

JERSEY INDUSTRIAL COMPLEX RANCHO CUCAMONGA, CALIFORNIA

AIR QUALITY/GREENHOUSE GAS STUDY

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JERSEY INDUSTRIAL COMPLEX PROJECT RANCHO CUCAMONGA, CALIFORNIA

AIR QUALITY and GREENHOUSE GAS STUDY

This report is an analysis of the potential air quality and greenhouse gas impacts associated with the proposed construction and operation of the Jersey Industrial Complex in the City of Rancho Cucamonga, California. This report has been prepared by Birdseye Planning Group (BPG) under contract to the project applicant to support preparation of the environmental documentation pursuant to the California Environmental Quality Act (CEQA). This study analyzes the potential for temporary impacts associated with construction activity and long-term impacts associated with operation of the proposed project.

PROJECT DESCRIPTION

The project would construct and operate a new warehouse/storage building with offices and related improvements on a vacant site located at 11298 Jersey Boulevard in the City of Rancho Cucamonga. The site is located at the northwest corner of Milliken Avenue and Jersey Boulevard (APN 229-111-60). The site is 7.39 acres in size and zoned Medium Impact/Heavy Industrial. Thus, the project is subject to standards and policies within the City of Rancho Cucamonga Municipal Code for that zoning designation. The project site has not been developed. However, debris piles are located on the site. The site has been fully remediated to remove slag fill that was identified on the site as part of a Phase I Environmental Site Assessment performed in December 2002.

The project would provide a new warehouse building with 143,014 square feet of storage in four separate units, 8,127 square feet of mezzanine storage, 8,127 square feet of office space (i.e., divided into four separate spaces, one for each storage unit) and a 312-square foot electrical room. The total building area would be 159,580 square feet. These would be the architectural parapets on the building frontage. A total of 110 parking spaces would be provided. The building would be oriented east/west with vehicle access to office space fronting the building from Jersey Boulevard. Truck access to the loading docks located at the rear of the building would be provided from Milliken Avenue. The truck access driveway would be gated with security cameras and monitored to ensure no unauthorized entrance to the loading area. The project would provide four warehouse storage units, each with four truck loading docks (i.e., 16 total docks). Water/sewer and other utilities would be provided via existing infrastructure located on-site or within the adjacent roadway corridor. Any cut and fill required during grading would be balanced on-site. No off-site import or export of soil material would be needed. The warehouse is expected to receive and ship non-perishable products from early morning to evening hours seven days a week. No cold storage would be provided. The office personnel would work during typical daytime office hours. Construction of the proposed project would begin in early 2021 and be completed in early 2022. The project site is shown in Figure 1. The proposed site plan is shown in Figure 2.

