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**Orchard Logistics Center  
ENERGY ANALYSIS  
CITY OF BEAUMONT**

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MARCH 6, 2023



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## LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
AGSP	Airport Gateway Specific Plan
AQIA	<i>Orchard Logistics Center Air Quality Impact Analysis</i>
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 Beaumont
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
HHD	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
LHD1/LHD2	Light-Heavy Duty Trucks
MDV	Medium Duty Trucks
MHD	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	Orchard Logistics Center
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 21 <sup>st</sup> Century
U.S.	United States
VMT	Vehicle Miles Traveled

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## EXECUTIVE SUMMARY

### ES.1 SUMMARY OF FINDINGS

The results of this *Orchard Logistics Center Energy Analysis* is summarized below based on the significance criteria in Section 6 of this report consistent with Appendix G of the 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?	6.0	<i>Less Than Significant</i>	<i>n/a</i>
Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	6.0	<i>Less Than Significant</i>	<i>n/a</i>

### 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 21<sup>st</sup> 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 is discussed in detail in section 6 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 Orchard Logistics Center Project (Project). The purpose of this report is to ensure that energy implication is considered by the City of Beaumont (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.

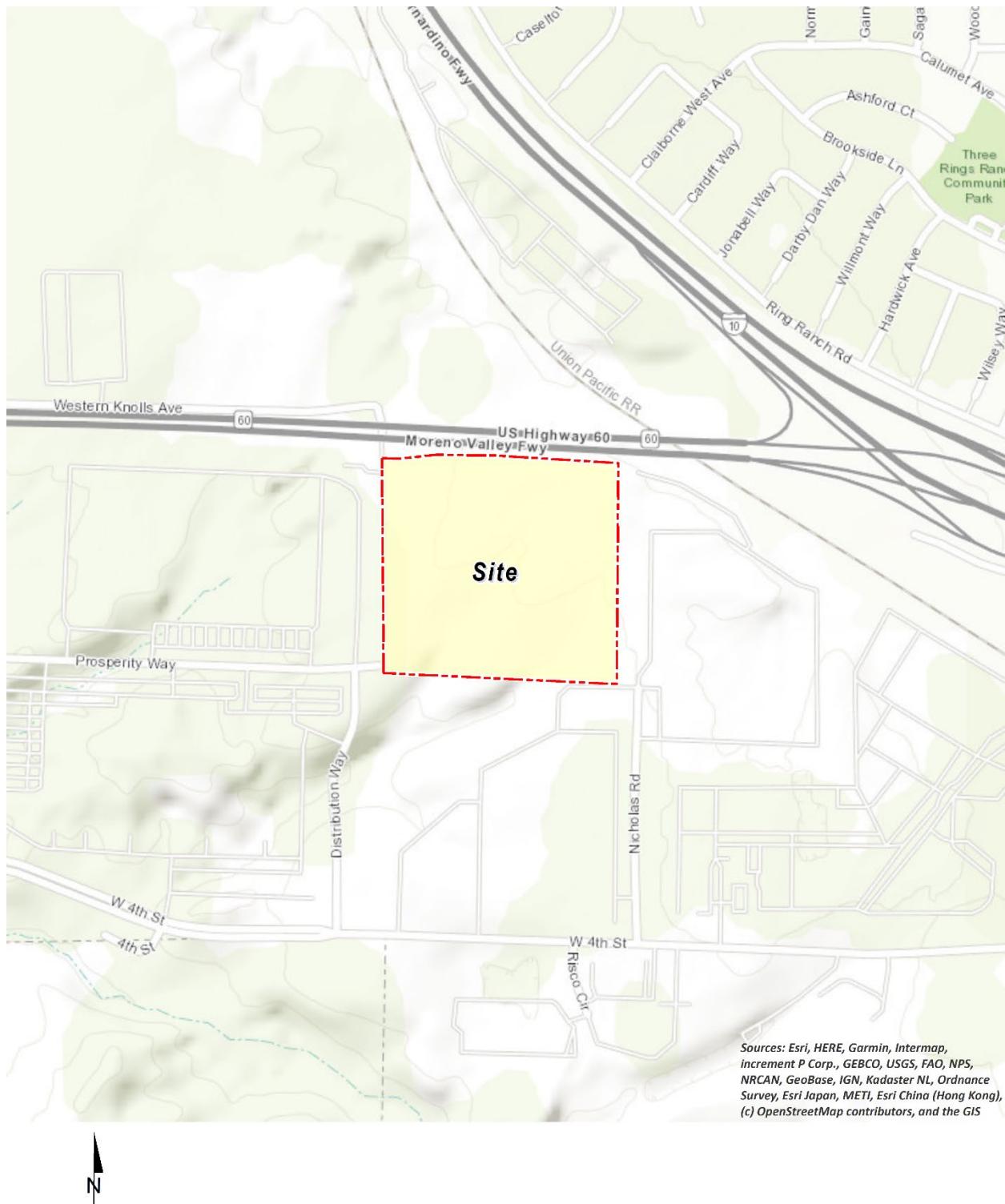
### 1.1 SITE LOCATION

The proposed Orchard Logistics Center site is located south of the Moreno Valley Freeway (State Route 60 [SR-60] Freeway), north of 4<sup>th</sup> Street, and at the northern terminus of Nicholas Road, in the City of Beaumont, as shown on Exhibit 1-A.

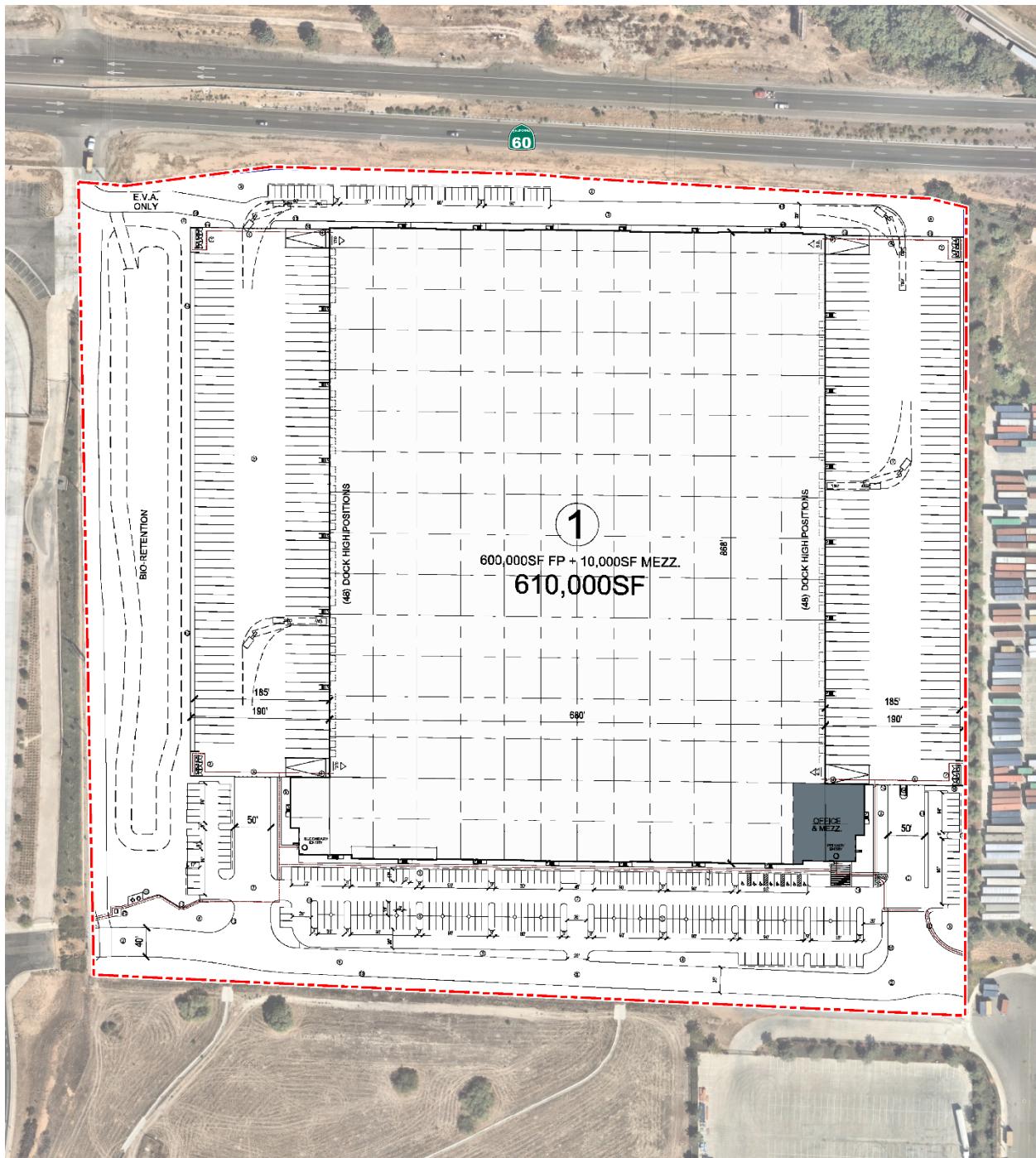
### 1.2 PROJECT DESCRIPTION

As shown in Exhibit 1-B, the Project is proposed to consist of 610,000 square feet (sf) of warehouse use within a single building. Consistent with the *Orchard Logistics Center Traffic Analysis*, the building has conservatively been evaluated assuming 10 percent (%) high-cube cold storage warehousing use (61,000 sf) and 90% high-cube fulfillment center warehousing use (549,000 sf). The proposed Project expected to generate approximately 1,304 total trips per day (652 vehicles inbound + 652 vehicles outbound) which include 1,046 total passenger vehicle trips per day (523 passenger vehicles inbound + 523 passenger vehicles outbound) and 258 total truck trips per day (129 trucks inbound + 129 trucks outbound) (2).

**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 2020, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2021 and included (3):

- As of 2020, approximately 6,923 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2020, approximately 524 million barrels of petroleum
- As of 2020, approximately 2,075 billion cubic feet of natural gas
- As of 2020, approximately 1 million short tons of coal

The California Energy Commission's (CEC) Transportation Energy Demand Forecast released the 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 CEC's 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 (4)
- 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 (4)
- Data from the Department of Energy states that approximately 3.9 billion gallons of diesel fuel were consumed in 2019 (5)

The most recent data provided by the EIA for energy use in California by demand sector is from 2020 and is reported as follows:

- Approximately 34.0% transportation
- Approximately 24.6% industrial
- Approximately 21.8% residential
- Approximately 19.6% commercial (6)

In 2021, total system electric generation for California was 277,764 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 194,127 GWh which accounted for approximately 70% of the electricity it uses; the rest was imported from the Pacific Northwest (12%) and the U.S. Southwest (18%) (7). Natural gas is the main source for electricity generation at 50.19% of the total in-state electric generation system power as shown in Table 2-1.

