4.2506**	**4.2506**	**6.0000e-005**	**4.2000e-004**	**4.3752**

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					0.1239	0.0000	0.1239	0.0243	0.0000	0.0243	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0410	0.4375	0.2947	7.5000e-004		0.0175	0.0175		0.0161	0.0161	0.0000	65.9220	65.9220	0.0213	0.0000	66.4550
Total	**0.0410**	**0.4375**	**0.2947**	**7.5000e-004**	**0.1239**	**0.0175**	**0.1415**	**0.0243**	**0.0161**	**0.0404**	**0.0000**	**65.9220**	**65.9220**	**0.0213**	**0.0000**	**66.4550**

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

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6000e-004	5.0400e-003	2.0100e-003	3.0000e-005	9.3000e-004	4.0000e-005	9.7000e-004	2.7000e-004	4.0000e-005	3.1000e-004	0.0000	2.4733	2.4733	2.0000e-005	3.7000e-004	2.5829
Worker	6.8000e-004	5.0000e-004	6.5900e-003	2.0000e-005	2.3100e-003	1.0000e-005	2.3200e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.7773	1.7773	4.0000e-005	5.0000e-005	1.7923
Total	**8.4000e-004**	**5.5400e-003**	**8.6000e-003**	**5.0000e-005**	**3.2400e-003**	**5.0000e-005**	**3.2900e-003**	**8.8000e-004**	**5.0000e-005**	**9.3000e-004**	**0.0000**	**4.2506**	**4.2506**	**6.0000e-005**	**4.2000e-004**	**4.3752**

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	0.4010	4.0240	2.7917	6.7200e-003		0.1718	0.1718		0.1610	0.1610	0.0000	580.9496	580.9496	0.1482	0.0000	584.6555
Total	**0.4010**	**4.0240**	**2.7917**	**6.7200e-003**		**0.1718**	**0.1718**		**0.1610**	**0.1610**	**0.0000**	**580.9496**	**580.9496**	**0.1482**	**0.0000**	**584.6555**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

3.4 Building Construction - 2023

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	0.0101	0.3189	0.1270	1.6300e-003	0.0588	2.6500e-003	0.0614	0.0170	2.5400e-003	0.0195	0.0000	156.4730	156.4730	1.5800e-003	0.0231	163.4073
Worker	0.0922	0.0683	0.8916	2.5900e-003	0.3122	1.4900e-003	0.3136	0.0829	1.3700e-003	0.0843	0.0000	240.3582	240.3582	5.9200e-003	6.3000e-003	242.3847
Total	**0.1023**	**0.3872**	**1.0186**	**4.2200e-003**	**0.3709**	**4.1400e-003**	**0.3750**	**0.0998**	**3.9100e-003**	**0.1038**	**0.0000**	**396.8312**	**396.8312**	**7.5000e-003**	**0.0294**	**405.7920**

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	0.4010	4.0240	2.7917	6.7200e-003		0.1718	0.1718		0.1610	0.1610	0.0000	580.9489	580.9489	0.1482	0.0000	584.6548
Total	**0.4010**	**4.0240**	**2.7917**	**6.7200e-003**		**0.1718**	**0.1718**		**0.1610**	**0.1610**	**0.0000**	**580.9489**	**580.9489**	**0.1482**	**0.0000**	**584.6548**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

3.4 Building Construction - 2023

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	0.0101	0.3189	0.1270	1.6300e-003	0.0588	2.6500e-003	0.0614	0.0170	2.5400e-003	0.0195	0.0000	156.4730	156.4730	1.5800e-003	0.0231	163.4073
Worker	0.0922	0.0683	0.8916	2.5900e-003	0.3122	1.4900e-003	0.3136	0.0829	1.3700e-003	0.0843	0.0000	240.3582	240.3582	5.9200e-003	6.3000e-003	242.3847
Total	**0.1023**	**0.3872**	**1.0186**	**4.2200e-003**	**0.3709**	**4.1400e-003**	**0.3750**	**0.0998**	**3.9100e-003**	**0.1038**	**0.0000**	**396.8312**	**396.8312**	**7.5000e-003**	**0.0294**	**405.7920**