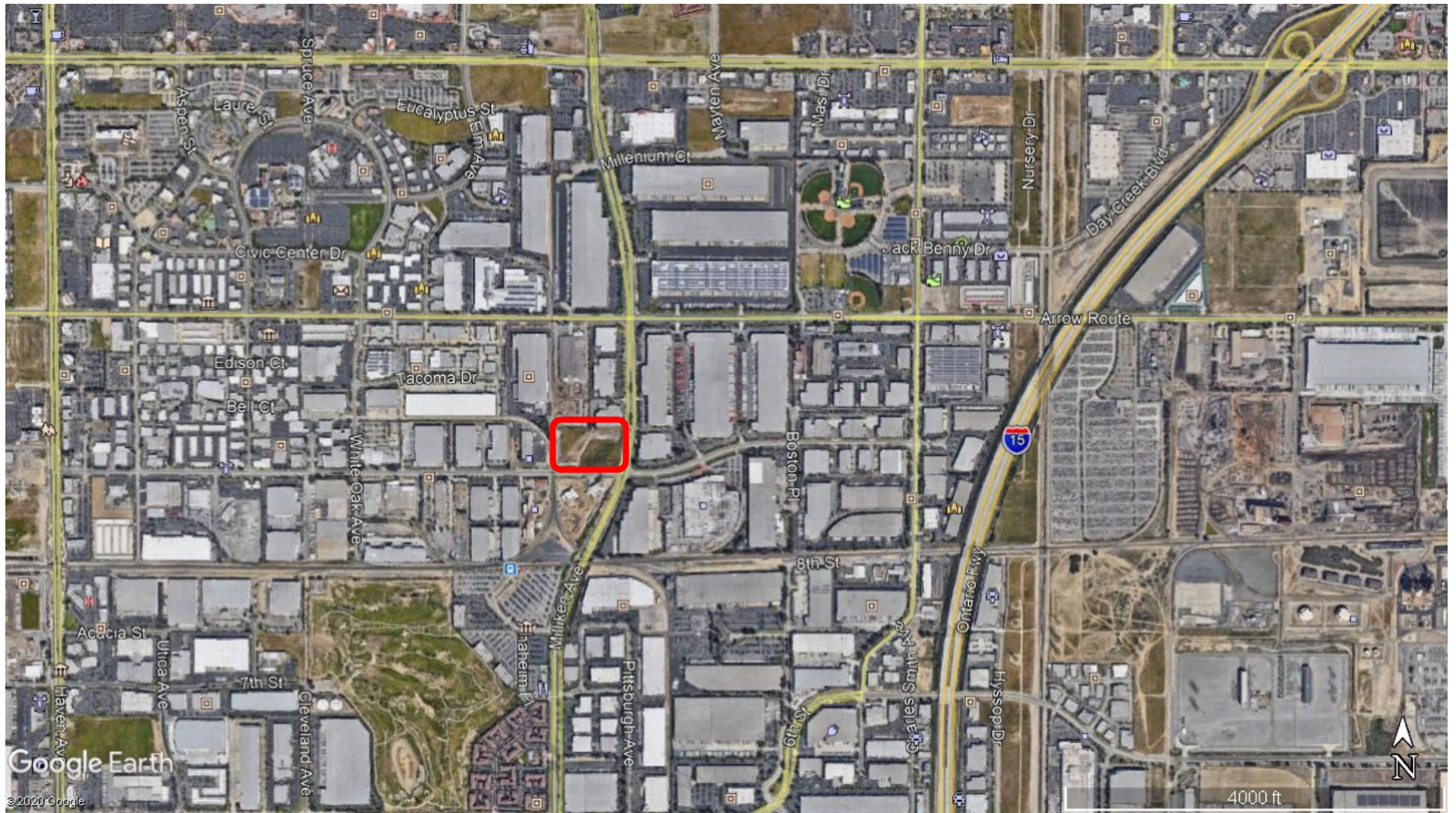


FIGURE 1—Vicinity Map

 - Project Site

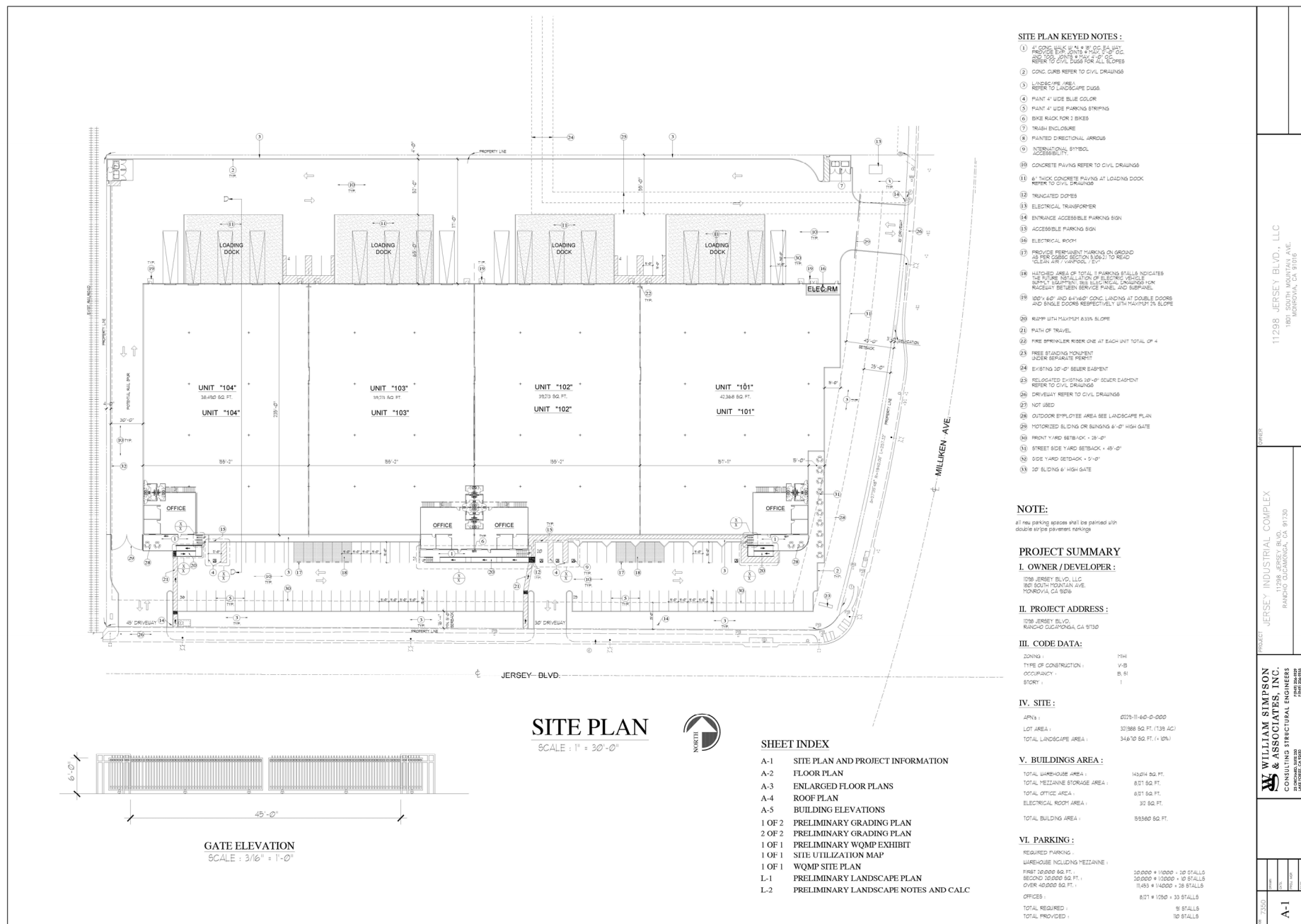


Figure 2— Site Plan

SETTING

Air Pollution Regulation

The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate emissions of airborne pollutants and have established ambient air quality standards for the protection of public health. The EPA is the federal agency designated to administer air quality regulation, while the California Air Resources Board (ARB) is the state equivalent in California. Federal and state standards have been established for six criteria pollutants, including ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulates less than 10 and 2.5 microns in diameter (PM₁₀ and PM_{2.5}), and lead (Pb). California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Table 1 lists the current federal and state standards for each of these pollutants. Standards have been set at levels intended to be protective of public health. California standards are more restrictive than federal standards for each of these pollutants except lead and the eight-hour average for CO.

Table 1 Ambient Air Quality Standards

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS ¹		NATIONAL STANDARDS ²		
		Concentration ³	Method ⁴	Primary ^{3, 5}	Secondary ^{3, 6}	Method ⁷
Ozone ⁸ (O ₃)	1 hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 hours	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m ³)	--	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
Nitrogen Dioxide (NO ₂) ¹⁰	Annual Average	0.030 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (339 µg/m ³)		100 ppb (188 µg/m ³)	--	
Sulfur Dioxide (SO ₂) ¹¹	Annual Average	--	Ultraviolet Fluorescence	0.03 ppm (80 µg/m ³)	--	Pararosaniline
	24 hours	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)	--	
	3 hours	--		--	0.5 ppm (1300 µg/m ³)	
	1 hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)	--	
Respirable	24 hours	50 µg/m ³		150 µg/m ³	150 µg/m ³	

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS ¹		NATIONAL STANDARDS ²		
		Concentration ³	Method ⁴	Primary ^{3, 5}	Secondary ^{3, 6}	Method ⁷
Particulate Matter (PM ₁₀) ⁹	Annual Arithmetic Mean	20 µg/m ³	Gravimetric or Beta Attenuation	--	--	Inertial Separation and Gravimetric Analysis
Fine Particulate Matter (PM _{2.5}) ⁹	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12 µg/m ³	15 µg/m ³	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m ³	Same as Primary Standard	
Sulfates	24 hours	25 µg/m ³	Ion Chromatography	--	--	--
Lead ^{12, 13} (Pb)	30-day Average	1.5 µg/m ³	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m ³	Same as Primary Standard	
	3-month Rolling Average	--		0.15 µg/m ³		
Hydrogen Sulfide (H ₂ S)	1 hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride ¹²	24 hours	0.010 ppm (26 µg/m ³)	Gas Chromatography	--	--	--

Notes:

ppm = parts per million

µg/m³ = micrograms per cubic meter

mg/m³ = milligrams per cubic meter

Source: California Air Resources Board 2017

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Local control in air quality management is provided by the ARB through county-level or regional (multi-county) Air Quality Management Districts (AQMDs). The ARB establishes air quality standards and is responsible for control of mobile emission sources, while the local AQMDs are responsible for enforcing standards and regulating stationary sources. The ARB has established 15 air basins statewide. The project site is located within the South Coast Air Basin (Basin), which includes portions of Los Angeles, Orange and Riverside Counties. Air quality conditions in the project area are under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is required to monitor air pollutant levels to

ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in “attainment” or “non-attainment.” The Basin, in which the project area is located, is a non-attainment area for both the federal and state standards for ozone and PM_{2.5}. The Basin is in attainment for the state and federal standards for PM₁₀, nitrogen dioxide, and carbon monoxide. Characteristics of ozone, carbon monoxide, nitrogen dioxide, and suspended particulates are described below.

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and reactive organic gases (ROG)¹. Nitrogen oxides are formed during the combustion of fuels, while reactive organic compounds are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide. Carbon monoxide is a local pollutant that is found in high concentrations only near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. Carbon monoxide’s health effects are related to its affinity for hemoglobin in the blood. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide. Nitrogen dioxide (NO₂) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. Nitrogen dioxide is an acute irritant. A relationship between NO₂ and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light and causes a reddish-brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM₁₀ and acid rain.

Suspended Particulates. PM₁₀ is particulate matter measuring no more than 10 microns in diameter, while PM_{2.5} is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM₁₀ and

¹ Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC).

PM_{2.5} are by-products of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates (PM_{2.5}) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Toxic Air Contaminants/Diesel Particulate Matter. Hazardous air pollutants, also known as toxic air pollutants (TACs) or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Examples of toxic air pollutants include:

- benzene, which is found in gasoline;
- perchloroethylene, which is emitted from some dry-cleaning facilities; and
- methylene chloride, which is used as a solvent.

Transportation related emissions are focused on particulate matter constituents within diesel exhaust and TAC constituents that comprise a portion of total organic gas (TOG) emissions from both diesel and gasoline fueled vehicles. Diesel engine emissions are comprised of exhaust particulate matter and TOGs which are collectively defined for the purpose of an HRA, as Diesel Particulate Matter (DPM). DPM and TOG emissions from both diesel and gasoline fueled vehicles is typically composed of carbon particles and carcinogenic substances including polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and oxides of nitrogen (NO_x). Information on TAC and DPM is provided herein for reference only. While truck operation would generate DPM, the site is not located in proximity to sensitive receptors such that the use would pose a health risk or justify further evaluation in a health risk assessment.

Regional Climate and Local Air Quality

South Coast Air Basin. The combination of topography, low mean mixing height, abundant sunshine, and emissions from the second largest urban area in the United States gives the SCAB the worst air pollution problem in the nation. Climate in the SCAB is determined by its terrain and geographical location. The SCAB consists of a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the SCAB. The SCAB lies in the semi-permanent high-pressure zone of the eastern

Pacific. The resulting climate is mild, and is tempered by cool ocean breezes. This climatological pattern is rarely interrupted. However, periods of extremely hot weather, winter storms, or easterly Santa Ana wind conditions can occur.