TABLE 2-1: TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2021)

Fuel Type	California In-State Generation (GWh)	% of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	% of Imports	Total California Energy Mix	Total California Power Mix
Coal	303	0.2%	181	7,788	7,969	9.5%	8,272	3.0%
Natural Gas	97,431	50.2%	45	7,880	7,925	9.5%	105,356	37.9%
Oil	37	0.0%	-	-	-	0.0%	37	0.0%
Other (Waste Heat/Petroleum Coke)	382	0.2%	68	15	83	0.1%	465	0.2%
Nuclear	16,477	8.5%	524	8,756	9,281	11.1%	25,758	9.3%
Large Hydro	12,036	6.2%	12,042	1,578	13,620	16.3%	25,656	9.2%
Unspecified	-	0.0%	8,156	10,731	18,887	22.6%	18,887	6.8%
Total Thermal and Non-Renewables	<b>126,666</b>	<b>65.2%</b>	<b>21,017</b>	<b>36,748</b>	<b>57,764</b>	<b>6910.0%</b>	<b>184,431</b>	<b>66.4%</b>
Biomass	5,381	2.8%	864	26	890	1.1%	6,271	2.3%
Geothermal	11,116	5.7%	192	1,906	2,098	2.5%	13,214	4.8%
Small Hydro	2,531	1.3%	304	1	304	0.4%	2,835	1.0%
Solar	33,260	17.1%	220	5,979	6,199	7.4%	39,458	14.2%
Wind	15,173	7.8%	9,976	6,405	16,381	19.6%	31,555	11.4%
Total Renewables	<b>67,461</b>	<b>34.8%</b>	<b>11,555</b>	<b>14,317</b>	<b>25,872</b>	<b>3090.0%</b>	<b>93,333</b>	<b>33.6%</b>
<b>SYSTEM TOTALS</b>	<b>194,127</b>	<b>100.0%</b>	<b>32,572</b>	<b>51,064</b>	<b>83,636</b>	<b>100.0%</b>	<b>277,764</b>	<b>100.0%</b>

Source: CECs 2021 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 (8):

- In 2021, California was the seventh-largest producer of crude oil among the 50 states, and, as of January 2021, it ranked third in crude oil refining capacity.
- California is the largest consumer of jet fuel and second-largest consumer of motor gasoline among the 50 states and, the state accounted for 15% of the nation’s jet fuel consumption and 10% of motor gasoline consumption in 2020.
- In 2019, California was the second-largest total energy consumer among the states, but its per capita energy consumption was less than in all other states except Rhode Island, due in part to its mild climate and its energy efficiency programs.
- In 2021, California was the nation’s top producer of electricity from solar, geothermal, and biomass energy. The state was fourth in the nation in conventional hydroelectric power generation, down from second in 2019, in part because of drought and increased water demand.
- In 2021, California was the fourth-largest electricity producer in the nation, but the state was also the nation’s second-largest consumer of electricity, and in 2020, it received about 30% of its electricity supply from generating facilities outside of California, including imports from Mexico.

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 CalEEMod Version 2022.1. 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 Independent Service Operator (ISO) studies revealed the extent to which the South Coast 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 (9). Similarly, the subsequent 2021 IEPR’s provides information and policy recommendations on advancing a clean, reliable, and affordable energy system.

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 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 (10).

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, utilities 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.

Electricity is currently provided to the Project site 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).

Table 2-2, SCE's specific proportional shares of electricity sources in 2020. As indicated in Table 2-2, the 2020 SCE Power Mix has renewable energy at 30.9% of the overall energy resources. Geothermal resources are at 5.5%, wind power is at 9.4%, large hydroelectric sources are at 3.3%, solar energy is at 15.1%, and coal is at 0% (12).

TABLE 2-2: SCE 2020 POWER CONTENT MIX

Energy Resources	2020 SCE Power Mix
<b><i>Eligible Renewable</i></b>	<b>30.9%</b>
Biomass & Waste	0.1%
Geothermal	5.5%
Eligible Hydroelectric	0.8%
Solar	15.1%
Wind	9.4%
<b><i>Coal</i></b>	<b>0.0%</b>
<b><i>Large Hydroelectric</i></b>	<b>3.3%</b>
<b><i>Natural Gas</i></b>	<b>15.2%</b>
<b><i>Nuclear</i></b>	<b>8.4%</b>
<b><i>Other</i></b>	<b>0.3%</b>
Unspecified Sources of power*	42.0%
<b>Total</b>	<b>100%</b>

\* "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 (MMcf/d) 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 MMcf/d, 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." (13)*

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.

## 2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The Department of Motor Vehicles (DMV) identified 36.2 million registered vehicles in California (14), and those vehicles consume an estimated 17.2 billion gallons of fuel each year<sup>1</sup>. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

<sup>1</sup> Fuel consumptions estimated utilizing information from EMFAC2021.

California's on-road transportation system includes 396,616 lane miles, more than 26.6 million passenger vehicles and light trucks, and almost 9.0 million medium- and heavy-duty vehicles (14). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for 10% of the nation's total consumption. The state is the largest U.S. consumer of motor gasoline and jet fuel, and 85% of the petroleum consumed in California is used in the transportation sector (15).

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2019, about 37% of the natural gas delivered to consumers went to the state's industrial sector, and about 28% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the state's utility-scale electricity generation in 2019. The residential sector, where two-thirds of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 12% of the deliveries to end users and the transportation sector consumed the remaining 1% (15).

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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)

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. ISTEА 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 ISTEА 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 21<sup>ST</sup> CENTURY (TEA-21)

TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEА 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 ISTEА, 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 § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2021 IEPR was adopted February 2022, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2021 IEPR provides the results

of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the state is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs. Additionally, the 2021 IEPR provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the state is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs (16).

### **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: The California Energy Code 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. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 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 2022 California Green Building Code Standards that will be effective on January 1, 2023<sup>2</sup>. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made (17).

### **3.2.4 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.

<sup>2</sup> The 2022 California Green Building Standard Code will be published July 1, 2022.

### **3.2.5 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 (18).

### **3.2.6 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 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

Appendix F of the *State CEQA Guidelines* (19), 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.

In compliance with Appendix G of the *State CEQA Guidelines* (20), 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

### 4.2 METHODOLOGY

Information from the CalEEMod Version 2022.1 outputs for the *Orchard Logistics Center Air Quality Impact Analysis* (AQIA) (21) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands.

#### 4.2.1 CALEEMOD

In May 2022, 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 2022.1. 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 (22). Accordingly, the latest version of CalEEMod has been used to determine the proposed Project's anticipated transportation and facility energy demands. Outputs from the annual model runs are provided in Appendices 4.1 through 4.2.

#### 4.2.2 EMISSION FACTORS MODEL

On May 2, 2022, the EPA approved the 2021 version of the EMissions FACtor model (EMFAC2021) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2021 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 (23). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2021 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 2023 and 2024 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Outputs from the EMFAC2021 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.

#### CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in June 2023 and would be completed in October 2024 (21). The construction schedule utilized in the analysis, shown in Table 4-1, 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* (24).

TABLE 4-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Demolition/Crushing	06/01/2023	07/12/2023	30
Site Preparation	07/13/2023	08/23/2023	30
Grading	08/24/2023	11/15/2023	60
Building Construction	11/16/2023	07/24/2024	180
Paving	07/25/2024	10/16/2024	60
Architectural Coating	07/25/2024	10/16/2024	60

#### PROJECT CONSTRUCTION POWER COST

The 2022 *National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of \$2.41, which was used to calculate the Project’s total construction power cost (25).

As shown on Table 4-2, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately \$55,215.39.

**TABLE 4-2: 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 Cold Storage (10%)	\$2.41	61.000	17	\$2,499.17
High-Cube Fulfillment (90%)	\$2.41	549.000	17	\$22,492.53
Landscape	\$2.41	201.915	17	\$8,272.46
Other Asphalt Surfaces	\$2.41	535.788	17	\$21,951.23
<b>CONSTRUCTION POWER COST</b>				<b>\$55,215.39</b>

#### 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 4-2) 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, 2022, SCE's general service rate is \$0.13 per kilowatt hours (kWh) of electricity for industrial services (26). As shown on Table 4-3, the total electricity usage from on-site Project construction related activities is estimated to be approximately 461,061 kWh.

**TABLE 4-3: CONSTRUCTION ELECTRICITY USAGE**

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
General Light Industrial (75%)	\$0.13	18,832
High-Cube Cold Storage (25%)	\$0.13	169,486
Auto Parking	\$0.13	62,335
Landscape	\$0.13	165,408
Other Asphalt Surfaces	\$0.13	18,832
<b>CONSTRUCTION ELECTRICITY USAGE</b>		<b>416,061</b>

#### 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

A summary of construction equipment assumptions by phase is provided at Table 4-4.

**TABLE 4-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS**

Construction Activity	Equipment <sup>1</sup>	Amount	Hours Per Day
Demolition/Crushing	Concrete/Industrial Saws	1	8
	Excavators	3	8
	Rubber Tired Dozers	2	8
Site Preparation	Crawler Tractors	3	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
	Forklifts	4	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	3	8
	Welders	2	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

**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 4-5. 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 (27). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered, which is consistent with industry standards.

TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Construction Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
Demolition	30	Rubber Tired Dozers	367	2	8	0.4	2,349	3,809
		Concrete/Industrial Saws	33	1	8	0.73	193	313
		Excavators	36	3	8	0.38	328	532
Site Preparation	30	Rubber Tired Dozers	367	3	8	0.4	3,523	5,713
		Crawler Tractors	87	4	8	0.43	1,197	1,941
Grading	60	Graders	148	1	8	0.41	485	1,574
		Excavators	36	2	8	0.38	219	710
		Rubber Tired Dozers	367	1	8	0.4	1,174	3,809
		Crawler Tractors	87	2	8	0.43	599	1,941
		Scrapers	423	2	8	0.48	3,249	10,536
Building Construction	180	Cranes	367	2	8	0.29	1,703	16,569
		Forklifts	82	4	8	0.2	525	5,106
		Generator Sets	14	2	8	0.74	166	1,613
		Welders	46	2	8	0.45	331	3,222
		Tractors/Loaders/Backhoes	84	3	8	0.37	746	7,258
Paving	60	Pavers	81	2	8	0.42	544	1,765
		Paving Equipment	89	2	8	0.36	513	1,663
		Rollers	36	2	8	0.38	219	710
Architectural Coating	60	Air Compressors	37	1	8	0.48	142	461
<b>CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)</b>								<b>69,245</b>

Diesel fuel would be supplied by existing commercial fuel providers serving the Project area and region<sup>3</sup>. As previously presented in Table 4-5, Project construction activities would consume an estimated 69,245 gallons of diesel fuel. Project construction would represent a “single-event” diesel fuel demand and would not require ongoing or permanent commitment of diesel fuel resources for this purpose.

#### 4.3.4 CONSTRUCTION TRIPS AND VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul truck commuting to and from the site. The number of workers and vendor trips are presented below in Table 4-6. 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 4-6: CONSTRUCTION TRIPS AND VMT**

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Demolition	15	17	4
Site Preparation	15	17	0
Grading	20	33	0
Building Construction	509	100	0
Paving	15	33	0
Architectural Coating	102	0	0

#### 4.3.5 CONSTRUCTION WORKER FUEL ESTIMATES

With respect to estimated VMT for the Project, the construction worker trips (personal vehicles used by workers commuting to the Project from home) would generate an estimated 488,992 VMT during the 17 months of construction (21). Based on CalEEMod methodology, it is assumed that 50% of all construction worker trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1<sup>4</sup>), and 25% are from light-duty-trucks (LDT2<sup>5</sup>). 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 2021 version of the EMFAC developed by CARB. EMFAC 2021 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 (23). EMFAC 2021 was

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

run for the LDA, LDT1, and LDT2 vehicle class within the California sub-area for the 2023 and 2024 calendar years. Data from EMFAC 2021 is shown in Appendix 4.3.

**TABLE 4-7: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES**

Year	Construction Activity	Duration (Days)	Worker Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
LDA							
2023	Demolition	30	8	18.5	4,163	30.60	136
	Site Preparation	30	8	18.5	4,163	30.60	136
	Grading	60	10	18.5	11,100	30.60	363
	Building Construction	32	255	18.5	150,664	30.60	4,923
	LDT1						
	Demolition	30	4	18.5	2,081	24.15	86
	Site Preparation	30	4	18.5	2,081	24.15	86
	Grading	60	5	18.5	5,550	24.15	230
	Building Construction	32	127	18.5	75,332	24.15	3,119
	LDT2						
	Demolition	30	4	18.5	2,081	23.88	87
	Site Preparation	30	4	18.5	2,081	23.88	87
	Grading	60	5	18.5	5,550	23.88	232
	Building Construction	32	127	18.5	75,332	23.88	3,154
LDA							
2024	Building Construction	148	21	18.5	57,498	31.51	1,825
	Paving	60	10	18.5	11,100	31.51	352
	Architectural Coating	60	4	18.5	4,440	31.51	141
	LDT1						
	Building Construction	148	11	18.5	30,118	24.62	1,223
	Paving	60	5	18.5	5,550	24.62	225
	Architectural Coating	60	2	18.5	2,220	24.62	90
	LDT2						
	Building Construction	148	11	18.5	30,118	24.57	1,226
	Paving	60	5	18.5	5,550	24.57	226
	Architectural Coating	60	2	18.5	2,220	24.57	90
<b>TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION</b>							<b>18,039</b>

As previously shown in Table 4-7, the estimated annual fuel consumption resulting from Project construction worker trips is 18,039 gallons during full construction of the Project. It should be noted that construction worker trips would represent a “single-event” gasoline fuel demand and would not require ongoing or permanent commitment of fuel resources for this purpose.