3.5 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	6.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0169**	**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**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

3.5 Paving - 2023

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	4.9000e-004	3.6000e-004	4.7100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2695	1.2695	3.0000e-005	3.0000e-005	1.2802
Total	**4.9000e-004**	**3.6000e-004**	**4.7100e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2695**	**1.2695**	**3.0000e-005**	**3.0000e-005**	**1.2802**

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	6.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0169**	**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**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

3.5 Paving - 2023

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	4.9000e-004	3.6000e-004	4.7100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2695	1.2695	3.0000e-005	3.0000e-005	1.2802
Total	**4.9000e-004**	**3.6000e-004**	**4.7100e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2695**	**1.2695**	**3.0000e-005**	**3.0000e-005**	**1.2802**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4414					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6700e-003	0.0521	0.0724	1.2000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	10.2130	10.2130	6.1000e-004	0.0000	10.2283
Total	**1.4491**	**0.0521**	**0.0724**	**1.2000e-004**		**2.8300e-003**	**2.8300e-003**		**2.8300e-003**	**2.8300e-003**	**0.0000**	**10.2130**	**10.2130**	**6.1000e-004**	**0.0000**	**10.2283**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5500e-003	4.1100e-003	0.0537	1.6000e-004	0.0188	9.0000e-005	0.0189	4.9900e-003	8.0000e-005	5.0700e-003	0.0000	14.4723	14.4723	3.6000e-004	3.8000e-004	14.5943
Total	**5.5500e-003**	**4.1100e-003**	**0.0537**	**1.6000e-004**	**0.0188**	**9.0000e-005**	**0.0189**	**4.9900e-003**	**8.0000e-005**	**5.0700e-003**	**0.0000**	**14.4723**	**14.4723**	**3.6000e-004**	**3.8000e-004**	**14.5943**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4414					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6700e-003	0.0521	0.0724	1.2000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	10.2130	10.2130	6.1000e-004	0.0000	10.2283
Total	**1.4491**	**0.0521**	**0.0724**	**1.2000e-004**		**2.8300e-003**	**2.8300e-003**		**2.8300e-003**	**2.8300e-003**	**0.0000**	**10.2130**	**10.2130**	**6.1000e-004**	**0.0000**	**10.2283**

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

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5500e-003	4.1100e-003	0.0537	1.6000e-004	0.0188	9.0000e-005	0.0189	4.9900e-003	8.0000e-005	5.0700e-003	0.0000	14.4723	14.4723	3.6000e-004	3.8000e-004	14.5943
Total	**5.5500e-003**	**4.1100e-003**	**0.0537**	**1.6000e-004**	**0.0188**	**9.0000e-005**	**0.0189**	**4.9900e-003**	**8.0000e-005**	**5.0700e-003**	**0.0000**	**14.4723**	**14.4723**	**3.6000e-004**	**3.8000e-004**	**14.5943**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast 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
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Parking Lot	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Unrefrigerated Warehouse-No Rail	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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	1.4375	8.0000e-005	9.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0178	0.0178	5.0000e-005	0.0000	0.0190
Unmitigated	1.4375	8.0000e-005	9.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0178	0.0178	5.0000e-005	0.0000	0.0190

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	0.1643					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.5000e-004	8.0000e-005	9.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0178	0.0178	5.0000e-005	0.0000	0.0190
Total	**1.4375**	**8.0000e-005**	**9.1600e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0178**	**0.0178**	**5.0000e-005**	**0.0000**	**0.0190**

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1643					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.5000e-004	8.0000e-005	9.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0178	0.0178	5.0000e-005	0.0000	0.0190
Total	**1.4375**	**8.0000e-005**	**9.1600e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0178**	**0.0178**	**5.0000e-005**	**0.0000**	**0.0190**

7.0 Water Detail

7.1 Mitigation Measures Water

Perris and Ramona Warehouse (Construction - Unmitigated) - Riverside-South Coast County, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