Annual average temperatures vary little throughout the SCAB, ranging from the low-to-middle 60s, measured in degrees Fahrenheit. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The majority of annual rainfall in the SCAB occurs between October and March. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the SCAB and along the coastal side of the mountains. Average temperatures in winter months in the project area range from a low of 34 degrees F to a high of 68 degrees F. In the summer, average temperatures range from a low of 59 degrees F to a high of 98 degrees F. During an average year, the greatest amount of precipitation, 2.86 inches, occurs in February.

The SCAQMD operates a network of 38 ambient air monitoring stations throughout the South Coast Air Basin. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the California and federal standards. The air quality monitoring station located nearest to the project site is the Upland station, located approximately 5 miles southwest of the project site. Table 2 provides a summary of monitoring data at the Upland Station for ozone and PM₁₀. As referenced, the SCAB is a nonattainment area for these two pollutants.

As shown, both the federal and state ozone standards were exceeded at the Upland monitoring station during each of the last three years. The federal PM₁₀ standard was exceeded one time during the last three years. Insufficient data was available to determine whether the state standard was exceeded or whether the PM_{2.5} standard was exceeded.

Air Quality Management Plan

Under state law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The SCAQMD updates the plan every three years. Each iteration of the SCAQMD's Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. SCAQMD adopted the 2016 AQMP in March 2017. The 2016 AQMP incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012 AQMP.

Table 2
Ambient Air Quality Data

Pollutant	2016	2017	2018
Ozone, ppm - Worst Hour	0.116	0.127	0.111
Number of days of State exceedances (>0.070 ppm)	88	87	52
Particulate Matter <10 microns, $\mu\text{g}/\text{m}^3$ Worst 24 Hours	184	106.5	156.6
Number of samples of State exceedances (>50 $\mu\text{g}/\text{m}^3$)	*	*	*
Number of samples of Federal exceedances (>150 $\mu\text{g}/\text{m}^3$)	1	*	1
Particulate Matter <2.5 microns, $\mu\text{g}/\text{m}^3$ Worst 24 Hours	40.0	73.4	44.9
Number of samples of State exceedances (>12 $\mu\text{g}/\text{m}^3$)	*	*	*
Number of samples of Federal exceedances (>12 $\mu\text{g}/\text{m}^3$)	*	*	*

Upland – 1350 San Bernardino Road Monitoring Station

**Data insufficient to determine the value*

Source: California Air Resources Board, 2016, 2017, 2018 Annual Air Quality Data Summaries available at <http://www.arb.ca.gov/adam/topfour/topfour1.php>

The 2016 AQMP was prepared to ensure continued progress towards clean air and comply with state and federal requirements. This AQMP builds upon the approaches taken in the 2012 AQMP for the South Coast Air Basin for the attainment of State and federal ozone air quality standards. The 2016 AQMP incorporates the 2016 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for applicable source categories. The 2016 AQMP also includes the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. The 2016 AQMP is available to download at <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>.

Sensitive Receptors

Sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to air pollutants. Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare as well that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. The closest existing properties defined herein as sensitive receptors are multifamily residences located along the west side of Milliken Avenue approximately 0.5-miles south of the project site.

AIR QUALITY IMPACT ANALYSIS

Methodology and Significance Thresholds

This air quality analysis conforms to the methodologies recommended in the SCAQMD's *CEQA Air Quality Handbook* (1993). The handbook includes thresholds for emissions associated with both construction and operation of proposed projects. All emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2016.3.2.

Construction activities such as clearing, grading and excavation would generate diesel and dust emissions. Construction equipment that would generate criteria air pollutants includes excavators, graders, dump trucks, and loaders. It was assumed that all construction equipment used would be diesel-powered. Construction emissions associated with development of the proposed project by estimating the types of equipment (including the number) that would be used on-site during each of the construction phases. Construction emissions are analyzed using the regional thresholds established by the SCAQMD and published in the *CEQA Air Quality Handbook*.

Operational emissions include mobile source emissions, energy emissions, and area source emissions. Mobile source emissions are generated by motor vehicle trips associated with operation of the project. CalEEMod default trip rates were used for both the warehouse and office use as separate emission sources. The default trip generation rates assume more trips for the purpose air emission modeling than would occur using the trip generation rates in the Trip Generation/Vehicle Miles Traveled (VMT) (Mizuta Traffic Consulting, Inc., November 2020). Emissions attributed to energy use include electricity and natural gas consumption for space and water heating. Area source emissions are generated by landscape maintenance equipment, consumer products and architectural coatings (i.e., paints). To determine whether a regional air quality impact would occur, the increase in emissions would be compared with the SCAQMD's recommended regional thresholds for operational emissions.

Regional Thresholds. Based on Appendix G of the *CEQA Guidelines*, a project would have a significant air quality impact if it would:

- a) *Conflict with or obstruct implementation of the applicable air quality plan;*
- b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
- c) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);*
- d) *Expose sensitive receptors to substantial pollutant concentrations; or*
- e) *Create objectionable odors affecting a substantial number of people.*

The SCAQMD has developed specific quantitative thresholds that apply to projects within the SCAB. The following significance thresholds apply to short-term construction activities:

- 75 pounds per day of ROG
- 100 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of SO_x
- 150 pounds per day of PM₁₀
- 55 pounds per day of PM_{2.5}

The following significance thresholds apply to long-term operational emissions:

- 55 pounds per day of ROG
- 55 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of SO_x
- 150 pounds per day of PM₁₀
- 55 pounds per day of PM_{2.5}

Construction Emissions

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM₁₀ and PM_{2.5}) and exhaust emissions from heavy construction vehicles, in addition to ROG that would be released during the drying phase upon application of paint and other architectural coatings. Construction would generally consist of demolition, site preparation, grading, construction of the proposed buildings, paving, and architectural coating (i.e., paint) application.

This analysis assumes that graded soils would be balanced on the project site and that no soil import or export would be required. The project would be required to comply with SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the South Coast Air Basin. Therefore, the following conditions, which are required to reduce fugitive dust in compliance with SCAQMD Rule 403, were included in CalEEMod for site preparation and grading phases of construction.

1. **Minimization of Disturbance.** Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
2. **Soil Treatment.** Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least twice daily, preferably in the late morning and after work is done for the day. The analysis provided herein assumes watering would occur two times daily.
3. **Soil Stabilization.** Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for

dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.

4. **No Grading During High Winds.** Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).
5. **Street Sweeping.** Construction contractors should sweep all on-site driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

Construction emissions modeling for demolition, site preparation, grading, building construction, paving, and architectural coating application is based on the overall scope of the proposed development and construction phasing which is expected to begin early 2021 and extend through early 2022, a duration of approximately 12 months. For dust control, it was assumed the disturbed area would be watered twice daily. In addition to SCAQMD Rule 403 requirements, emissions modeling also accounts for the use of low-VOC paint (50 g/L for non-flat coatings and 100 g/L for pavement coatings) as required by SCAQMD Rule 1113. Table 3 summarizes the estimated maximum mitigated daily emissions of pollutants occurring during 2021.

Table 3
Estimated Maximum Mitigated Daily Construction Emissions

Construction Phase	Maximum Emissions (lbs/day)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2021 Maximum lbs/day	3.9	40.5	22.1	0.04	10.3	6.4
2022 Maximum lbs/day	49.9	18.8	20.1	0.04	1.9	1.0
<i>SCAQMD Regional Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Threshold Exceeded 2021	No	No	No	No	No	No
Threshold Exceeded 2022	No	No	No	No	No	No

As shown in Table 3, construction of the proposed project would not exceed the SCAQMD regional thresholds. No mitigation in addition to compliance with SCAQMD Rule 403 and Rule 1113 would be required to reduce construction emissions to less than significant.

Localized Significance Thresholds. The SCAQMD has published a “Fact Sheet for Applying CalEEMod to Localized Significance Thresholds” (South Coast Air Quality Management

District 2011). The following describes the methods used to apply the fact sheet methods to the CalEEMod output data for comparison with the Localized Significance Thresholds (LSTs). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. Construction-related emissions reported by CalEEMod are compared to the localized significance threshold lookup tables. The CalEEMod output in Appendix A shows the equipment assumed for this analysis.

LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, distance to the sensitive receptor and related factors. However, LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for NO_x, CO, PM₁₀ and PM_{2.5}. LSTs are not applicable to mobile sources such as cars on a roadway (Final Localized Significance Threshold Methodology, SCAQMD, June 2003). As such, LSTs for operational emissions do not apply to the proposed development as the majority of project emissions would be generated by cars on roadways traveling to/from the facility.

LSTs have been developed for emissions within areas of one, two and five acres in size, with air pollutant modeling recommended for activity within larger areas. While emission modeling was performed for the project, an LST evaluation was also performed to conservatively address potential short-term construction impacts. The project site is located in Source Receptor Area 32 (SRA-32, Northwest San Bernardino Valley). According to the SCAQMD's publication *Final Localized Significant (LST) Thresholds Methodology*, the use of LSTs is voluntary, to be implemented at the discretion of local agencies. LSTs for construction related emissions in the SRA 32 at varying distances between the source and receiving property are shown in Table 4. The area disturbed during daily grading based on the default equipment mix generated by CalEEMod is four acres. To conservatively evaluate potential LST impacts, the thresholds for a two-acre site are shown below in Table 4.

As referenced, the nearest sensitive receptors to the project site are residences located approximately 0.5 miles to south. Consistent with SCAQMD recommendations for projects with receptors greater than 500 meters from a construction site, the 500-meter LSTs are used. As discussed, LSTs apply to on-site uses only and do not include off-site vehicle trips and emissions. LSTs are compared to estimated project emissions in Table 5.

As shown in Table 5, no LST's would be exceeded during construction at the receivers located within 500 meters of the active construction area. No mitigation measures are required.

Table 4
SCAQMD LSTs for Construction

Pollutant	Allowable emissions as a function of receptor distance in meters from a two-acre site (lbs/day)				
	25	50	100	200	500
Gradual conversion of NO _x to NO ₂	170	200	263	378	684
CO	1,232	1,877	3,218	6,778	24,768
PM ₁₀	6	19	34	66	160
PM _{2.5}	5	8	14	36	150

Source: <http://www.aqmd.gov/CEQA/handbook/LST/appC.pdf>, October 2009.

Table 5
Estimated Mitigated Daily On-Site Construction Emissions and LSTs

On-Site Construction Emissions	NO _x	CO	PM ₁₀	PM _{2.5}
Demolition	31.4	21.5	1.5	1.4
Site Preparation	40.4	21.1	10.1	6.3
Grading	24.7	15.8	4.1	2.5
Building Construction	17.4	16.7	0.9	0.9
Paving	9.5	12.1	0.4	0.4
Architectural Coating	1.4	1.8	0.08	0.08
Local Significance Threshold – 500 meters (on-site only)²	684	24,768	160	150
Threshold Exceeded	No	No	No	No

Notes: All calculations were made using CalEEMod. See the Appendix A. Grading, Paving, Building Construction, and Architectural Coating totals include worker trips, construction vehicle emissions and fugitive dust.

Site Preparation and Grading phases incorporate anticipated emissions reductions required by SCAQMD Rule 403 to reduce fugitive dust.

1 - Total daily emissions over the construction cycle were totaled as requested by reviewer. The LSTs are for daily on-site emissions. Note that daily on-site emission estimates do not exceed the LSTs.

2- LSTs are for a two-acre disturbance area in SRA-32 within 500 meters of sensitive properties boundary.

Construction-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of “individual cancer risk”. “Individual Cancer Risk” is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the short-term construction schedule, the proposed project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and related individual cancer risk. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project.

Construction-Related Odor Impacts

Potential sources of odor during construction activities include equipment exhaust and activities such as paving. The objectionable odors that may be produced during the construction process would occur periodically and end when construction is completed. No significant impact related to odors would occur during construction of the proposed project per threshold (e) referenced above.

Long-Term Regional Impacts

Regional Pollutant Emissions

Table 6 summarizes emissions associated with operation of the proposed project. Operational emissions include emissions from electricity consumption (energy sources), vehicle trips (mobile sources), and area sources including landscape equipment and architectural coating emissions as the structures are repainted over the life of the project. The majority of operational emissions are associated with vehicle trips to and from the project site.

As shown in Table 6, the net change in emissions would not exceed the SCAQMD thresholds or LSTs for the pollutants evaluated. Therefore, the project's regional air quality impacts (including impacts related to criteria pollutants, sensitive receptors and violations of air quality standards) would be less than significant.

Table 6
Estimated Operational Emissions

	Estimated Emissions (lbs/day)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
<i>Proposed Project</i>						
Area	3.3	0.01	0.02	0.01	0.01	0.01
Energy	0.01	0.09	0.07	0.01	0.01	0.01
Mobile	0.7	5.0	9.8	0.02	2.9	0.8
Maximum lbs/day	4.1	5.1	9.9	0.03	2.9	0.8
<i>SCAQMD Thresholds</i>	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

See Appendix for CalEEMod version. 2016.3.2 computer model output for operational emissions. Summer emissions shown.

Note – totals may vary slightly due to rounding.

1 – Totals shown for LSTs include energy and area sources only. Mobile sources are not included.

Operational Toxic Air Contaminant Emissions

As referenced above, transportation related emissions are focused on particulate matter constituents within diesel exhaust and TAC constituents that comprise a portion of total organic gas (TOG) emissions from both diesel and gasoline fueled vehicles. Diesel engine emissions are comprised of exhaust particulate matter and TOGs which are collectively defined for the purpose of a health risk assessment, as Diesel Particulate Matter (DPM). DPM and TOG emissions from both diesel and gasoline fueled vehicles is typically composed of carbon particles and carcinogenic substances including polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and oxides of nitrogen (NO_x). While truck operation would generate DPM, the site is located along an unrestricted truck route (Milliken Avenue) within the City of Rancho Cucamonga per Section 10.56.010 of the Municipal Code. The California Air Resources Board (CARB) Air Quality and Land Use Handbook (2005) recommends avoiding the siting of new sensitive receptors within 500 feet of an urban roadway with 100,000 vehicles daily. Traffic counts from 2015 show daily volumes on Milliken Avenue in proximity to Jersey Boulevard are 30,310. If these volumes are factored up by 2% annually, the 2021 volumes would be approximately 34,134. This is less than the recommended threshold. The project is not a sensitive use and project traffic would utilize an existing truck route. The nearest receptor is located approximately one-half mile south of the site along Milliken Avenue and daily volumes are less than the CARB recommended threshold. Thus, project-related truck traffic would not pose a health risk or justify further evaluation in a health risk assessment.

Objectionable Odors

The proposed warehouse would receive, store and distribute various dry goods. The facility is not expected to create or emit objectionable odors. Therefore, this impact would be less than significant per threshold (e).

AQMP Consistency

A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates local city General Plans and the Southern California Association of Government's (SCAG) Regional Transportation Plan socioeconomic forecast projections of regional population, housing and employment growth.

The proposed project involves the construction of a warehouse facility on a 7.39-acre site. The project would create new jobs many of which are expected to be filled by people already living in the general area. The project would not create housing nor is it expected to increase housing demand to the extent that new housing would be needed for the workforce. The proposed site is zoned Heavy Industrial and project is being processed as permitted use within the zone. The proposed project would be consistent with current planning documents; thus, it would be consistent with the AQMP and not cause an adverse impact under threshold (a).

GREENHOUSE GAS EMISSIONS

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and sulfur hexafluoride (SF₆) (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as “carbon dioxide equivalent” (CO₂E), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a GWP of one. By contrast, methane (CH₄) has a GWP of 21, meaning its global warming effect is 21 times greater than carbon dioxide on a molecule per molecule basis (IPCC, 1997).