#### 4.3.6 CONSTRUCTION VENDOR/HAULING FUEL ESTIMATES

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 236,796 VMT along area roadways for the Project over the duration of construction activity (21). It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHD), 50% of all vendor trips are from heavy-heavy duty trucks (HHD), and 100% of all hauling trips are HHDs. These assumptions are consistent with the CalEEMod defaults utilized within the AQIA (21). Vehicle fuel efficiencies for MHDs and HHDs were estimated using information generated within EMFAC 2021. EMFAC 2021 was run for the MHD and HHD vehicle classes within the California sub-area for the 2023 and 2024 calendar years. Data from EMFAC2021 is shown in Appendix 4.3.

TABLE 4-8: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (Days)	Vendor/Hauling Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
MHD							
2023	Demolition	30	9	10.2	2,601	8.42	309
	Site Preparation	30	9	10.2	2,601	8.42	309
	Grading	60	17	10.2	10,098	8.42	1,199
	Building Construction	32	50	10.2	16,320	8.42	1,938
	HHD (Vendor)						
	Demolition	30	9	10.2	2,601	6.04	430
	Site Preparation	30	9	10.2	2,601	6.04	430
	Grading	60	17	10.2	10,098	6.04	1,671
	Building Construction	32	50	10.2	16,320	6.04	2,701
HHD (Hauling)							
2024	Demolition	30	4	20	2,400	6.04	397
	MHD						
	Building Construction	148	50	10.2	75,480	8.49	8,887
	Paving	60	17	10.2	10,098	8.49	1,189
	HHD (Vendor)						
	Building Construction	148	50	10.2	75,480	6.12	12,331
	Paving	60	17	10.2	10,098	6.12	1,650

Year	Construction Activity	Duration (Days)	Vendor/Hauling Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
<b>TOTAL CONSTRUCTION VENDOR/HAULING FUEL CONSUMPTION</b>							<b>33,441</b>

Based on Table 4-8, it is estimated that 33,441 gallons of fuel will be consumed related to construction vendor trips during full construction of the Project. 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.

#### 4.3.7 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, 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 fuel demands (fuel consumed by passenger car and truck vehicles accessing the Project site), fuel demands from operational equipment, and facilities energy demands (energy consumed by building operations and site maintenance activities).

### **4.4.1 TRANSPORTATION FUEL 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 EMFAC 2021 developed by CARB (23). EMFAC 2021 was run for the Riverside County area for the 2024 calendar year. Data from EMFAC2021 is shown in Appendix 4.3.

In order to account for the possibility of refrigerated uses (cold storage), it is assumed that all trucks accessing this land use are presumed to also have transport refrigeration units (TRUs). Therefore, for modeling purposes 24 trucks are assumed to be trucks with TRUs. TRUs are also accounted for during on-site and off-site travel. The TRU calculations are based on EMFAC 2021.

The estimated transportation energy demands are summarized on Table 4-9. As summarized on Table 4-9 the Project would result in 10,690,009 annual VMT and an estimated annual fuel consumption of 739,479 gallons.

**TABLE 4-9: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION**

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual VMT	Estimated Annual Fuel Consumption (gallons)
LDA	31.51	4,150,714	131,743
LDT1	24.62	336,171	13,653
LDT2	24.57	1,650,587	67,172
MDV	19.79	1,347,394	68,097
MCY	41.75	198,506	4,754
LHD1	16.16	349,883	21,649
LHD2	15.52	98,782	6,367
MHD	8.49	332,129	39,103
HHD	6.12	2,225,844	363,644
TRUs			23,297
<b>TOTAL (ALL VEHICLES)</b>		<b>10,690,009</b>	<b>739,479</b>

#### 4.4.2 ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMANDS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to two (2) 175 horsepower (hp), natural gas-powered cargo handling equipment – port tractors operating at 4 hours a day<sup>6</sup> for 365 days of the year.

Project operational activity estimates and associated fuel consumption estimates are based on the annual EMFAC 2021 offroad emissions for the 2024 operational year and was used to derive the total annual fuel consumption associated on-site equipment. As presented in Table 4-10, Project on-site equipment would consume an estimated 9,284 gallons of natural gas.

**TABLE 4-10: ON-SITE CARGO HANDLING EQUIPMENT FUEL CONSUMPTION ESTIMATES**

Equipment	Quantity	Usage Hours	Days of Operation	EMFAC 2021 Fuel Consumption (gal./yr)	EMFAC 2021 Activity (hrs./yr)	Total Fuel Consumption
Cargo Handling Equipment	2	4	365	17,909	5,633	9,284
<b>ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMAND (GALLONS FUEL)</b>						<b>9,284</b>

<sup>6</sup> Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

#### 4.4.3 FACILITY ENERGY DEMANDS

Project building operations activities would result in the consumption of electricity and natural gas, which would be supplied to the Project by SCE and SoCalGas, respectively. Annual natural gas and electricity demands of the Project are summarized in Table 4-11. As summarized on Table 4-11 the Project would result in usage of 12,095,732 kBtu/year of natural gas and 3,860,734 kWh/year of electricity.

**TABLE 4-11: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY**

Land Use	Natural Gas Demand (kBtu/year)	Electricity Demand (kWh/year)
High-Cube Cold Storage (10%)	1,614,124	1,334,043
High-Cube Fulfillment (90%)	10,481,608	2,526,691
Landscape	0	0
Other Asphalt Surfaces	0	0
<b>TOTAL PROJECT ENERGY DEMAND</b>	<b>12,095,732</b>	<b>3,860,734</b>

#### 4.4.4 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 4-9 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.

#### 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 \$55,215.39. Additionally, based on the assumed power cost, it is

estimated that the total electricity usage during construction, after full Project buildout, is calculated to be approximately 416,061 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 69,245 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 18,039 gallons of fuel. Additionally, fuel consumption from construction vendor and hauling trips (MHDs and HHDs) will total approximately 33,441 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 2021 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 (16). 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 fuel demand of 739,479 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 (11th Ed., 2021); 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-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% 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 (28).
- 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.

#### **ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMANDS**

As previously stated, it is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. On-site cargo handling equipment

used by the Project would result in approximately 9,284 gallons of natural gas. On-site equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed operations that are unusual or energy-intensive, and Project on-site equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

#### **FACILITY ENERGY DEMANDS**

Project facility operational energy demands are estimated to be 12,095,732 kBTU/year of natural gas and 3,860,734 kWh/year of electricity. Natural gas will be supplied to the Project by SoCalGas and 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 is consistent with energy conservation goals to reduce per capita energy consumption and reliance on fossil fuels while increasing reliance on renewable energy. As such, Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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## 5 CONCLUSIONS

### 5.1 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?***

As supported by the preceding analyses, Project construction and operations would not result in the inefficient, wasteful, or unnecessary consumption of energy and would implement energy-saving measures required under Title 24. 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

***Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?***

The Project will not conflict with or obstruct the applicable state and local plans discussed below.

#### 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.

#### 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.

#### 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 2021 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 2020 IEPR.

## **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, and would not otherwise interfere with or obstruct, implementation of the State of California Energy Plan.

## **CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS**

The 2022 version of Title 24 was adopted by the CEC and will become effective on January 1, 2023. As the Project building construction is anticipated in 2024, it would be required to comply with the Title 24 standards in place at that time (17). The proposed Project would be subject to Title 24 standards.

## **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 2022 California Green Building Code Standards that were published on July 1, 2022 and will become effective on January 1, 2023. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made.

## **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.

## **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.

## **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.

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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 Orchard Logistics Center. 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](mailto: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**

# 14410 Orchard Logistics Center Construction Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	14410 Orchard Logistics Center Construction
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	25.8
Location	33.93154051041351, -116.99695467872836
County	Riverside-South Coast
City	Beaumont
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5625
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Refrigerated Warehouse-No Rail	61.0	1000sqft	1.40	61,000	0.00	—	—	—
Unrefrigerated Warehouse-No Rail	549	1000sqft	12.6	549,000	201,915	—	—	—

Other Asphalt Surfaces	12.3	Acre	12.3	0.00	0.00	—	—	—
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### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-13	Use Low-VOC Paints for Construction

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.50	101	44.3	42.5	0.07	2.29	64.0	65.2	2.11	9.72	10.8	—	9,107	9,107	0.35	0.36	18.4	9,241
Mit.	5.50	52.8	44.3	42.5	0.07	2.29	64.0	65.2	2.11	9.72	10.8	—	9,107	9,107	0.35	0.36	18.4	9,241
% Reduced	—	48%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.13	101	41.6	38.9	0.07	1.96	3.72	5.01	1.81	1.07	2.88	—	8,894	8,894	0.36	0.36	0.51	9,011
Mit.	5.13	52.8	41.6	38.9	0.07	1.96	3.72	5.01	1.81	1.07	2.88	—	8,894	8,894	0.36	0.36	0.51	9,011
% Reduced	—	48%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.95	18.0	14.9	18.0	0.02	0.69	6.56	7.26	0.64	1.28	1.92	—	4,135	4,135	0.16	0.17	3.64	4,195

Mit.	1.95	10.0	14.9	18.0	0.02	0.69	6.56	7.26	0.64	1.28	1.92	—	4,135	4,135	0.16	0.17	3.64	4,195
% Reduced	—	44%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Unmit.	0.36	3.28	2.72	3.29	< 0.005	0.13	1.20	1.32	0.12	0.23	0.35	—	685	685	0.03	0.03	0.60	694
Mit.	0.36	1.83	2.72	3.29	< 0.005	0.13	1.20	1.32	0.12	0.23	0.35	—	685	685	0.03	0.03	0.60	694
% Reduced	—	44%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

## 2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2023	5.50	4.63	44.3	36.9	0.07	2.29	64.0	65.2	2.11	9.72	10.8	—	7,449	7,449	0.29	0.13	2.48	7,498
2024	3.98	101	21.9	42.5	0.05	0.84	3.72	4.56	0.78	0.89	1.66	—	9,107	9,107	0.35	0.36	18.4	9,241
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2023	5.13	4.31	41.6	38.9	0.07	1.96	3.72	5.01	1.81	1.07	2.88	—	8,894	8,894	0.36	0.36	0.51	9,011
2024	3.90	101	22.2	37.3	0.05	0.84	3.72	4.56	0.78	0.89	1.66	—	8,809	8,809	0.36	0.36	0.48	8,926
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2023	1.95	1.64	14.9	14.2	0.02	0.69	6.56	7.26	0.64	1.28	1.92	—	2,826	2,826	0.11	0.07	1.08	2,851
2024	1.84	18.0	10.7	18.0	0.02	0.41	1.65	2.07	0.38	0.39	0.78	—	4,135	4,135	0.16	0.17	3.64	4,195
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2023	0.36	0.30	2.72	2.60	< 0.005	0.13	1.20	1.32	0.12	0.23	0.35	—	468	468	0.02	0.01	0.18	472
2024	0.34	3.28	1.95	3.29	< 0.005	0.08	0.30	0.38	0.07	0.07	0.14	—	685	685	0.03	0.03	0.60	694