Equipment Type	Number

11.0 Vegetation

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APPENDIX 4.2:

CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

Perris and Ramona Warehouse (Operations)

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	347.92	1000sqft	7.99	347,918.00	0
User Defined Industrial	347.92	User Defined Unit	0.00	0.00	0
Parking Lot	217.00	Space	1.57	68,356.00	0
City Park	2.52	Acre	2.52	109,644.00	0
Other Asphalt Surfaces	150.02	1000sqft	3.44	150,018.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 15.52 acres

Construction Phase - Operations run only

Off-road Equipment - Operations run only

Vehicle Trips - Trip characteristics based on information provided in the Traffic analysis

Fleet Mix - Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, & MCY). Truck Mix based on information in the Traffic analysis.

Operational Off-Road Equipment - Based on SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Busniess Survey Results (2014)

Perris and Ramona Warehouse (Operations) - Riverside-South Coast 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
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	1/2/2023	12/5/2022
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.61
tblFleetMix	LDA	0.53	0.58
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.13
tblFleetMix	LHD2	7.3100e-003	0.00
tblFleetMix	LHD2	7.3100e-003	0.04
tblFleetMix	MCY	0.02	0.03
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.4680e-003	0.00
tblFleetMix	MH	5.4680e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.22
tblFleetMix	OBUS	6.1600e-004	0.00
tblFleetMix	OBUS	6.1600e-004	0.00
tblFleetMix	SBUS	1.1000e-003	0.00
tblFleetMix	SBUS	1.1000e-003	0.00
tblFleetMix	UBUS	3.1500e-004	0.00
tblFleetMix	UBUS	3.1500e-004	0.00

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

tblLandUse	LandUseSquareFeet	86,800.00	68,356.00
tblLandUse	LandUseSquareFeet	109,771.20	109,644.00
tblLandUse	LotAcreage	1.95	1.57
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	1.74	0.78
tblVehicleTrips	ST_TR	0.00	0.16
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	1.74	0.73
tblVehicleTrips	SU_TR	0.00	0.15
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	1.74	1.18
tblVehicleTrips	WD_TR	0.00	0.24

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Perris and Ramona Warehouse (Operations) - Riverside-South Coast 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	1.4379	1.2000e-004	0.0136	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0264	0.0264	7.0000e-005	0.0000	0.0282
Energy	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	184.7090	184.7090	0.0132	2.1900e-003	185.6911
Mobile	0.2560	2.2354	2.9082	0.0172	1.0592	0.0268	1.0860	0.2888	0.0255	0.3143	0.0000	1,641.0121	1,641.0121	0.0381	0.1854	1,697.2016
Offroad	0.0403	0.3782	0.2735	1.1600e-003		0.0137	0.0137		0.0126	0.0126	0.0000	101.5038	101.5038	0.0328	0.0000	102.3246
Waste						0.0000	0.0000		0.0000	0.0000	66.4308	0.0000	66.4308	3.9260	0.0000	164.5796
Water						0.0000	0.0000		0.0000	0.0000	25.5251	191.7074	217.2325	2.6379	0.0639	302.2106
Total	**1.7380**	**2.6480**	**3.2240**	**0.0186**	**1.0592**	**0.0432**	**1.1024**	**0.2888**	**0.0408**	**0.3296**	**91.9560**	**2,118.9587**	**2,210.9147**	**6.6479**	**0.2514**	**2,452.0356**