Total U.S. GHG emissions were 6,676.6 MMT CO₂E in 2018 (U.S. EPA, April 2020). Total U.S. emissions increased by 3.7 percent from 1990 to 2018. Overall, net emissions increase 3.1 percent from 2017 to 2018 and decreased from 10.2 percent from 2005 levels. The decline reflects many long-term trends, including population, economic growth, energy market trends, technological changes including energy efficiency, and energy fuel choices. Between 2017 and 2018, the increase in total greenhouse gas emissions was largely driven by an increase in CO₂ emissions from fossil fuel combustion. This resulted from many factors including increased energy use from greater heating and cooling needs caused by a colder winter and hotter summer in 2018 compared to 2017.

The primary greenhouse gas emitted by human activities in the United States was CO₂, representing approximately 81.3 percent of total greenhouse gas emissions. The largest source of CO₂, and of overall greenhouse gas emissions, was fossil fuel combustion. Methane emissions (CH₄) account for nearly 10 percent of emissions and have decreased by 7 percent since 2005 and 18.1 percent since 1990. The major sources of methane include enteric fermentation associated with domestic livestock, natural gas systems, and decomposition of wastes in landfills. Agricultural soil management, stationary fuel combustion, manure management, and mobile sources of fuel combustion were the major sources of N₂O emissions.

Based upon the California Air Resources Board (ARB) California Greenhouse Gas Inventory, 2019 edition, California produced 424.1 MMT CO₂E in 2017. The major source of GHG in California is transportation, contributing 41 percent of the state's total GHG emissions. The industrial sector is the second largest source, contributing 24 percent of the state's GHG emissions (ARB, June 2019). California produced 441.5 MMT CO₂E in 2014. The major source of GHG was transportation, contributing 37 percent of the state's total GHG emissions. The industrial sector was the second largest source, contributing 24 percent of the state's GHG emissions (ARB, June 2016).

California emissions result in part to its geographic size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. The ARB has projected statewide unregulated GHG emissions for the year 2020 is projected to be 509 MMT CO₂E (ARB, May 2014). These projections are based on Business As Usual (BAU) conditions and represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

California Regulations

In 2005, former Governor Schwarzenegger issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 states that by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent of 1990 levels (CalEPA, 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report recommended various strategies that the state could pursue to reduce GHG emissions. These strategies could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture.

Assembly Bill 32 and CARB's Scoping Plan

To further the goals established in EO S-3-05, the Legislature passed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. Under AB 32, CARB is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO₂E). CARB's adoption of this limit is in accordance with Health and Safety Code, Section 38550.

Further, in 2008, CARB adopted the Scoping Plan in accordance with Health and Safety Code, Section 38561. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33%;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions;
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In the Scoping Plan (CARB 2008), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5% from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020) absent GHG reducing laws and regulations (referred to as Business-As-Usual (BAU)). To calculate this percentage reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (CARB 2011a), CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7% (down from 28.5%) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (RPS) (12% to 20%), CARB determined that

achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 28.5%) from the BAU conditions.

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update; CARB 2014). The stated purpose of the First Update is to “highlight California’s success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050” (CARB 2014). The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the First Update, CARB identified “six key focus areas comprising major components of the state’s economy to evaluate and describe the larger transformative actions that will be needed to meet the state’s more expansive emission reduction needs by 2050” (CARB 2014). Those six areas are (1) energy, (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure), (3) agriculture, (4) water, (5) waste management, and (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05’s 2050 reduction goal (CARB 2014).

Based on CARB’s research efforts presented in the First Update, it has a “strong sense of the mix of technologies needed to reduce emissions through 2050” (CARB 2014). Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the state’s 1990 emissions level using more recent GWPs identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO₂E) and the revised 2020-emissions-level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 28.5% or 16%) from the BAU conditions (CARB 2014).

In January 2017, CARB released, *The 2017 Climate Change Scoping Plan Update* (Second Update; CARB 2017b), for public review and comment. This update proposes CARB’s strategy for achieving the state’s 2030 GHG target as established in Senate Bill (SB) 32 (discussed below), including continuing the Cap-and-Trade Program through 2030, and includes a new approach to reduce GHGs from refineries by 20%. The Second Update incorporates approaches to cutting short-lived climate pollutants (SLCPs) under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by CARB in March 2017), acknowledges the need for reducing emissions in agriculture, and highlights the work underway to ensure that California’s natural and working lands increasingly sequester carbon. During development of the Second Update, CARB held a number of public workshops in the Natural and Working Lands, Agriculture, Energy, and Transportation sectors to inform development of the 2030

Scoping Plan Update (CARB 2016). The Second Update has not been considered by CARB's Governing Board at the time this analysis was prepared.

Executive Order S-01-07 was enacted on January 18, 2007. The order mandates that a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.

Other regulations affecting state and local GHG planning and policy development are summarized as follows:

Assembly Bill 939 and Senate Bill 1374

Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

Senate Bill 1368

Senate Bill 1368 (SB 1368) is the companion Bill of AB 32 and was adopted September, 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007 and for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all electricity provided to the State, including imported electricity, must be generated by plants that meet the standards set by California Public Utilities Commission (CPUC) and California Energy Commission (CEC).

Senate Bill 97

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is an environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010. Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed sections of the CEQA Guidelines and incorporated GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.

- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that “to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation.”
- OPR’s emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09

Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08 was signed on November 2008 and expands the State’s Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established 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 efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity

production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards. The 2013 commercial standards are estimated to be 30 percent more efficient than the 2008 standards; 2013 residential standards are at least 25 percent more efficient. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted in September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable community's strategy or alternate planning strategy for consistency with its assigned targets.

SCAG's 2016-2040 RTP/SCS

SB 375 requires that Metropolitan Planning Organizations (MPOs) prepare a sustainable communities strategy as part of the their regional transportation plan. For the Southern California Association of Governments (SCAG) region, the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was adopted on April 7, 2016 and is an update to the 2012 RTP/SCS (SCAG 2016). In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled from automobiles and light duty trucks and thereby reduce GHG emissions from these sources. The 2016-2040 RTP/SCS projects that the SCAG region will meet or exceed the passenger per capita targets set in 2010 by CARB. It is projected that VMT per capita in the region for year 2040 would be reduced by 7.4 percent with implementation of the 2016-2040 RTP/SCS compared to a no-plan year 2040 scenario.

Under the 2016-2040 RTP/SCS, SCAG anticipates lowering GHG emissions 8 percent below 2005 levels by 2020, 18 percent by 2035, and 21 percent by 2040. The 18 percent reduction by 2035 over 2005 levels represents a 2 percent increase in reduction compared to the 2012 RTP/SCS projection. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include

planning for new growth around high quality transit areas and livable corridors and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles (SCAG 2016). However, the SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS; instead, it provides incentives to governments and developers to achieve consistency with the SCS.

However, CEQA incentivizes, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as “transit priority projects.”

Senate Bill X7-7

Senate Bill X7-7 (SB X7-7), enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. Additionally, SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

California Green Building Standards

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California’s building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code, Section 25402(b)(1)). The regulations receive input from members of industry, as well as the public, with the goal of “reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy” (California Public Resources Code, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402(d)) and cost effectiveness (California Public Resources Code, Sections 25402(b)(2) and (b)(3)). These standards are updated to consider and incorporate new energy efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2016 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2017. In general, single-family homes built to the 2016 standards are anticipated to use approximately 28% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and nonresidential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2015a).

Title 24, Part 11. In addition to the CEC’s efforts, in 2008, the California Building Standards

Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as "CALGreen," and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings and schools and hospitals. The CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings;
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance;
- Diversion of 65% of construction and demolition waste from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency;
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations; and
- Low-pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle board.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements, stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 25% cement reduction, and cool/solar-reflective roofs (24 CCR Part 11).

The California Public Utilities Commission, CEC, and CARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. The key policy timelines include the following: (1) all new residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by 2030 (CPUC 2013).² As most recently defined by the CEC in its 2015 Integrated Energy Policy Report (CEC 2015b), a ZNE code building is "one where the value of the energy produced by on-site

² It is expected that achievement of the ZNE goal will occur through revisions to the Title 24 standards.

renewable energy resources is equal to the value of the energy consumed annually by the building” using the CEC’s Time Dependent Valuation metric.