## 2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2023	5.50	4.63	44.3	36.9	0.07	2.29	64.0	65.2	2.11	9.72	10.8	—	7,449	7,449	0.29	0.13	2.48	7,498
2024	3.98	52.8	21.9	42.5	0.05	0.84	3.72	4.56	0.78	0.89	1.66	—	9,107	9,107	0.35	0.36	18.4	9,241
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2023	5.13	4.31	41.6	38.9	0.07	1.96	3.72	5.01	1.81	1.07	2.88	—	8,894	8,894	0.36	0.36	0.51	9,011
2024	3.90	52.8	22.2	37.3	0.05	0.84	3.72	4.56	0.78	0.89	1.66	—	8,809	8,809	0.36	0.36	0.48	8,926
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2023	1.95	1.64	14.9	14.2	0.02	0.69	6.56	7.26	0.64	1.28	1.92	—	2,826	2,826	0.11	0.07	1.08	2,851
2024	1.84	10.0	10.7	18.0	0.02	0.41	1.65	2.07	0.38	0.39	0.78	—	4,135	4,135	0.16	0.17	3.64	4,195
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2023	0.36	0.30	2.72	2.60	< 0.005	0.13	1.20	1.32	0.12	0.23	0.35	—	468	468	0.02	0.01	0.18	472
2024	0.34	1.83	1.95	3.29	< 0.005	0.08	0.30	0.38	0.07	0.07	0.14	—	685	685	0.03	0.03	0.60	694

## 3. Construction Emissions Details

### 3.1. Demolition (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.39	2.84	27.3	23.5	0.03	1.20	—	1.20	1.10	—	1.10	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	63.7	63.7	—	9.64	9.64	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.25	1.93	< 0.005	0.10	—	0.10	0.09	—	0.09	—	282	282	0.01	< 0.005	—	282
Demolition	—	—	—	—	—	—	5.23	5.23	—	0.79	0.79	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.35	< 0.005	0.02	—	0.02	0.02	—	0.02	—	46.6	46.6	< 0.005	< 0.005	—	46.8
Demolition	—	—	—	—	—	—	0.95	0.95	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	220	220	0.01	0.01	0.94	224
Vendor	0.01	0.01	0.26	0.08	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	220	220	< 0.005	0.03	0.61	230

Hauling	0.01	< 0.005	0.33	0.08	< 0.005	0.01	0.02	0.02	0.01	0.01	—	284	284	0.01	0.05	0.60	298
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	< 0.005	< 0.005	0.00	0.00	—	16.9	16.9	< 0.005	< 0.005	0.03	17.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18.1	18.1	< 0.005	< 0.005	0.02	18.9
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	23.4	23.4	< 0.005	< 0.005	0.02	24.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	—	2.79	2.79	< 0.005	< 0.005	0.01	2.83
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.99	2.99	< 0.005	< 0.005	< 0.005	3.13
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.87	3.87	< 0.005	< 0.005	< 0.005	4.05

### 3.2. Demolition (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	3.39	2.84	27.3	23.5	0.03	1.20	—	1.20	1.10	—	1.10	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	63.7	63.7	—	9.64	9.64	—	—	—	—	—	—	
Onsite truck	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	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.25	1.93	< 0.005	0.10	—	0.10	0.09	—	0.09	—	282	282	0.01	< 0.005	—	282
Demolition	—	—	—	—	—	—	5.23	5.23	—	0.79	0.79	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.35	< 0.005	0.02	—	0.02	0.02	—	0.02	—	46.6	46.6	< 0.005	< 0.005	—	46.8
Demolition	—	—	—	—	—	—	0.95	0.95	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	220	220	0.01	0.01	0.94	224
Vendor	0.01	0.01	0.26	0.08	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	220	220	< 0.005	0.03	0.61	230
Hauling	0.01	< 0.005	0.33	0.08	< 0.005	0.01	0.02	0.02	0.01	0.01	0.01	—	284	284	0.01	0.05	0.60	298
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	16.9	16.9	< 0.005	< 0.005	0.03	17.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18.1	18.1	< 0.005	< 0.005	0.02	18.9
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	23.4	23.4	< 0.005	< 0.005	0.02	24.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	2.79	2.79	< 0.005	< 0.005	0.01	2.83

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.99	2.99	< 0.005	< 0.005	< 0.005	3.13
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.87	3.87	< 0.005	< 0.005	< 0.005	4.05

### 3.3. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	5.40	4.54	43.9	35.4	0.05	2.29	—	2.29	2.11	—	2.11	—	5,181	5,181	0.21	0.04	—	5,199
Dust From Material Movement	—	—	—	—	—	—	5.52	5.52	—	2.67	2.67	—	—	—	—	—	—	
Onsite truck	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	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.44	0.37	3.61	2.91	< 0.005	0.19	—	0.19	0.17	—	0.17	—	426	426	0.02	< 0.005	—	427
Dust From Material Movement	—	—	—	—	—	—	0.45	0.45	—	0.22	0.22	—	—	—	—	—	—	
Onsite truck	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	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Off-Road Equipment	0.08	0.07	0.66	0.53	< 0.005	0.03	—	0.03	0.03	—	0.03	—	70.5	70.5	< 0.005	< 0.005	—	70.7
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	220	220	0.01	0.01	0.94	224
Vendor	0.01	0.01	0.26	0.08	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	220	220	< 0.005	0.03	0.61	230
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	16.9	16.9	< 0.005	< 0.005	0.03	17.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18.1	18.1	< 0.005	< 0.005	0.02	18.9
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	2.79	2.79	< 0.005	< 0.005	0.01	2.83
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.99	2.99	< 0.005	< 0.005	< 0.005	3.13
Hauling	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	0.00

### 3.4. Site Preparation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	220	220	0.01	0.01	0.94	224
Vendor	0.01	0.01	0.26	0.08	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	220	220	< 0.005	0.03	0.61	230
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	16.9	16.9	< 0.005	< 0.005	0.03	17.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18.1	18.1	< 0.005	< 0.005	0.02	18.9
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	2.79	2.79	< 0.005	< 0.005	0.01	2.83
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.99	2.99	< 0.005	< 0.005	< 0.005	3.13
Hauling	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	0.00

### 3.5. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	5.00	4.20	40.9	32.7	0.06	1.96	—	1.96	1.80	—	1.80	—	6,715	6,715	0.27	0.05	—	6,738

Dust From Material Movement:	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.00	4.20	40.9	32.7	0.06	1.96	—	1.96	1.80	—	1.80	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement:	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.73	5.37	0.01	0.32	—	0.32	0.30	—	0.30	—	1,104	1,104	0.04	0.01	—	1,108
Dust From Material Movement:	—	—	—	—	—	—	0.44	0.44	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.23	0.98	< 0.005	0.06	—	0.06	0.05	—	0.05	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement:	—	—	—	—	—	—	0.08	0.08	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00

### 3.6. Grading (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Off-Road Equipment	5.00	4.20	40.9	32.7	0.06	1.96	—	1.96	1.80	—	1.80	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement:	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	
Onsite truck	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	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	5.00	4.20	40.9	32.7	0.06	1.96	—	1.96	1.80	—	1.80	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement:	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	
Onsite truck	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	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.82	0.69	6.73	5.37	0.01	0.32	—	0.32	0.30	—	0.30	—	1,104	1,104	0.04	0.01	—	1,108
Dust From Material Movement:	—	—	—	—	—	—	0.44	0.44	—	0.16	0.16	—	—	—	—	—	—	
Onsite truck	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	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.15	0.13	1.23	0.98	< 0.005	0.06	—	0.06	0.05	—	0.05	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement:	—	—	—	—	—	—	0.08	0.08	—	0.03	0.03	—	—	—	—	—	—	

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.11	1.81	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	294	294	0.01	0.01	1.26	298
Vendor	0.02	0.01	0.51	0.16	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	440	440	0.01	0.07	1.22	461
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.37	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	270	270	0.01	0.01	0.03	273
Vendor	0.02	0.01	0.54	0.16	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	440	440	0.01	0.07	0.03	460
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	44.9	44.9	< 0.005	< 0.005	0.09	45.6
Vendor	< 0.005	< 0.005	0.09	0.03	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	72.3	72.3	< 0.005	0.01	0.09	75.6
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	7.44	7.44	< 0.005	< 0.005	0.01	7.55
Vendor	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.01	12.5
Hauling	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	0.00

### 3.7. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.58	2.16	20.1	20.7	0.04	0.91	—	0.91	0.83	—	0.83	—	4,084	4,084	0.17	0.03	—	4,098
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.81	1.87	< 0.005	0.08	—	0.08	0.07	—	0.07	—	368	368	0.01	< 0.005	—	369
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	60.9	60.9	< 0.005	< 0.005	—	61.1
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.43	1.30	1.57	17.6	0.00	0.00	0.21	0.21	0.00	0.00	0.00	—	3,458	3,458	0.17	0.13	0.42	3,501
Vendor	0.07	0.04	1.65	0.50	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,351	1,351	0.03	0.20	0.10	1,412
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.13	0.12	0.14	1.66	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	315	315	0.01	0.01	0.63	320
Vendor	0.01	< 0.005	0.15	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	122	122	< 0.005	0.02	0.15	127
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.02	0.02	0.03	0.30	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	52.2	52.2	< 0.005	< 0.005	0.10	52.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	20.1	20.1	< 0.005	< 0.005	0.02	21.1
Hauling	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	0.00

### 3.8. Building Construction (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	2.58	2.16	20.1	20.7	0.04	0.91	—	0.91	0.83	—	0.83	—	4,084	4,084	0.17	0.03	—	4,098
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.23	0.19	1.81	1.87	< 0.005	0.08	—	0.08	0.07	—	0.07	—	368	368	0.01	< 0.005	—	369
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.04	0.04	0.33	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	60.9	60.9	< 0.005	< 0.005	—	61.1

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.43	1.30	1.57	17.6	0.00	0.00	0.21	0.21	0.00	0.00	0.00	—	3,458	3,458	0.17	0.13	0.42	3,501
Vendor	0.07	0.04	1.65	0.50	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,351	1,351	0.03	0.20	0.10	1,412
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.14	1.66	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	315	315	0.01	0.01	0.63	320
Vendor	0.01	< 0.005	0.15	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	122	122	< 0.005	0.02	0.15	127
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.30	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	52.2	52.2	< 0.005	< 0.005	0.10	52.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	20.1	20.1	< 0.005	< 0.005	0.02	21.1
Hauling	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	0.00

### 3.9. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Off-Road Equipment	2.48	2.07	19.1	20.6	0.04	0.82	—	0.82	0.76	—	0.76	—	4,084	4,084	0.17	0.03	—	4,098
Onsite truck	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	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	2.48	2.07	19.1	20.6	0.04	0.82	—	0.82	0.76	—	0.76	—	4,084	4,084	0.17	0.03	—	4,098
Onsite truck	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	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	1.00	0.83	7.72	8.31	0.02	0.33	—	0.33	0.31	—	0.31	—	1,647	1,647	0.07	0.01	—	1,652
Onsite truck	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	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.18	0.15	1.41	1.52	< 0.005	0.06	—	0.06	0.06	—	0.06	—	273	273	0.01	< 0.005	—	274
Onsite truck	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	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	1.44	1.31	1.24	21.4	0.00	0.00	0.21	0.21	0.00	0.00	0.00	—	3,688	3,688	0.16	0.13	14.6	3,744
Vendor	0.06	0.04	1.51	0.47	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,335	1,335	0.03	0.20	3.76	1,399
Hauling	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	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	1.37	1.23	1.46	16.2	0.00	0.00	0.21	0.21	0.00	0.00	0.00	—	3,389	3,389	0.16	0.13	0.38	3,431

Vendor	0.06	0.04	1.58	0.48	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,336	1,336	0.03	0.20	0.10	1,397
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.50	0.59	6.86	0.00	0.00	0.08	0.08	0.00	0.00	0.00	—	1,384	1,384	0.06	0.05	2.55	1,403
Vendor	0.02	0.02	0.64	0.19	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	538	538	0.01	0.08	0.65	563
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.25	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	229	229	0.01	0.01	0.42	232
Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	89.1	89.1	< 0.005	0.01	0.11	93.3
Hauling	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	0.00