Perris and Ramona Warehouse (Operations) - Riverside-South Coast 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	1.4379	1.2000e-004	0.0136	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0264	0.0264	7.0000e-005	0.0000	0.0282
Energy	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	184.7090	184.7090	0.0132	2.1900e-003	185.6911
Mobile	0.2560	2.2354	2.9082	0.0172	1.0592	0.0268	1.0860	0.2888	0.0255	0.3143	0.0000	1,641.0121	1,641.0121	0.0381	0.1854	1,697.2016
Offroad	0.0403	0.3782	0.2735	1.1600e-003		0.0137	0.0137		0.0126	0.0126	0.0000	101.5038	101.5038	0.0328	0.0000	102.3246
Waste						0.0000	0.0000		0.0000	0.0000	66.4308	0.0000	66.4308	3.9260	0.0000	164.5796
Water						0.0000	0.0000		0.0000	0.0000	25.5251	191.7074	217.2325	2.6379	0.0639	302.2106
Total	**1.7380**	**2.6480**	**3.2240**	**0.0186**	**1.0592**	**0.0432**	**1.1024**	**0.2888**	**0.0408**	**0.3296**	**91.9560**	**2,118.9587**	**2,210.9147**	**6.6479**	**0.2514**	**2,452.0356**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/6/2022	12/5/2022	5	0	

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.01

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

3.2 Demolition - 2022

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

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					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

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	0.2560	2.2354	2.9082	0.0172	1.0592	0.0268	1.0860	0.2888	0.0255	0.3143	0.0000	1,641.0121	1,641.0121	0.0381	0.1854	1,697.2016
Unmitigated	0.2560	2.2354	2.9082	0.0172	1.0592	0.0268	1.0860	0.2888	0.0255	0.3143	0.0000	1,641.0121	1,641.0121	0.0381	0.1854	1,697.2016

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	409.99	272.52	252.24	1,576,346	1,576,346
User Defined Industrial	82.00	54.52	50.45	1,071,176	1,071,176
Total	491.99	327.04	302.69	2,647,522	2,647,522

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Parking Lot	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Unrefrigerated Warehouse-No Rail	0.576000	0.060300	0.185900	0.151900	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.025900	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.133900	0.036800	0.219500	0.609800	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Perris and Ramona Warehouse (Operations) - Riverside-South Coast 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
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	147.3909	147.3909	0.0124	1.5100e-003	148.1513
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	147.3909	147.3909	0.0124	1.5100e-003	148.1513
NaturalGas Mitigated	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3181	37.3181	7.2000e-004	6.8000e-004	37.5399
NaturalGas Unmitigated	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3181	37.3181	7.2000e-004	6.8000e-004	37.5399

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	699315	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3181	37.3181	7.2000e-004	6.8000e-004	37.5399
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.7700e-003**	**0.0343**	**0.0288**	**2.1000e-004**		**2.6100e-003**	**2.6100e-003**		**2.6100e-003**	**2.6100e-003**	**0.0000**	**37.3181**	**37.3181**	**7.2000e-004**	**6.8000e-004**	**37.5399**

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	699315	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3181	37.3181	7.2000e-004	6.8000e-004	37.5399
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.7700e-003**	**0.0343**	**0.0288**	**2.1000e-004**		**2.6100e-003**	**2.6100e-003**		**2.6100e-003**	**2.6100e-003**	**0.0000**	**37.3181**	**37.3181**	**7.2000e-004**	**6.8000e-004**	**37.5399**

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	23924.6	4.2429	3.6000e-004	4.0000e-005	4.2648
Unrefrigerated Warehouse-No Rail	807170	143.1480	0.0121	1.4600e-003	143.8864
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**147.3909**	**0.0124**	**1.5000e-003**	**148.1513**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	23924.6	4.2429	3.6000e-004	4.0000e-005	4.2648
Unrefrigerated Warehouse-No Rail	807170	143.1480	0.0121	1.4600e-003	143.8864
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**147.3909**	**0.0124**	**1.5000e-003**	**148.1513**

6.0 Area Detail

6.1 Mitigation Measures Area

Perris and Ramona Warehouse (Operations) - Riverside-South Coast 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
Category	tons/yr										MT/yr					
Mitigated	1.4379	1.2000e-004	0.0136	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0264	0.0264	7.0000e-005	0.0000	0.0282
Unmitigated	1.4379	1.2000e-004	0.0136	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0264	0.0264	7.0000e-005	0.0000	0.0282

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	0.1643					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2600e-003	1.2000e-004	0.0136	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0264	0.0264	7.0000e-005	0.0000	0.0282
Total	**1.4379**	**1.2000e-004**	**0.0136**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0264**	**0.0264**	**7.0000e-005**	**0.0000**	**0.0282**