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Executive Order B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB’s Scoping Plan to express the 2030 target in terms of MMT CO₂E. EO B-30-15 also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

Senate Bill 32 and Assembly Bill 197

SB 32 and AB 197 (enacted in 2016) are companion bills that set new statewide GHG reduction targets, make changes to CARB’s membership, increase legislative oversight of CARB’s climate change-based activities, and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state’s climate policies. AB 197 added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

Local Regulations and CEQA Requirements

As referenced, pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, but contain no suggested thresholds of significance for GHG emissions. Instead, lead agencies are given the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. The general approach to developing a Threshold of Significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move the state towards climate stabilization. If a project would generate GHG emissions above the threshold level, its contribution to cumulative impacts would be considered significant. To date, the Bay Area Air Quality Management District (BAAQMD), the South Coast Air Quality Management District (SCAQMD), and the San Joaquin Air Pollution Control District (SJVAPCD) have adopted quantitative significance thresholds for GHGs. However, in March 2013 the Bay Area's thresholds were overruled by the Alameda County Superior Court (*California Building Industry Association v. Bay Area Air Quality Management District*), on the basis that adoption of the thresholds constitutes a "project" under CEQA, but did not receive the appropriate environmental review. As a result, BAAQMD has elected to not recommend specific GHG thresholds for use in CEQA documents.

The SCAQMD threshold, which was adopted in December 2008, considers emissions of over 10,000 metric tons CO₂E /year to be significant. However, the SCAQMD's threshold applies only to stationary sources and is expressly intended to apply only when the SCAQMD is the CEQA lead agency. Although not formally adopted, the SCAQMD has developed a draft quantitative threshold for all land use types of 3,000 metric tons CO₂E /year (SCAQMD, September 2010). Note that lead agencies retain the responsibility to determine significance on a case-by-case basis for each specific project.

Sustainable Community Action Plan. Adopted in April 2017, the Sustainable Community Action Plan serves as a roadmap for advancing environmental sustainability and reducing greenhouse gas emissions and identifying long-term actions that can be implemented to reduce city-wide GHG emissions beyond 2020. It is intended to serve as a vision for sustainability in Rancho Cucamonga and identify initial steps the City can take to begin implementing sustainability initiatives. The Sustainable Community Action Plan:

- Describes a vision for Rancho Cucamonga's desire for a sustainable future.
- Articulates the community's values and priorities as guiding principles for the Plan.
- Confirms greenhouse gas reduction goals.
- Highlights recent accomplishments and projects undertaken by the City and community.
- Identifies new policy and program opportunities to achieve environmental sustainability goals; and

- Expresses the sustainability, economic, and health co-benefits through a triple-bottom line evaluation.

Project consistency with the Sustainable Community Action Plan is described below.

CLIMATE CHANGE IMPACT ANALYSIS

Thresholds of Significance

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions in March 2010. These guidelines are used in evaluating the cumulative significance of GHG emissions from the proposed project. According to the adopted CEQA Guidelines, impacts related to GHG emissions from the proposed project would be significant if the project would:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or*
- *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence on climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). The proposed project is evaluated herein based on 3,000 MT CO_{2e} annual significance standard suggested by the South Coast AQMD as well as compliance with applicable elements of the Rancho Cucamonga Sustainable Community Action Plan (April 2017).

Methodology

GHG emissions associated with construction and operation of the proposed project have been estimated using California Emissions Estimator Model (CalEEMod) version 2016.3.2.

Construction Emissions

Construction of the proposed project would generate temporary GHG emissions primarily associated with the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest emission quantities because the use of heavy equipment

is greatest during this phase of construction. Emissions associated with the construction period were estimated based on the projected maximum amount of equipment that would be used onsite at one time. Air districts such as the SCAQMD have recommended amortizing construction-related emissions over a 30-year period to calculate annual emissions. Complete CalEEMod results and assumptions can be viewed in the Appendix.

Operational Emissions

Default values used in CalEEMod version 2016.3.2 are based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies. CalEEMod provides operational emissions of CO₂, N₂O and CH₄. This methodology has been subjected to peer review by numerous public and private stakeholders, and in particular by the CEC; and therefore, is considered reasonable and reliable for use in GHG impact analysis pursuant to CEQA. It is also recommended by CAPCOA (January 2008).

Emissions associated with area sources (i.e., consumer products, landscape maintenance, and architectural coating) were calculated in CalEEMod based on standard emission rates from CARB, USEPA, and district supplied emission factor values (CalEEMod User Guide, 2016). Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide, 2016). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California. Emissions from mobile sources were quantified based on trip generation estimates included in CalEEMod version 2016.3.2 and verified per the trip generation memorandum prepared by Mizuta Traffic Consulting, Inc., (November 2020).

Estimate of GHG Emissions

Construction Emissions

Construction activity is assumed to occur over a period of approximately 12 months beginning in early 2021 and concluding in early 2022. Based on CalEEMod results, construction activity for the project would generate an estimated 531 metric tons of carbon dioxide equivalent (CO₂E), as shown in Table 7. Amortized over a 30-year period (the assumed life of the project), construction of the proposed project would generate 18 metric tons of CO₂E per year.

Table 7
Estimated Construction Related Greenhouse Gas Emissions

Year	Annual Emissions (metric tons CO₂E)
2021	503
2022	28
Total	531
Amortized over 30 years	18 metric tons per year

See Appendix for CalEEMod software program output for new construction.

Operational Indirect and Stationary Direct Emissions

Long-term emissions relate to energy use, solid waste, water use, and transportation. Each source is discussed below and includes the emissions associated with existing development and the anticipated emissions that would result from the proposed project.

Energy Use. Operation of onsite development would consume both electricity and natural gas (see Appendix for CalEEMod results). The generation of electricity through combustion of fossil fuels typically yields CO₂, and to a smaller extent, N₂O and CH₄. Natural gas emissions can be calculated using default values from the CEC sponsored CEUS and RASS studies which are built into CalEEMod. As shown in Table 8, the overall net increase in energy use at the project site would result in approximately 162 metric tons of CO₂E per year.

Water Use Emissions. The CalEEMod results indicate that the project would use approximately 36 million gallons of water per year. Based on the amount of electricity generated to supply and convey this amount of water, as shown in Table 9, the project would generate approximately 204 metric tons of CO₂E per year.

Solid Waste Emissions. For solid waste generated onsite, it was assumed that the project would achieve a 75% diversion rate, as required by the California Integrated Waste Management Act of 1989 (AB 939), as amended by AB 341. The CalEEMod results indicate that the project would result in approximately 19 metric tons of CO₂E per year associated with solid waste disposed within landfills.

Transportation Emissions. Mobile source GHG emissions were estimated using the annual vehicle miles traveled (VMT) calculated by CalEEMod for the proposed project. Table 10 shows the estimated mobile emissions of GHGs for the project based on the estimated annual VMT of 1,307,611. CalEEMod does not calculate N₂O emissions related to mobile sources. As such, N₂O

Table 8
Estimated Annual Energy-Related Greenhouse Gas Emissions

Emission Source	Annual Emissions (CO ₂ E)
Natural Gas	18 metric tons
Electricity	144 metric tons
Total	162 metric tons

See Appendix for CalEEMod software program output.

Table 9
Estimated Annual Solid Waste and Water Use Greenhouse Gas Emissions

Emission Source	Annual Emissions (CO ₂ E)
Water	204 metric tons
Solid Waste	19 metric tons
Total Water and Solid Waste	223 metric tons

See Appendix for CalEEMod software program output (demolition and new construction).

¹Based on a 75% diversion rate, as required by the California Integrated Waste Management Act (AB 939).

emissions were calculated based on the project's VMT using calculation methods provided by the California Climate Action Registry General Reporting Protocol (January 2009) and fleet mix percentages. As shown in Table 10, the project would generate approximately 616 metric tons of CO₂E associated with new vehicle trips.

Combined Construction, Stationary and Mobile Source Emissions

Table 11 combines the net new construction, operational, and mobile GHG emissions associated with the proposed project. As discussed above, temporary emissions associated with construction activity (approximately 531 metric tons CO₂E) are amortized over 30 years (the anticipated life of the project).