### 3.10. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	2.48	2.07	19.1	20.6	0.04	0.82	—	0.82	0.76	—	0.76	—	4,084	4,084	0.17	0.03	—	4,098
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	2.48	2.07	19.1	20.6	0.04	0.82	—	0.82	0.76	—	0.76	—	4,084	4,084	0.17	0.03	—	4,098
Onsite truck	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	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.00	0.83	7.72	8.31	0.02	0.33	—	0.33	0.31	—	0.31	—	1,647	1,647	0.07	0.01	—	1,652
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.41	1.52	< 0.005	0.06	—	0.06	0.06	—	0.06	—	273	273	0.01	< 0.005	—	274
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.44	1.31	1.24	21.4	0.00	0.00	0.21	0.21	0.00	0.00	0.00	—	3,688	3,688	0.16	0.13	14.6	3,744
Vendor	0.06	0.04	1.51	0.47	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,335	1,335	0.03	0.20	3.76	1,399
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.37	1.23	1.46	16.2	0.00	0.00	0.21	0.21	0.00	0.00	0.00	—	3,389	3,389	0.16	0.13	0.38	3,431
Vendor	0.06	0.04	1.58	0.48	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,336	1,336	0.03	0.20	0.10	1,397
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.50	0.59	6.86	0.00	0.00	0.08	0.08	0.00	0.00	0.00	—	1,384	1,384	0.06	0.05	2.55	1,403
Vendor	0.02	0.02	0.64	0.19	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	538	538	0.01	0.08	0.65	563
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.25	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	229	229	0.01	0.01	0.42	232

Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	89.1	89.1	< 0.005	0.01	0.11	93.3
Hauling	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	0.00

### 3.11. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.17	0.14	1.28	1.65	< 0.005	0.06	—	0.06	0.06	—	0.06	—	248	248	0.01	< 0.005	—	249
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Off-Road Equipment	0.03	0.03	0.23	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.1	41.1	< 0.005	< 0.005	—	41.3
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.25	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	216	216	0.01	0.01	0.86	219
Vendor	0.02	0.01	0.49	0.15	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	435	435	0.01	0.07	1.22	456
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.95	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	198	198	0.01	0.01	0.02	201
Vendor	0.02	0.01	0.52	0.16	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	435	435	0.01	0.07	0.03	455
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	33.0	33.0	< 0.005	< 0.005	0.06	33.5
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	71.5	71.5	< 0.005	0.01	0.09	74.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	5.47	5.47	< 0.005	< 0.005	0.01	5.55
Vendor	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.8	11.8	< 0.005	< 0.005	0.01	12.4
Hauling	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	0.00

### 3.12. Paving (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.65	< 0.005	0.06	—	0.06	0.06	—	0.06	—	248	248	0.01	< 0.005	—	249
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.23	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.1	41.1	< 0.005	< 0.005	—	41.3
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.25	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	216	216	0.01	0.01	0.86	219
Vendor	0.02	0.01	0.49	0.15	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	435	435	0.01	0.07	1.22	456
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.95	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	198	198	0.01	0.01	0.02	201
Vendor	0.02	0.01	0.52	0.16	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	435	435	0.01	0.07	0.03	455
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	33.0	33.0	< 0.005	< 0.005	0.06	33.5
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	71.5	71.5	< 0.005	0.01	0.09	74.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	5.47	5.47	< 0.005	< 0.005	0.01	5.55
Vendor	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.8	11.8	< 0.005	< 0.005	0.01	12.4
Hauling	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	0.00

### 3.13. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Off-Road Equipment	0.22	0.18	1.21	1.53	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	99.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.21	1.53	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	99.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.20	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.3	29.3	< 0.005	< 0.005	—	29.4
Architectural Coatings	—	16.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.85	4.85	< 0.005	< 0.005	—	4.86
Architectural Coatings	—	2.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.26	0.25	4.28	0.00	0.00	0.04	0.04	0.00	0.00	0.00	—	738	738	0.03	0.03	2.93	749
Vendor	0.02	0.01	0.49	0.15	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	435	435	0.01	0.07	1.22	456
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.25	0.29	3.23	0.00	0.00	0.04	0.04	0.00	0.00	0.00	—	678	678	0.03	0.03	0.08	686
Vendor	0.02	0.01	0.52	0.16	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	435	435	0.01	0.07	0.03	455
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.56	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	113	113	0.01	< 0.005	0.21	114
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	71.5	71.5	< 0.005	0.01	0.09	74.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	18.7	18.7	< 0.005	< 0.005	0.03	18.9
Vendor	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.8	11.8	< 0.005	< 0.005	0.01	12.4
Hauling	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	0.00

### 3.14. Architectural Coating (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Off-Road Equipment	0.22	0.18	1.21	1.53	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	50.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.21	1.53	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	50.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.20	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.3	29.3	< 0.005	< 0.005	—	29.4
Architectural Coatings	—	8.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.85	4.85	< 0.005	< 0.005	—	4.86
Architectural Coatings	—	1.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.26	0.25	4.28	0.00	0.00	0.04	0.04	0.00	0.00	—	738	738	0.03	0.03	2.93	749	
Vendor	0.02	0.01	0.49	0.15	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	435	435	0.01	0.07	1.22	456
Hauling	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	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.25	0.29	3.23	0.00	0.00	0.04	0.04	0.00	0.00	—	678	678	0.03	0.03	0.08	686	
Vendor	0.02	0.01	0.52	0.16	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	435	435	0.01	0.07	0.03	455
Hauling	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	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.56	0.00	0.00	0.01	0.01	0.00	0.00	—	113	113	0.01	< 0.005	0.21	114	
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	71.5	71.5	< 0.005	0.01	0.09	74.8
Hauling	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	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	0.01	0.10	0.00	0.00	< 0.005	< 0.005	0.00	0.00	—	18.7	18.7	< 0.005	< 0.005	0.03	18.9	
Vendor	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.8	11.8	< 0.005	< 0.005	0.01	12.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	

## 4. Operations Emissions Details

### 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
------------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
---------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	6/1/2023	7/12/2023	5.00	30.0	—
Site Preparation	Site Preparation	7/13/2023	8/23/2023	5.00	30.0	—
Grading	Grading	8/24/2023	11/15/2023	5.00	60.0	—
Building Construction	Building Construction	11/16/2023	7/24/2024	5.00	180	—
Paving	Paving	7/25/2024	10/16/2024	5.00	60.0	—
Architectural Coating	Architectural Coating	7/25/2024	10/16/2024	5.00	60.0	—

### 5.2. Off-Road Equipment

#### 5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	3.00	8.00	87.0	0.43
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43

### 5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40

Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	3.00	8.00	87.0	0.43
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	7.00	10.2	HHDT,MHDT
Demolition	Hauling	4.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—

Site Preparation	Worker	15.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	7.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	14.0	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	256	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	43.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	14.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	51.2	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	14.0	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

### 5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
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Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	7.00	10.2	HHDT,MHDT
Demolition	Hauling	4.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	15.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	7.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	14.0	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	256	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	43.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	14.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	51.2	18.5	LDA,LDT1,LDT2

Architectural Coating	Vendor	14.0	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	939,110	313,037	32,147

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	138,164	—
Site Preparation	0.00	0.00	150	0.00	—
Grading	0.00	0.00	300	0.00	—
Paving	0.00	0.00	0.00	0.00	12.3

### 5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Refrigerated Warehouse-No Rail	0.00	0%
Unrefrigerated Warehouse-No Rail	0.00	0%
Other Asphalt Surfaces	12.3	100%

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005
2024	0.00	532	0.03	< 0.005

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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#### 5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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### 5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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#### 5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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## 6. Climate Risk Detailed Report

### 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	31.4	annual days of extreme heat
Extreme Precipitation	5.35	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	24.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about  $\frac{3}{4}$  an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A

Air Quality	1	1	1	2
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The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	99.1
AQ-PM	47.8
AQ-DPM	30.5
Drinking Water	55.1
Lead Risk Housing	23.3
Pesticides	37.0
Toxic Releases	42.0
Traffic	32.3
Effect Indicators	—
CleanUp Sites	70.2
Groundwater	57.0
Haz Waste Facilities/Generators	69.4
Impaired Water Bodies	12.5
Solid Waste	97.2

Sensitive Population	—
Asthma	60.2
Cardio-vascular	87.3
Low Birth Weights	80.3
Socioeconomic Factor Indicators	—
Education	43.4
Housing	43.9
Linguistic	15.6
Poverty	41.7
Unemployment	68.4

## 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	54.6002823
Employed	72.89875529
Education	—
Bachelor's or higher	47.5426665
High school enrollment	100
Preschool enrollment	49.90375978
Transportation	—
Auto Access	52.9449506
Active commuting	1.039394328
Social	—
2-parent households	88.81047094
Voting	61.97869883

Neighborhood	—
Alcohol availability	92.22379058
Park access	41.79391762
Retail density	2.617733864
Supermarket access	12.53689208
Tree canopy	5.299627871
Housing	—
Homeownership	86.71885025
Housing habitability	81.89400744
Low-inc homeowner severe housing cost burden	32.58052098
Low-inc renter severe housing cost burden	74.33594251
Uncrowded housing	67.80443988
Health Outcomes	—
Insured adults	60.00256641
Arthritis	0.0
Asthma ER Admissions	38.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	44.5
Cognitively Disabled	22.1
Physically Disabled	22.7
Heart Attack ER Admissions	4.6
Mental Health Not Good	0.0

Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	13.4
SLR Inundation Area	0.0
Children	0.7
Elderly	81.9
English Speaking	89.2
Foreign-born	20.9
Outdoor Workers	25.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.7
Traffic Density	32.2
Traffic Access	23.0
Other Indices	—
Hardship	47.1
Other Decision Support	—
2016 Voting	65.5

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	73.0
Healthy Places Index Score for Project Location (b)	60.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

## 8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction anticipated to begin in June 2023 and be completed in October 2024
Construction: Off-Road Equipment	Equipment based on information provided by the Project team
Construction: Dust From Material Movement	Assumes 5 acres will be graded per day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition/Crushing, Site Preparation, Grading, Building Construction, and Paving

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**APPENDIX 4.2:**

**CALEEMOD PROJECT OPERATIONS EMISSIONS MODEL OUTPUTS**

# 14410 Orchard Logistics Center Ops Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	14410 Orchard Logistics Center Ops
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	25.8
Location	33.93190946782603, -116.99688729351396
County	Riverside-South Coast
City	Beaumont
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5625
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Refrigerated Warehouse-No Rail	61.0	1000sqft	1.40	61,000	0.00	—	—	—
Unrefrigerated Warehouse-No Rail	549	1000sqft	12.6	549,000	201,915	—	—	—

Other Asphalt Surfaces	12.3	Acre	12.3	0.00	0.00	—	—	—
User Defined Industrial	610	User Defined Unit	0.00	0.00	0.00	—	—	—

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Transportation	T-53*	Electrify Loading Docks
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power
Water	W-4	Require Low-Flow Water Fixtures
Area	LL-1	Replace Gas Powered Landscape Equipment with Zero-Emission Landscape Equipment

\* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

## 2. Emissions Summary

### 2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.3	25.1	38.4	117	0.45	1.05	9.78	10.8	1.04	1.91	2.95	579	55,193	55,772	60.7	5.09	199	59,004
Mit.	7.56	20.8	38.2	90.9	0.45	1.02	9.78	10.8	0.99	1.91	2.90	556	54,235	54,791	58.3	5.01	199	57,940
% Reduced	38%	17%	1%	23%	< 0.5%	3%	—	< 0.5%	5%	—	2%	4%	2%	2%	4%	1%	—	2%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.31	20.6	39.9	75.6	0.43	1.02	9.78	10.8	0.99	1.91	2.90	579	53,808	54,387	60.7	5.11	65.7	57,492