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1643					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2600e-003	1.2000e-004	0.0136	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0264	0.0264	7.0000e-005	0.0000	0.0282
Total	**1.4379**	**1.2000e-004**	**0.0136**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0264**	**0.0264**	**7.0000e-005**	**0.0000**	**0.0282**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	217.2325	2.6379	0.0639	302.2106
Unmitigated	217.2325	2.6379	0.0639	302.2106

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.00253	5.9159	5.0000e-004	6.0000e-005	5.9464
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	80.4565 / 0	211.3166	2.6374	0.0638	296.2642
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**217.2325**	**2.6379**	**0.0639**	**302.2106**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.00253	5.9159	5.0000e-004	6.0000e-005	5.9464
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	80.4565 / 0	211.3166	2.6374	0.0638	296.2642
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**217.2325**	**2.6379**	**0.0639**	**302.2106**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	66.4308	3.9260	0.0000	164.5796
Unmitigated	66.4308	3.9260	0.0000	164.5796

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.22	0.0447	2.6400e-003	0.0000	0.1106
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	327.04	66.3862	3.9233	0.0000	164.4689
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**66.4308**	**3.9260**	**0.0000**	**164.5796**

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.22	0.0447	2.6400e-003	0.0000	0.1106
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	327.04	66.3862	3.9233	0.0000	164.4689
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**66.4308**	**3.9260**	**0.0000**	**164.5796**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	2	4.00	365	200	0.37	CNG

Perris and Ramona Warehouse (Operations) - Riverside-South Coast County, Annual

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

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Tractors/Loaders/ Backhoes	0.0403	0.3782	0.2735	1.1600e-003		0.0137	0.0137		0.0126	0.0126	0.0000	101.5038	101.5038	0.0328	0.0000	102.3246
Total	**0.0403**	**0.3782**	**0.2735**	**1.1600e-003**		**0.0137**	**0.0137**		**0.0126**	**0.0126**	**0.0000**	**101.5038**	**101.5038**	**0.0328**	**0.0000**	**102.3246**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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APPENDIX 4.3:

EMFAC2017

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
Riverside (SC)	2022	HHDT	Aggregate	Aggregate	Gasoline	6.576938112	153457.8614	36.38308143	36383.08143	86338603.49	153457.8614	609730316.4	7.06	HHDT
Riverside (SC)	2022	HHDT	Aggregate	Aggregate	Diesel	15714.36952	606232799.9	84894.0389	84894038.9		606232799.9			
Riverside (SC)	2022	HHDT	Aggregate	Aggregate	Natural Gas	263.7933161	3344058.656	1408.18151	1408181.51		3344058.656			
Riverside (SC)	2022	LDA	Aggregate	Aggregate	Gasoline	581991.6725	8224182944	255876.5259	255876525.9	257472567.5	8224182944	8437175826	32.77	LDA
Riverside (SC)	2022	LDA	Aggregate	Aggregate	Diesel	5627.648407	83145410.99	1596.041638	1596041.638		83145410.99			
Riverside (SC)	2022	LDA	Aggregate	Aggregate	Electricity	9519.079074	129847470.9	0	0		129847470.9			
Riverside (SC)	2022	LDT1	Aggregate	Aggregate	Gasoline	60037.51621	784889608.4	28670.08786	28670087.86	28678196.65	784889608.4	790148273.6	27.55	LDT1
Riverside (SC)	2022	LDT1	Aggregate	Aggregate	Diesel	27.76404389	208778.8044	8.108788608	8108.788608		208778.8044			
Riverside (SC)	2022	LDT1	Aggregate	Aggregate	Electricity	356.2042589	5049886.408	0	0		5049886.408			
Riverside (SC)	2022	LDT2	Aggregate	Aggregate	Gasoline	182118.8677	2486397650	96428.35184	96428351.84	96853535.07	2486397650	2521171664	26.03	LDT2
Riverside (SC)	2022	LDT2	Aggregate	Aggregate	Diesel	1054.483634	16665909.69	425.1832295	425183.2295		16665909.69			
Riverside (SC)	2022	LDT2	Aggregate	Aggregate	Electricity	1677.633962	18108104.13	0	0		18108104.13			
Riverside (SC)	2022	LHDT1	Aggregate	Aggregate	Gasoline	15417.55767	163201148.4	15108.11893	15108118.93	23387437.93	163201148.4	336574881.3	14.39	LHDT1
Riverside (SC)	2022	LHDT1	Aggregate	Aggregate	Diesel	15837.49513	173373732.9	8279.318992	8279318.992		173373732.9			
Riverside (SC)	2022	LHDT2	Aggregate	Aggregate	Gasoline	2252.42518	24026208.75	2542.009363	2542009.363	6051733.364	24026208.75	91253583.76	15.08	LHDT2
Riverside (SC)	2022	LHDT2	Aggregate	Aggregate	Diesel	6123.275766	67227375.01	3509.724001	3509724.001		67227375.01			
Riverside (SC)	2022	MCY	Aggregate	Aggregate	Gasoline	28171.90267	62796448.34	1655.586212	1655586.212	1655586.212	62796448.34	62796448.34	37.93	MCY
Riverside (SC)	2022	MDV	Aggregate	Aggregate	Gasoline	154199.5457	1942294285	94789.21819	94789218.19	96446076.25	1942294285	2000039012	20.74	MDV
Riverside (SC)	2022	MDV	Aggregate	Aggregate	Diesel	3261.4865	47596581.84	1656.858052	1656858.052		47596581.84			
Riverside (SC)	2022	MDV	Aggregate	Aggregate	Electricity	916.717804	10148145.12	0	0		10148145.12			
Riverside (SC)	2022	MH	Aggregate	Aggregate	Gasoline	4849.122996	12414677.16	2406.257705	2406257.705	2875800.063	12414677.16	17521753.84	6.09	MH
Riverside (SC)	2022	MH	Aggregate	Aggregate	Diesel	1986.085476	5107076.677	469.5423575	469542.3575		5107076.677			
Riverside (SC)	2022	MHDT	Aggregate	Aggregate	Gasoline	1326.926938	17674320.91	3359.446933	3359446.933	24049505.3	17674320.91	248635402	10.34	MHDT
Riverside (SC)	2022	MHDT	Aggregate	Aggregate	Diesel	11907.6705	230961081.1	20690.05836	20690058.36		230961081.1			
Riverside (SC)	2022	OBUS	Aggregate	Aggregate	Gasoline	438.8357563	4993518.807	967.2190429	967219.0429	1483181.022	4993518.807	9603790.146	6.48	OBUS
Riverside (SC)	2022	OBUS	Aggregate	Aggregate	Diesel	222.2197269	4610271.339	515.9619792	515961.9792		4610271.339			
Riverside (SC)	2022	SBUS	Aggregate	Aggregate	Gasoline	417.9532809	4815312.165	544.2910283	544291.0283	1708055.084	4815312.165	13640990.38	7.99	SBUS
Riverside (SC)	2022	SBUS	Aggregate	Aggregate	Diesel	852.548169	8825678.217	1163.764056	1163764.056		8825678.217			
Riverside (SC)	2022	UBUS	Aggregate	Aggregate	Gasoline	164.4551683	7571499.764	1228.231474	1228231.474	3307606.769	7571499.764	16372886.42	4.95	UBUS
Riverside (SC)	2022	UBUS	Aggregate	Aggregate	Diesel	1.105797941	19153.01246	2.147195041	2147.195041		19153.01246			
Riverside (SC)	2022	UBUS	Aggregate	Aggregate	Electricity	0.058469431	409.3068597	0	0		409.3068597			
Riverside (SC)	2022	UBUS	Aggregate	Aggregate	Natural Gas	204.1188773	8781824.334	2077.2281	2077228.1		8781824.334			