The combined annual emissions would total approximately 1,019 metric tons per year in CO₂E. This total represents less than 0.001% of California's total 2017 emissions of 424 million metric tons. The majority (60%) of the project's GHG emissions are associated with energy demand. As noted above, neither the SCAQMD nor the City of Rancho Cucamonga has adopted GHG emissions thresholds that apply to land use projects. Therefore, the proposed project is

Table 10
Estimated Annual Mobile Emissions of Greenhouse Gases

Emission Source	Annual Emissions (CO ₂ E)
<i>Proposed Project</i>	
Mobile Emissions (CO ₂ & CH ₄)	589 metric tons
Mobile Emissions (N ₂ O) ¹	27 metric tons
Total	616 metric tons

See Appendix for CalEEMod software program output.

¹ California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009, page 30-35. See Appendix for calculations.

Table 11
Combined Annual Greenhouse Gas Emissions

Emission Source	Annual Emissions (CO ₂ E)
Construction	18 metric tons
Operational	
Energy	162 metric tons
Solid Waste	19 metric tons
Water	204 metric tons
Mobile	616 metric tons
Total	1,019 metric tons

See Appendix for CalEEMod software program output (demolition and new construction).

evaluated based on the SCAQMD's recommended/preferred option threshold of 3,000 metric tons CO₂E per year for all land use types referenced above. Project-related annual GHG emissions would not exceed the threshold of 3,000 metric tons per year; therefore, no measures are needed to reduce GHG emissions to below CEQA thresholds.

GHG Cumulative Significance. As discussed, a proposed project exceeding the 3,000 annual MT screening threshold could have a significant environmental impact under CEQA. The calculations presented herein show emissions would not exceed 3,000 MT CO₂E annually. No GHG mitigation measures are required.

Sustainable Community Action Plan

The Rancho Cucamonga Sustainable Community Action Plan (April 2017) summarizes the direction and future goals for sustainability in Rancho Cucamonga and is the result of a collaborative effort between residents, local businesses, community organizations, students, City staff and elected officials, and regional agencies. The Land Use, Open Space Goals and Policies section supports City Council mid- and long-range planning goals regarding sustainable land use decisions, open space enhancement and revitalization. The Green Building Performance section addresses the construction of energy efficient buildings that reduce overall

demand for conventional forms of electricity and use of natural gas. The Water+Wastewater section addresses policies and methods to reduce potable water use and generation of wastewater. A directive incorporated into the Sustainable Community Action Plan focuses on developing standards to address mixed use, high density, Transit Oriented Development in underperforming or underutilized areas. Specific components of the project that would incorporate goals and policies within the Sustainable Community Action Plan focus on energy conservation, construction of buildings that are consistent with green building standards, reduced demand for potable water and achieving a 75% reduction of solid waste generated by the project that enters area landfills.

The proposed site is zoned Minimum Impact/Heavy Industrial and the proposed project is permitted outright within this zone per the zoning code. The project would be constructed on a vacant site within an existing industrial area and surrounding by existing industrial uses. The building would be designed consistent with Title 24 of the California Energy Code and applicable elements of the CalGreen green building standards code. The project would implement a water reduction program designed to reduce water consumption by 20% as required by Executive Order B-25-15 and implement a recycling program with a goal of recycling 75% of all waste material consistent with AB 341.

Striped shoulders are located on both Milliken Avenue and Jersey Boulevard. Milliken Avenue is a designated bicycle route in the General Plan Mobility Element. The project would be conditioned to make frontage improvements (i.e., sidewalk/curb/gutter) to ensure consistency with City of Rancho Cucamonga standards and facilitate pedestrian access within the area. Omnitrans Route 82 provides transit service along Milliken Avenue at the Jersey Boulevard intersection.

Consistent with the Sustainable Community Action Plan, the project would facilitate use of an underutilized industrial site located in proximity to alternative transportation options. Based on these project characteristics, the project supports applicable Sustainable Community Action Plan policies intended to reduce GHG emissions generated within the City of Rancho Cucamonga.

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Appendix A

CalEEMod Air Quality and Greenhouse Gas Emissions Model Results -
Summer/ Annual, and N₂O from Mobile Emissions Sources

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

Rancho Cucamonga Warehouse

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	151.14	1000sqft	3.47	151,141.00	0
General Office Building	8.13	1000sqft	0.19	8,127.00	0
Parking Lot	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

Project Characteristics -

Land Use -

Construction Phase - Painting phase modified to reduce ROG emissions

Grading - Grading assumes maximum disturbance of 5 acres daily.

Construction Off-road Equipment Mitigation -

Area Mitigation - SCAQMD requires 50 g/L VOC

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	100	50
tblConstructionPhase	NumDays	18.00	30.00
tblConstructionPhase	PhaseEndDate	2/24/2022	3/14/2022
tblGrading	AcresOfGrading	4.00	5.00

2.0 Emissions Summary

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9796	40.5536	22.1860	0.0452	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	4,422.477 1	4,422.477 1	1.1976	0.0000	4,440.022 9
2022	49.9069	18.8739	20.1497	0.0448	1.1615	0.8195	1.9810	0.3128	0.7710	1.0838	0.0000	4,382.360 7	4,382.360 7	0.6930	0.0000	4,399.685 2
Maximum	49.9069	40.5536	22.1860	0.0452	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	4,422.477 1	4,422.477 1	1.1976	0.0000	4,440.022 9

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9796	40.5536	22.1860	0.0452	8.3310	2.0458	10.3768	4.5222	1.8821	6.4043	0.0000	4,422.477 1	4,422.477 1	1.1976	0.0000	4,440.022 9
2022	49.9069	18.8739	20.1497	0.0448	1.1615	0.8195	1.9810	0.3128	0.7710	1.0838	0.0000	4,382.360 7	4,382.360 7	0.6930	0.0000	4,399.685 2
Maximum	49.9069	40.5536	22.1860	0.0452	8.3310	2.0458	10.3768	4.5222	1.8821	6.4043	0.0000	4,422.477 1	4,422.477 1	1.1976	0.0000	4,440.022 9

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	51.14	0.00	44.57	53.04	0.00	42.18	0.00	0.00	0.00	0.00	0.00	0.00

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.5795	2.5000e-004	0.0275	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0589	0.0589	1.6000e-004		0.0628
Energy	9.9000e-003	0.0900	0.0756	5.4000e-004		6.8400e-003	6.8400e-003		6.8400e-003	6.8400e-003		107.9829	107.9829	2.0700e-003	1.9800e-003	108.6246
Mobile	0.7693	5.0159	9.8585	0.0391	2.9359	0.0260	2.9619	0.7856	0.0243	0.8099		3,987.6173	3,987.6173	0.1849		3,992.2389
Total	4.3587	5.1061	9.9616	0.0396	2.9359	0.0329	2.9688	0.7856	0.0313	0.8169		4,095.6591	4,095.6591	0.1871	1.9800e-003	4,100.9263

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.3756	2.5000e-004	0.0275	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0589	0.0589	1.6000e-004		0.0628
Energy	9.9000e-003	0.0900	0.0756	5.4000e-004		6.8400e-003	6.8400e-003		6.8400e-003	6.8400e-003		107.9829	107.9829	2.0700e-003	1.9800e-003	108.6246
Mobile	0.7693	5.0159	9.8585	0.0391	2.9359	0.0260	2.9619	0.7856	0.0243	0.8099		3,987.6173	3,987.6173	0.1849		3,992.2389
Total	4.1548	5.1061	9.9616	0.0396	2.9359	0.0329	2.9688	0.7856	0.0313	0.8169		4,095.6591	4,095.6591	0.1871	1.9800e-003	4,100.9263

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/5/2021	5	5	
3	Grading	Grading	2/6/2021	2/17/2021	5	8	
4	Building Construction	Building Construction	2/18/2021	1/5/2022	5	230	
5	Paving	Paving	1/6/2022	1/31/2022	5	18	
6	Architectural Coating	Architectural Coating	2/1/2022	3/14/2022	5	30	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 5****Acres of Paving: 0.99****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 238,902; Non-Residential Outdoor: 79,634; Striped Parking Area: 2,640 (Architectural Coating – sqft)****OffRoad Equipment**