Mit.	7.31	20.6	39.9	75.6	0.43	1.02	9.78	10.8	0.99	1.91	2.90	556	52,942	53,499	58.3	5.04	65.7	56,524
% Reduced	—	—	—	—	—	—	—	—	—	—	—	4%	2%	2%	4%	1%	—	2%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.2	23.3	39.0	92.9	0.42	1.02	9.32	10.3	1.00	1.82	2.82	579	52,158	52,737	60.7	4.93	118	55,840
Mit.	6.98	20.3	38.8	74.8	0.42	0.99	9.32	10.3	0.97	1.82	2.79	556	51,228	51,785	58.2	4.85	118	54,806
% Reduced	32%	13%	< 0.5%	20%	< 0.5%	2%	—	< 0.5%	3%	—	1%	4%	2%	2%	4%	1%	—	2%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.86	4.24	7.11	17.0	0.08	0.19	1.70	1.89	0.18	0.33	0.52	95.9	8,635	8,731	10.0	0.82	19.6	9,245
Mit.	1.27	3.70	7.08	13.6	0.08	0.18	1.70	1.88	0.18	0.33	0.51	92.1	8,481	8,574	9.64	0.80	19.6	9,074
% Reduced	32%	13%	< 0.5%	20%	< 0.5%	2%	—	< 0.5%	3%	—	1%	4%	2%	2%	4%	1%	—	2%

## 2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.84	5.71	31.7	85.5	0.41	0.52	9.78	10.3	0.50	1.91	2.41	—	42,710	42,710	0.97	4.35	137	44,167
Area	4.71	19.1	0.22	26.5	< 0.005	0.04	—	0.04	0.05	—	0.05	—	109	109	< 0.005	0.01	—	112
Energy	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	11,441	11,441	1.04	0.06	—	11,484
Water	—	—	—	—	—	—	—	—	—	—	—	270	933	1,204	27.8	0.67	—	2,098
Waste	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	12.3	25.1	38.4	117	0.45	1.05	9.78	10.8	1.04	1.91	2.95	579	55,193	55,772	60.7	5.09	199	59,004

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.60	5.48	33.4	70.2	0.39	0.52	9.78	10.3	0.50	1.91	2.41	—	41,434	41,434	0.98	4.38	3.55	42,767
Area	—	14.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	11,441	11,441	1.04	0.06	—	11,484
Water	—	—	—	—	—	—	—	—	—	—	—	270	933	1,204	27.8	0.67	—	2,098
Waste	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	7.31	20.6	39.9	75.6	0.43	1.02	9.78	10.8	0.99	1.91	2.90	579	53,808	54,387	60.7	5.11	65.7	57,492
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.27	5.19	32.3	69.3	0.38	0.50	9.32	9.81	0.47	1.82	2.30	—	39,709	39,709	0.94	4.19	56.3	41,038
Area	3.23	17.7	0.15	18.2	< 0.005	0.02	—	0.02	0.03	—	0.03	—	74.7	74.7	< 0.005	0.01	—	76.9
Energy	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	11,441	11,441	1.04	0.06	—	11,484
Water	—	—	—	—	—	—	—	—	—	—	—	270	933	1,204	27.8	0.67	—	2,098
Waste	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	10.2	23.3	39.0	92.9	0.42	1.02	9.32	10.3	1.00	1.82	2.82	579	52,158	52,737	60.7	4.93	118	55,840
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.14	0.95	5.90	12.6	0.07	0.09	1.70	1.79	0.09	0.33	0.42	—	6,574	6,574	0.16	0.69	9.32	6,794
Area	0.59	3.23	0.03	3.32	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	12.4	12.4	< 0.005	< 0.005	—	12.7
Energy	0.13	0.07	1.19	1.00	0.01	0.09	—	0.09	0.09	—	0.09	—	1,894	1,894	0.17	0.01	—	1,901
Water	—	—	—	—	—	—	—	—	—	—	—	44.8	155	199	4.60	0.11	—	347
Waste	—	—	—	—	—	—	—	—	—	—	—	51.2	0.00	51.2	5.11	0.00	—	179
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.3	10.3
Total	1.86	4.24	7.11	17.0	0.08	0.19	1.70	1.89	0.18	0.33	0.52	95.9	8,635	8,731	10.0	0.82	19.6	9,245

## 2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.84	5.71	31.7	85.5	0.41	0.52	9.78	10.3	0.50	1.91	2.41	—	42,710	42,710	0.97	4.35	137	44,167
Area	—	14.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	10,669	10,669	0.96	0.05	—	10,707
Water	—	—	—	—	—	—	—	—	—	—	—	247	856	1,103	25.5	0.61	—	1,922
Waste	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	7.56	20.8	38.2	90.9	0.45	1.02	9.78	10.8	0.99	1.91	2.90	556	54,235	54,791	58.3	5.01	199	57,940
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.60	5.48	33.4	70.2	0.39	0.52	9.78	10.3	0.50	1.91	2.41	—	41,434	41,434	0.98	4.38	3.55	42,767
Area	—	14.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	10,653	10,653	0.96	0.05	—	10,691
Water	—	—	—	—	—	—	—	—	—	—	—	247	856	1,103	25.5	0.61	—	1,922
Waste	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	7.31	20.6	39.9	75.6	0.43	1.02	9.78	10.8	0.99	1.91	2.90	556	52,942	53,499	58.3	5.04	65.7	56,524
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.27	5.19	32.3	69.3	0.38	0.50	9.32	9.81	0.47	1.82	2.30	—	39,709	39,709	0.94	4.19	56.3	41,038
Area	—	14.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	10,664	10,664	0.96	0.05	—	10,702
Water	—	—	—	—	—	—	—	—	—	—	—	247	856	1,103	25.5	0.61	—	1,922

Waste	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	6.98	20.3	38.8	74.8	0.42	0.99	9.32	10.3	0.97	1.82	2.79	556	51,228	51,785	58.2	4.85	118	54,806
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.14	0.95	5.90	12.6	0.07	0.09	1.70	1.79	0.09	0.33	0.42	—	6,574	6,574	0.16	0.69	9.32	6,794
Area	—	2.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.13	0.07	1.19	1.00	0.01	0.09	—	0.09	0.09	—	0.09	—	1,766	1,766	0.16	0.01	—	1,772
Water	—	—	—	—	—	—	—	—	—	—	—	41.0	142	183	4.21	0.10	—	318
Waste	—	—	—	—	—	—	—	—	—	—	—	51.2	0.00	51.2	5.11	0.00	—	179
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.3	10.3
Total	1.27	3.70	7.08	13.6	0.08	0.18	1.70	1.88	0.18	0.33	0.51	92.1	8,481	8,574	9.64	0.80	19.6	9,074

## 4. Operations Emissions Details

### 4.1. Mobile Emissions by Land Use

#### 4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	0.46	0.41	0.31	6.28	0.01	0.01	0.06	0.07	0.01	0.02	0.02	—	1,333	1,333	0.04	0.03	5.28	1,349

Unrefrigerated Warehouses-No Rail	5.30	4.72	3.53	72.0	0.15	0.07	0.69	0.76	0.06	0.21	0.27	—	15,269	15,269	0.49	0.34	60.5	15,444
Other Asphalt Surfaces	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	0.00
User Defined Industrial	1.08	0.58	27.9	7.22	0.24	0.45	1.89	2.34	0.43	0.61	1.04	—	26,108	26,108	0.44	3.97	71.0	27,374
Total	6.84	5.71	31.7	85.5	0.41	0.52	2.65	3.17	0.50	0.83	1.33	—	42,710	42,710	0.97	4.35	137	44,167
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouses-No Rail	0.44	0.39	0.34	5.05	0.01	0.01	0.06	0.07	0.01	0.02	0.02	—	1,230	1,230	0.04	0.03	0.14	1,241
Unrefrigerated Warehouses-No Rail	5.09	4.52	3.93	57.9	0.14	0.07	0.69	0.76	0.06	0.21	0.27	—	14,089	14,089	0.50	0.37	1.57	14,213
Other Asphalt Surfaces	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	0.00
User Defined Industrial	1.06	0.56	29.1	7.26	0.24	0.45	1.89	2.34	0.43	0.61	1.04	—	26,115	26,115	0.44	3.98	1.84	27,313
Total	6.60	5.48	33.4	70.2	0.39	0.52	2.65	3.17	0.50	0.83	1.33	—	41,434	41,434	0.98	4.38	3.55	42,767
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouses-No Rail	0.08	0.07	0.06	0.96	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	205	205	0.01	0.01	0.38	207

Unrefrigerated Warehouse-No Rail	0.88	0.78	0.70	10.4	0.02	0.01	0.12	0.13	0.01	0.04	0.05	—	2,236	2,236	0.08	0.06	4.09	2,260
Other Asphalt Surfaces	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	0.00
User Defined Industrial	0.19	0.10	5.13	1.26	0.04	0.08	0.33	0.41	0.08	0.11	0.18	—	4,133	4,133	0.07	0.63	4.86	4,327
Total	1.14	0.95	5.90	12.6	0.07	0.09	0.46	0.55	0.09	0.15	0.23	—	6,574	6,574	0.16	0.69	9.32	6,794

#### 4.1.2. Mitigated

##### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	0.46	0.41	0.31	6.28	0.01	0.01	0.06	0.07	0.01	0.02	0.02	—	1,333	1,333	0.04	0.03	5.28	1,349
Unrefrigerated Warehouse-No Rail	5.30	4.72	3.53	72.0	0.15	0.07	0.69	0.76	0.06	0.21	0.27	—	15,269	15,269	0.49	0.34	60.5	15,444
Other Asphalt Surfaces	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	0.00
User Defined Industrial	1.08	0.58	27.9	7.22	0.24	0.45	1.89	2.34	0.43	0.61	1.04	—	26,108	26,108	0.44	3.97	71.0	27,374
Total	6.84	5.71	31.7	85.5	0.41	0.52	2.65	3.17	0.50	0.83	1.33	—	42,710	42,710	0.97	4.35	137	44,167

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	0.44	0.39	0.34	5.05	0.01	0.01	0.06	0.07	0.01	0.02	0.02	—	1,230	1,230	0.04	0.03	0.14	1,241
Unrefrigerated Warehouse-No Rail	5.09	4.52	3.93	57.9	0.14	0.07	0.69	0.76	0.06	0.21	0.27	—	14,089	14,089	0.50	0.37	1.57	14,213
Other Asphalt Surfaces	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	0.00
User Defined Industrial	1.06	0.56	29.1	7.26	0.24	0.45	1.89	2.34	0.43	0.61	1.04	—	26,115	26,115	0.44	3.98	1.84	27,313
Total	6.60	5.48	33.4	70.2	0.39	0.52	2.65	3.17	0.50	0.83	1.33	—	41,434	41,434	0.98	4.38	3.55	42,767
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	0.08	0.07	0.06	0.96	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	205	205	0.01	0.01	0.38	207
Unrefrigerated Warehouse-No Rail	0.88	0.78	0.70	10.4	0.02	0.01	0.12	0.13	0.01	0.04	0.05	—	2,236	2,236	0.08	0.06	4.09	2,260
Other Asphalt Surfaces	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	0.00
User Defined Industrial	0.19	0.10	5.13	1.26	0.04	0.08	0.33	0.41	0.08	0.11	0.18	—	4,133	4,133	0.07	0.63	4.86	4,327

Total	1.14	0.95	5.90	12.6	0.07	0.09	0.46	0.55	0.09	0.15	0.23	—	6,574	6,574	0.16	0.69	9.32	6,794
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## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	1,274	1,274	0.12	0.01	—	1,282	
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	2,413	2,413	0.23	0.03	—	2,427	
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	—	3,688	3,688	0.35	0.04	—	3,709	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,274	1,274	0.12	0.01	—	1,282
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,413	2,413	0.23	0.03	—	2,427
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,688	3,688	0.35	0.04	—	3,709
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	211	211	0.02	< 0.005	—	212
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	400	400	0.04	< 0.005	—	402
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	611	611	0.06	0.01	—	614