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Gasoline	6.287048944	153937.6255	35.55040317	35550.40317	83956073.71	153937.6255	624266409.2	7.44	HHDT
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Diesel	15994.29576	620335254.9	82353.42203	82353422.03		620335254.9			
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Natural Gas	297.8339277	3777216.619	1567.101271	1567101.271		3777216.619			
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Gasoline	600073.2625	8365084572	253390.156	253390156	255027967.5	8365084572	8616394452	33.79	LDA
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Diesel	6022.455725	87471276.92	1637.811474	1637811.474		87471276.92			
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Electricity	11812.58063	163838603.3	0	0		163838603.3			
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Gasoline	61620.9911	799977533.2	28439.50607	28439506.07	28446990.16	799977533.2	807387761	28.38	LDT1
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Diesel	25.82294405	195899.1133	7.484089094	7484.089094		195899.1133			
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Electricity	500.2265064	7214328.719	0	0		7214328.719			
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Gasoline	186844.1926	2523160631	94460.38646	94460386.46	94911274.58	2523160631	2564584260	27.02	LDT2
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Diesel	1179.189513	18179036.69	450.888116	450888.116		18179036.69			
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Electricity	2202.047417	23244591.93	0	0		23244591.93			
Riverside (SC)	2023	LHDT1	Aggregate	Aggregate	Gasoline	15202.19219	160036544.4	14645.65687	14645656.87	22712976.52	160036544.4	331139011.1	14.58	LHDT1
Riverside (SC)	2023	LHDT1	Aggregate	Aggregate	Diesel	15878.17916	171102466.7	8067.31965	8067319.65		171102466.7			
Riverside (SC)	2023	LHDT2	Aggregate	Aggregate	Gasoline	2254.447347	23819917.55	2491.847218	2491847.218	5925383.012	23819917.55	90400247.11	15.26	LHDT2
Riverside (SC)	2023	LHDT2	Aggregate	Aggregate	Diesel	6182.746468	66580329.56	3433.535795	3433535.795		66580329.56			
Riverside (SC)	2023	MCY	Aggregate	Aggregate	Gasoline	28475.24545	62139045.86	1639.73057	1639730.57	1639730.57	62139045.86	62139045.86	37.90	MCY
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Gasoline	154204.1049	1919857377	90781.78682	90781786.82	92469161.97	1919857377	1983892786	21.45	MDV
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Diesel	3492.231312	49837792.99	1687.375147	1687375.147		49837792.99			
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Electricity	1314.447545	14197616.87	0	0		14197616.87			
Riverside (SC)	2023	MH	Aggregate	Aggregate	Gasoline	4646.002839	11786716.04	2262.850071	2262850.071	2716664.402	11786716.04	16757390.07	6.17	MH
Riverside (SC)	2023	MH	Aggregate	Aggregate	Diesel	1979.944695	4970674.029	453.8143312	453814.3312		4970674.029			
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Gasoline	1361.919314	18155961.42	3400.73407	3400734.07	23439444.62	18155961.42	251707089.5	10.74	MHDT
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Diesel	11600.10675	233551128.1	20038.71055	20038710.55		233551128.1			
Riverside (SC)	2023	OBUS	Aggregate	Aggregate	Gasoline	437.8068702	4892382.41	934.9605215	934960.5215	1447125.767	4892382.41	9596664.79	6.63	OBUS
Riverside (SC)	2023	OBUS	Aggregate	Aggregate	Diesel	221.7033657	4704282.38	512.1652457	512165.2457		4704282.38			
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Gasoline	428.8888994	4875379.461	549.2707658	549270.7658	1727264.498	4875379.461	13916051.77	8.06	SBUS
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Diesel	872.8772386	9040672.31	1177.993732	1177993.732		9040672.31			
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Gasoline	165.4254964	7616173.577	1224.574262	1224574.262	3317084.96	7616173.577	16469490.69	4.97	UBUS
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Diesel	0.141961099	3818.605614	0.410265377	410.2653772		3818.605614			
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Electricity	0.058469431	409.3068597	0	0		409.3068597			
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Natural Gas	206.2939379	8849089.206	2092.100433	2092100.433		8849089.206			

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