#### 4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	488	488	0.05	0.01	—	491	
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	2,428	2,428	0.23	0.03	—	2,442	
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	—	2,916	2,916	0.28	0.03	—	2,933	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	486	486	0.05	0.01	—	489	

Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,413	2,413	0.23	0.03	—	2,427
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,900	2,900	0.27	0.03	—	2,916
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	80.7	80.7	0.01	< 0.005	—	81.2
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	401	401	0.04	< 0.005	—	404
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	482	482	0.05	0.01	—	485

#### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	0.10	0.05	0.87	0.73	0.01	0.07	—	0.07	0.07	—	0.07	—	1,035	1,035	0.09	< 0.005	—	1,037
Unrefrigerated Warehouse-No Rail	0.62	0.31	5.63	4.73	0.03	0.43	—	0.43	0.43	—	0.43	—	6,718	6,718	0.59	0.01	—	6,737
Other Asphalt Surfaces	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
User Defined Industrial	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
Total	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	7,753	7,753	0.69	0.01	—	7,775
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	0.10	0.05	0.87	0.73	0.01	0.07	—	0.07	0.07	—	0.07	—	1,035	1,035	0.09	< 0.005	—	1,037
Unrefrigerated Warehouse-No Rail	0.62	0.31	5.63	4.73	0.03	0.43	—	0.43	0.43	—	0.43	—	6,718	6,718	0.59	0.01	—	6,737
Other Asphalt Surfaces	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

User Defined Industrial	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
Total	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	7,753	7,753	0.69	0.01	—	7,775
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	0.02	0.01	0.16	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	171	171	0.02	< 0.005	—	172
Unrefrigerated Warehouse-No Rail	0.11	0.06	1.03	0.86	0.01	0.08	—	0.08	0.08	—	0.08	—	1,112	1,112	0.10	< 0.005	—	1,115
Other Asphalt Surfaces	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
User Defined Industrial	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
Total	0.13	0.07	1.19	1.00	0.01	0.09	—	0.09	0.09	—	0.09	—	1,284	1,284	0.11	< 0.005	—	1,287

#### 4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	0.10	0.05	0.87	0.73	0.01	0.07	—	0.07	0.07	—	0.07	—	1,035	1,035	0.09	< 0.005	—	1,037

Unrefrigerated Warehouse-No Rail	0.62	0.31	5.63	4.73	0.03	0.43	—	0.43	0.43	—	0.43	—	6,718	6,718	0.59	0.01	—	6,737
Other Asphalt Surfaces	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
User Defined Industrial	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
Total	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	7,753	7,753	0.69	0.01	—	7,775
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	0.10	0.05	0.87	0.73	0.01	0.07	—	0.07	0.07	—	0.07	—	1,035	1,035	0.09	< 0.005	—	1,037
Unrefrigerated Warehouse-No Rail	0.62	0.31	5.63	4.73	0.03	0.43	—	0.43	0.43	—	0.43	—	6,718	6,718	0.59	0.01	—	6,737
Other Asphalt Surfaces	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
User Defined Industrial	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
Total	0.71	0.36	6.50	5.46	0.04	0.49	—	0.49	0.49	—	0.49	—	7,753	7,753	0.69	0.01	—	7,775
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	0.02	0.01	0.16	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	171	171	0.02	< 0.005	—	172

Unrefrigerated Warehouses-No Rail	0.11	0.06	1.03	0.86	0.01	0.08	—	0.08	0.08	—	0.08	—	1,112	1,112	0.10	< 0.005	—	1,115
Other Asphalt Surfaces	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
User Defined Industrial	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
Total	0.13	0.07	1.19	1.00	0.01	0.09	—	0.09	0.09	—	0.09	—	1,284	1,284	0.11	< 0.005	—	1,287

## 4.3. Area Emissions by Source

### 4.3.2. Unmitigated

#### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Consumer Products	—	13.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Landscape Equipment	4.71	4.35	0.22	26.5	< 0.005	0.04	—	0.04	0.05	—	0.05	—	109	109	< 0.005	0.01	—	112
Total	4.71	19.1	0.22	26.5	< 0.005	0.04	—	0.04	0.05	—	0.05	—	109	109	< 0.005	0.01	—	112
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Consumer	—	13.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	14.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.59	0.54	0.03	3.32	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	12.4	12.4	< 0.005	< 0.005	—	12.7
Total	0.59	3.23	0.03	3.32	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	12.4	12.4	< 0.005	< 0.005	—	12.7

#### 4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Consumer Products	—	13.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total	—	14.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	13.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	14.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	2.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 4.4. Water Emissions by Land Use

### 4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	27.0	91.7	119	2.78	0.07	—	208

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	243	842	1,085	25.0	0.60	—	1,890
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	270	933	1,204	27.8	0.67	—	2,098	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	27.0	91.7	119	2.78	0.07	—	208	
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	243	842	1,085	25.0	0.60	—	1,890	
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	270	933	1,204	27.8	0.67	—	2,098	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	4.48	15.2	19.7	0.46	0.01	—	34.5	

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	40.3	139	180	4.14	0.10	—	313
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	44.8	155	199	4.60	0.11	—	347	

#### 4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	24.7	84.0	109	2.55	0.06	—	191
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	223	772	995	22.9	0.55	—	1,732
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	—	247	856	1,103	25.5	0.61	—	1,922

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	24.7	84.0	109	2.55	0.06	—	191	
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	223	772	995	22.9	0.55	—	1,732	
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	247	856	1,103	25.5	0.61	—	1,922	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	4.10	13.9	18.0	0.42	0.01	—	31.6	
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	36.9	128	165	3.79	0.09	—	287	
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00	

Total	—	—	—	—	—	—	—	—	—	—	—	41.0	142	183	4.21	0.10	—	318
-------	---	---	---	---	---	---	---	---	---	---	---	------	-----	-----	------	------	---	-----

## 4.5. Waste Emissions by Land Use

### 4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	30.9	0.00	30.9	3.09	0.00	—	108
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	278	0.00	278	27.8	0.00	—	973
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	30.9	0.00	30.9	3.09	0.00	—	108
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	278	0.00	278	27.8	0.00	—	973
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	5.12	0.00	5.12	0.51	0.00	—	17.9
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	46.0	0.00	46.0	4.60	0.00	—	161
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	51.2	0.00	51.2	5.11	0.00	—	179

#### 4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	30.9	0.00	30.9	3.09	0.00	—	108
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	278	0.00	278	27.8	0.00	—	973
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	30.9	0.00	30.9	3.09	0.00	—	108

Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	278	0.00	278	27.8	0.00	—	973
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	309	0.00	309	30.9	0.00	—	1,081
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	5.12	0.00	5.12	0.51	0.00	—	17.9
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	46.0	0.00	46.0	4.60	0.00	—	161
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	51.2	0.00	51.2	5.11	0.00	—	179

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.3	10.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.3	10.3

#### 4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.2	62.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.3	10.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.3	10.3

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

### 4.8. Stationary Emissions By Equipment Type

#### 4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.9. User Defined Emissions By Equipment Type

##### 4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

#### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

#### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

##### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

#### 4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 5. Activity Data

### 5.9. Operational Mobile Sources

#### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Refrigerated Warehouse-No Rail	84.0	82.3	82.3	30,481	1,778	1,742	1,742	645,156
Unrefrigerated Warehouse-No Rail	962	784	784	332,525	20,358	16,594	16,594	7,038,216
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	258	218	218	90,046	8,616	7,292	7,292	3,006,637

## 5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Refrigerated Warehouse-No Rail	84.0	82.3	82.3	30,481	1,778	1,742	1,742	645,156
Unrefrigerated Warehouse-No Rail	962	784	784	332,525	20,358	16,594	16,594	7,038,216
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	258	218	218	90,046	8,616	7,292	7,292	3,006,637

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

#### 5.10.1.2. Mitigated

### 5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	939,110	313,037	32,147

### 5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

## 5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

#### Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBtu/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBtu/yr)
Refrigerated Warehouse-No Rail	1,334,043	349	0.0330	0.0040	1,614,124
Unrefrigerated Warehouse-No Rail	2,526,691	349	0.0330	0.0040	10,481,608
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

### 5.11.2. Mitigated

#### Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBtu/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBtu/yr)
Refrigerated Warehouse-No Rail	509,043	349	0.0330	0.0040	1,614,124
Unrefrigerated Warehouse-No Rail	2,526,691	349	0.0330	0.0040	10,481,608
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Refrigerated Warehouse-No Rail	14,106,250	0.00
Unrefrigerated Warehouse-No Rail	126,956,250	3,201,506
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

### 5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Refrigerated Warehouse-No Rail	12,912,861	0.00
Unrefrigerated Warehouse-No Rail	116,215,751	3,201,506
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Refrigerated Warehouse-No Rail	57.3	0.00
Unrefrigerated Warehouse-No Rail	516	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

### 5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Refrigerated Warehouse-No Rail	57.3	0.00

Unrefrigerated Warehouse-No Rail	516	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Refrigerated Warehouse-No Rail	Cold storage	User Defined	150	7.50	7.50	7.50	25.0

### 5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Refrigerated Warehouse-No Rail	Cold storage	User Defined	150	7.50	7.50	7.50	25.0

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

### 5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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## 5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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## 5.17. User Defined

Equipment Type	Fuel Type
—	—

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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#### 5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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#### 5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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## 5.18.2. Sequestration

### 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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### 5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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## 6. Climate Risk Detailed Report

### 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	31.4	annual days of extreme heat
Extreme Precipitation	5.35	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	24.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about  $\frac{3}{4}$  an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large ( $> 400$  ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	99.1
AQ-PM	47.8
AQ-DPM	30.5
Drinking Water	55.1
Lead Risk Housing	23.3
Pesticides	37.0
Toxic Releases	42.0
Traffic	32.3
Effect Indicators	—
CleanUp Sites	70.2
Groundwater	57.0
Haz Waste Facilities/Generators	69.4
Impaired Water Bodies	12.5
Solid Waste	97.2
Sensitive Population	—
Asthma	60.2
Cardio-vascular	87.3

Low Birth Weights	80.3
Socioeconomic Factor Indicators	—
Education	43.4
Housing	43.9
Linguistic	15.6
Poverty	41.7
Unemployment	68.4

## 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	54.6002823
Employed	72.89875529
Median HI	—
Education	—
Bachelor's or higher	47.5426665
High school enrollment	100
Preschool enrollment	49.90375978
Transportation	—
Auto Access	52.9449506
Active commuting	1.039394328
Social	—
2-parent households	88.81047094
Voting	61.97869883
Neighborhood	—
Alcohol availability	92.22379058

Park access	41.79391762
Retail density	2.617733864
Supermarket access	12.53689208
Tree canopy	5.299627871
Housing	—
Homeownership	86.71885025
Housing habitability	81.89400744
Low-inc homeowner severe housing cost burden	32.58052098
Low-inc renter severe housing cost burden	74.33594251
Uncrowded housing	67.80443988
Health Outcomes	—
Insured adults	60.00256641
Arthritis	0.0
Asthma ER Admissions	38.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	44.5
Cognitively Disabled	22.1
Physically Disabled	22.7
Heart Attack ER Admissions	4.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0

Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	13.4
SLR Inundation Area	0.0
Children	0.7
Elderly	81.9
English Speaking	89.2
Foreign-born	20.9
Outdoor Workers	25.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.7
Traffic Density	32.2
Traffic Access	23.0
Other Indices	—
Hardship	47.1
Other Decision Support	—
2016 Voting	65.5

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	73.0

Healthy Places Index Score for Project Location (b)	60.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

## 8. User Changes to Default Data

Screen	Justification
Operations: Vehicle Data	Trip characteristics based on Project traffic study
Operations: Fleet Mix	Fleet mix based on Project traffic study.
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater

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**APPENDIX 4.3:**

**EMFAC 2021**

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/year for CVMT and EVMT, trips/year for Trips, kWh/year for Energy Consumption, 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	9.455104489	402.0155083	0.108573531	108.5735307	317785.1606	402.0155083	1920248.354	6.04	HHDT
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Diesel	14188.53655	1870417.715	309.6254593	309625.4593		1870417.715			
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Electricity	10.75839329	733.8118529	0	0		733.8118529			
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Natural Gas	693.7983116	48694.81207	8.051127696	8051.127696		48694.81207			
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Gasoline	469124.6474	20366451.54	699.7310812	699731.0812	711067.1515	20366451.54	21760170.77	30.60	LDA
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Diesel	1558.762895	58561.51523	1.375784729	1375.784729		58561.51523			
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Electricity	16185.78734	744565.1808	0	0		744565.1808			
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Plug-in Hybrid	11651.42905	590592.5329	9.960285645	9960.285645		590592.5329			
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Gasoline	41569.09002	1542689.764	63.99950114	63999.50114	64044.29373	1542689.764	1546785.932	24.15	LDT1
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Diesel	20.22700504	383.6181372	0.015644241	15.64424123		383.6181372			
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Electricity	42.93918941	1813.231309	0	0		1813.231309			
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Plug-in Hybrid	33.25263876	1899.318283	0.029148352	29.14835174		1899.318283			
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Gasoline	191587.7811	8435118.12	356.5641957	356564.1957	358545.5463	8435118.12	8562709.114	23.88	LDT2
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Diesel	577.8339592	27328.90025	0.849494989	849.4949888		27328.90025			
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Electricity	816.9774193	29520.94571	0	0		29520.94571			
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1285.022226	70741.14871	1.131855657	1131.855657		70741.14871			
Riverside (SC)	2023	LHDT1	Aggregate	Aggregate	Gasoline	18052.34987	656605.5887	49.73832228	49738.32228	77417.67097	656605.5887	1224140.947	15.81	LHDT1
Riverside (SC)	2023	LHDT1	Aggregate	Aggregate	Diesel	15395.69696	567535.3588	27.67934868	27679.34868		567535.3588			
Riverside (SC)	2023	LHDT2	Aggregate	Aggregate	Gasoline	2523.570585	90490.65997	7.611904144	7611.904144	22679.23434	90490.65997	346711.8059	15.29	LHDT2
Riverside (SC)	2023	LHDT2	Aggregate	Aggregate	Diesel	6852.470307	256221.1459	15.0673302	15067.3302		256221.1459			
Riverside (SC)	2023	MCY	Aggregate	Aggregate	Gasoline	24170.7213	141523.0693	3.403298812	3403.298812	3403.298812	141523.0693	141523.0693	41.58	MCY
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Gasoline	159138.1322	6456725.347	338.8355886	338835.5886	344047.395	6456725.347	6637695.092	19.29	MDV
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Diesel	2483.005938	104140.6313	4.4577137	4457.7137		104140.6313			
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Electricity	897.1539487	32338.42861	0	0		32338.42861			
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Plug-in Hybrid	887.9224631	44490.68605	0.754092705	754.0927053		44490.68605			
Riverside (SC)	2023	MH	Aggregate	Aggregate	Gasoline	5083.841078	44617.33224	9.135457245	9135.457245	10873.77525	44617.33224	62635.35904	5.76	MH
Riverside (SC)	2023	MH	Aggregate	Aggregate	Diesel	2073.70666	18018.02681	1.738318002	1738.318002		18018.02681			
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Gasoline	1260.142241	50001.99826	9.730848023	9730.848023	72860.34533	50001.99826	613586.1262	8.42	MHDT
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Diesel	12683.243	556347.8969	62.32189585	62321.89585		556347.8969			
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Electricity	4.9202908	108.4971152	0	0		108.4971152			
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Natural Gas	147.6204682	7127.733974	0.807601459	807.6014589		7127.733974			
Riverside (SC)	2023	OBUS	Aggregate	Aggregate	Gasoline	386.6813181	13386.35665	2.645844907	2645.844907	4805.404855	13386.35665	30497.76136	6.35	OBUS
Riverside (SC)	2023	OBUS	Aggregate	Aggregate	Diesel	215.667787	15076.44179	1.951877039	1951.877039		15076.44179			
Riverside (SC)	2023	OBUS	Aggregate	Aggregate	Natural Gas	33.12387867	2034.962916	0.207682909	207.6829092		2034.962916			
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Gasoline	421.1646074	16563.24745	1.897862822	1897.862822	5896.748986	16563.24745	37701.28126	6.39	SBUS
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Diesel	499.0687276	10519.58678	1.437331357	1437.331357		10519.58678			
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Electricity	0.562315788	6.53322339	0	0		6.53322339			
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Natural Gas	428.0776414	10611.9138	2.561554808	2561.554808		10611.9138			
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Gasoline	145.9294435	18476.36382	3.28009086	3280.09086	11107.60554	18476.36382	49531.64193	4.46	UBUS
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Diesel	0.3117338	30.10971099	0.002674589	2.674588852		30.10971099			
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Electricity	0.030745281	2.969621933	0	0		2.969621933			
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Natural Gas	251.677147	31022.19878	7.824840087	7824.840087		31022.19878			

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/year for CVMT and EVMT, trips/year for Trips, kWh/year for Energy Consumption, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	el_Consumption (1000 g)	Fuel_Consumption (gal)	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
Riverside (SC)	2024	HHDT	Aggregate	Aggregate	Gasoline	7.589475903	347.9694468	0.092180823	92.18082291	321404.9638	347.9694468	1967302.751	6.12	HHDT
Riverside (SC)	2024	HHDT	Aggregate	Aggregate	Diesel	14792.02338	1911347.779	313.0439759	313043.9759		1911347.779			
Riverside (SC)	2024	HHDT	Aggregate	Aggregate	Electricity	47.99547895	5148.201829	0	0		5148.201829			
Riverside (SC)	2024	HHDT	Aggregate	Aggregate	Natural Gas	740.0705237	50458.80082	8.268807048	8268.807048		50458.80082			
Riverside (SC)	2024	LDA	Aggregate	Aggregate	Gasoline	469145.3818	20418129.53	688.4836596	688483.6596	700469.6115	20418129.53	22069128.65	31.51	LDA
Riverside (SC)	2024	LDA	Aggregate	Aggregate	Diesel	1473.049219	54327.45303	1.267188759	1267.188759		54327.45303			
Riverside (SC)	2024	LDA	Aggregate	Aggregate	Electricity	19934.69439	945704.6798	0	0		945704.6798			
Riverside (SC)	2024	LDA	Aggregate	Aggregate	Plug-in Hybrid	12893.65575	650966.9876	10.71876311	10718.76311		650966.9876			
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	Gasoline	40643.24621	1523061.246	62.04624692	62046.24692	62104.32538	1523061.246	1529163.988	24.62	LDT1
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	Diesel	18.16927182	339.6979643	0.013831102	13.83110227		339.6979643			
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	Electricity	60.98632141	2789.967089	0	0		2789.967089			
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	Plug-in Hybrid	52.35545177	2973.077776	0.044247357	44.24735695		2973.077776			
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	Gasoline	196761.1569	8732860.794	359.674683	359674.683	361927.3798	8732860.794	8893408.735	24.57	LDT2
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	Diesel	611.2140627	29007.74721	0.880423066	880.4230662		29007.74721			
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	Electricity	1212.721837	43455.52608	0	0		43455.52608			
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1617.209463	88084.6679	1.372273758	1372.273758		88084.6679			
Riverside (SC)	2024	LHDT1	Aggregate	Aggregate	Gasoline	17828.73734	656766.0119	48.36247552	48362.47552	75554.20605	656766.0119	1221087.42	16.16	LHDT1
Riverside (SC)	2024	LHDT1	Aggregate	Aggregate	Diesel	15247.60565	560367.9206	27.19173053	27191.73053		560367.9206			
Riverside (SC)	2024	LHDT1	Aggregate	Aggregate	Electricity	53.50587181	3953.487241	0	0		3953.487241			
Riverside (SC)	2024	LHDT2	Aggregate	Aggregate	Gasoline	2494.679179	89754.81853	7.38743171	7387.43171	22224.411	89754.81853	344827.7113	15.52	LHDT2
Riverside (SC)	2024	LHDT2	Aggregate	Aggregate	Diesel	6844.928194	254103.3578	14.83697929	14836.97929		254103.3578			
Riverside (SC)	2024	LHDT2	Aggregate	Aggregate	Electricity	13.8489928	969.5349487	0	0		969.5349487			
Riverside (SC)	2024	MCY	Aggregate	Aggregate	Gasoline	24077.0623	140258.0803	3.359217865	3359.217865	3359.217865	140258.0803		41.75	MCY
Riverside (SC)	2024	MDV	Aggregate	Aggregate	Gasoline	158529.7591	6468418.76	332.0736912	332073.6912	337278.1883	6468418.76	6673535.232	19.79	MDV
Riverside (SC)	2024	MDV	Aggregate	Aggregate	Diesel	2456.219583	102039.6434	4.306633032	4306.633032		102039.6434			
Riverside (SC)	2024	MDV	Aggregate	Aggregate	Electricity	1347.135818	48185.7285	0	0		48185.7285			
Riverside (SC)	2024	MDV	Aggregate	Aggregate	Plug-in Hybrid	1094.492843	54891.09982	0.897864131	897.864131		54891.09982			
Riverside (SC)	2024	MH	Aggregate	Aggregate	Gasoline	4781.777946	41623.53594	8.518926412	8518.926412	10212.97469	41623.53594	59176.14669	5.79	MH
Riverside (SC)	2024	MH	Aggregate	Aggregate	Diesel	2046.063726	17552.61075	1.694048275	1694.048275		17552.61075			
Riverside (SC)	2024	MHDT	Aggregate	Aggregate	Gasoline	1238.0029	49965.95549	9.588666638	9588.666638	73502.73221	49965.95549	624307.4842	8.49	MHDT
Riverside (SC)	2024	MHDT	Aggregate	Aggregate	Diesel	12954.3675	564761.4751	63.06414519	63064.14519		564761.4751			
Riverside (SC)	2024	MHDT	Aggregate	Aggregate	Electricity	40.46425607	2074.722372	0	0		2074.722372			
Riverside (SC)	2024	MHDT	Aggregate	Aggregate	Natural Gas	158.0466253	7505.331205	0.849920382	849.9203818		7505.331205			
Riverside (SC)	2024	OBUS	Aggregate	Aggregate	Gasoline	374.6153087	12781.812	2.496601383	2496.601383	4662.380277	12781.812	30088.9967	6.45	OBUS
Riverside (SC)	2024	OBUS	Aggregate	Aggregate	Diesel	219.2789175	15140.91273	1.951181612	1951.181612		15140.91273			
Riverside (SC)	2024	OBUS	Aggregate	Aggregate	Electricity	0.821516166	55.60331633	0	0		55.60331633			
Riverside (SC)	2024	OBUS	Aggregate	Aggregate	Natural Gas	34.6553722	2110.668656	0.214597282	214.5972817		2110.668656			
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	Gasoline	423.5817437	16753.46749	1.914821769	1914.821769	5918.221943	16753.46749	37909.3201	6.41	SBUS
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	Diesel	491.8063992	10225.99182	1.394925642	1394.925642		10225.99182			
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	Electricity	2.445505521	61.99924762	0	0		61.99924762			
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	Natural Gas	443.1589434	10867.86154	2.608474532	2608.474532		10867.86154			
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	Gasoline	146.2127201	18511.1132	3.282633075	3282.633075	11054.35384	18511.1132	49631.8201	4.49	UBUS
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	Diesel	0.3117338	30.10971099	0.002675115	2.675115035		30.10971099			
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	Electricity	0.120004951	18.36371585	0	0		18.36371585			
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	Natural Gas	252.109466	31072.23347	7.769045647	7769.045647		31072.23347			

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