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	85.00	33.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289

3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.6569	3,685.6569	1.1920		3,715.4573

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.3 Site Preparation - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0565	0.7452	1.9800e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		196.9345	196.9345	5.6000e-003		197.0746
Total	0.0915	0.0565	0.7452	1.9800e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		196.9345	196.9345	5.6000e-003		197.0746

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	8.1298	2.0445	10.1743	4.4688	1.8809	6.3497	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.3 Site Preparation - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0565	0.7452	1.9800e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		196.9345	196.9345	5.6000e-003		197.0746
Total	0.0915	0.0565	0.7452	1.9800e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		196.9345	196.9345	5.6000e-003		197.0746

3.4 Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6849	0.0000	6.6849	3.3818	0.0000	3.3818			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895,1495
Total	2.2903	24.7367	15.8575	0.0296	6.6849	1.1599	7.8448	3.3818	1.0671	4.4489		2,871.9285	2,871.9285	0.9288		2,895,1495

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.4 Grading - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0082	0.0000	3.0082	1.5218	0.0000	1.5218			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895,1495
Total	2.2903	24.7367	15.8575	0.0296	3.0082	1.1599	4.1681	1.5218	1.0671	2.5889	0.0000	2,871.9285	2,871.9285	0.9288		2,895,1495

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.4 Grading - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.5 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0854	3.1824	0.5988	8.9000e-003	0.2114	5.4600e-003	0.2168	0.0609	5.2200e-003	0.0661		939.1447	939.1447	0.0594		940.6285
Worker	0.4319	0.2670	3.5189	9.3400e-003	0.9501	6.0800e-003	0.9562	0.2520	5.6000e-003	0.2576		929.9684	929.9684	0.0265		930.6301
Total	0.5173	3.4494	4.1177	0.0182	1.1615	0.0115	1.1730	0.3128	0.0108	0.3236		1,869.113 2	1,869.113 2	0.0858		1,871.258 6

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0854	3.1824	0.5988	8.9000e-003	0.2114	5.4600e-003	0.2168	0.0609	5.2200e-003	0.0661		939.1447	939.1447	0.0594		940.6285
Worker	0.4319	0.2670	3.5189	9.3400e-003	0.9501	6.0800e-003	0.9562	0.2520	5.6000e-003	0.2576		929.9684	929.9684	0.0265		930.6301
Total	0.5173	3.4494	4.1177	0.0182	1.1615	0.0115	1.1730	0.3128	0.0108	0.3236		1,869.1132	1,869.1132	0.0858		1,871.2586

3.5 Building Construction - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.5 Building Construction - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0796	3.0183	0.5537	8.8300e-003	0.2114	4.5800e-003	0.2159	0.0609	4.3800e-003	0.0652		931.6150	931.6150	0.0573		933.0474
Worker	0.4033	0.2400	3.2326	9.0000e-003	0.9501	5.9000e-003	0.9560	0.2520	5.4300e-003	0.2574		896.4121	896.4121	0.0237		897.0056
Total	0.4829	3.2583	3.7863	0.0178	1.1615	0.0105	1.1719	0.3128	9.8100e-003	0.3226		1,828.0271	1,828.0271	0.0810		1,830.0530

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.5 Building Construction - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0796	3.0183	0.5537	8.8300e-003	0.2114	4.5800e-003	0.2159	0.0609	4.3800e-003	0.0652		931.6150	931.6150	0.0573		933.0474
Worker	0.4033	0.2400	3.2326	9.0000e-003	0.9501	5.9000e-003	0.9560	0.2520	5.4300e-003	0.2574		896.4121	896.4121	0.0237		897.0056
Total	0.4829	3.2583	3.7863	0.0178	1.1615	0.0105	1.1719	0.3128	9.8100e-003	0.3226		1,828.0271	1,828.0271	0.0810		1,830.0530

3.6 Paving - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.1441					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1206	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.6 Paving - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0949	0.0565	0.7606	2.1200e-003	0.2236	1.3900e-003	0.2249	0.0593	1.2800e-003	0.0606		210.9205	210.9205	5.5900e-003		211.0601
Total	0.0949	0.0565	0.7606	2.1200e-003	0.2236	1.3900e-003	0.2249	0.0593	1.2800e-003	0.0606		210.9205	210.9205	5.5900e-003		211.0601

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.1441					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1206	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.6 Paving - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0949	0.0565	0.7606	2.1200e-003	0.2236	1.3900e-003	0.2249	0.0593	1.2800e-003	0.0606		210.9205	210.9205	5.5900e-003		211.0601
Total	0.0949	0.0565	0.7606	2.1200e-003	0.2236	1.3900e-003	0.2249	0.0593	1.2800e-003	0.0606		210.9205	210.9205	5.5900e-003		211.0601

3.7 Architectural Coating - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.6217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	49.8262	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.7 Architectural Coating - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0807	0.0480	0.6465	1.8000e-003	0.1900	1.1800e-003	0.1912	0.0504	1.0900e-003	0.0515		179.2824	179.2824	4.7500e-003		179.4011
Total	0.0807	0.0480	0.6465	1.8000e-003	0.1900	1.1800e-003	0.1912	0.0504	1.0900e-003	0.0515		179.2824	179.2824	4.7500e-003		179.4011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.6217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	49.8262	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

3.7 Architectural Coating - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0807	0.0480	0.6465	1.8000e-003	0.1900	1.1800e-003	0.1912	0.0504	1.0900e-003	0.0515		179.2824	179.2824	4.7500e-003		179.4011
Total	0.0807	0.0480	0.6465	1.8000e-003	0.1900	1.1800e-003	0.1912	0.0504	1.0900e-003	0.0515		179.2824	179.2824	4.7500e-003		179.4011

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7693	5.0159	9.8585	0.0391	2.9359	0.0260	2.9619	0.7856	0.0243	0.8099		3,987.617 3	3,987.617 3	0.1849		3,992.238 9
Unmitigated	0.7693	5.0159	9.8585	0.0391	2.9359	0.0260	2.9619	0.7856	0.0243	0.8099		3,987.617 3	3,987.617 3	0.1849		3,992.238 9

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	89.64	19.99	8.53	219,395	219,395
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	253.92	253.92	253.92	1,088,216	1,088,216
Total	343.56	273.91	262.45	1,307,611	1,307,611

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Parking Lot	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Unrefrigerated Warehouse-No Rail	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	9.9000e-003	0.0900	0.0756	5.4000e-004		6.8400e-003	6.8400e-003		6.8400e-003	6.8400e-003		107.9829	107.9829	2.0700e-003	1.9800e-003	108.6246
NaturalGas Unmitigated	9.9000e-003	0.0900	0.0756	5.4000e-004		6.8400e-003	6.8400e-003		6.8400e-003	6.8400e-003		107.9829	107.9829	2.0700e-003	1.9800e-003	108.6246

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	77.2622	8.3000e-004	7.5700e-003	6.3600e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.0897	9.0897	1.7000e-004	1.7000e-004	9.1437
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	840.592	9.0700e-003	0.0824	0.0692	4.9000e-004		6.2600e-003	6.2600e-003		6.2600e-003	6.2600e-003		98.8932	98.8932	1.9000e-003	1.8100e-003	99.4809
Total		9.9000e-003	0.0900	0.0756	5.4000e-004		6.8400e-003	6.8400e-003		6.8400e-003	6.8400e-003		107.9829	107.9829	2.0700e-003	1.9800e-003	108.6246

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0772622	8.3000e-004	7.5700e-003	6.3600e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.0897	9.0897	1.7000e-004	1.7000e-004	9.1437
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.840592	9.0700e-003	0.0824	0.0692	4.9000e-004		6.2600e-003	6.2600e-003		6.2600e-003	6.2600e-003		98.8932	98.8932	1.9000e-003	1.8100e-003	99.4809
Total		9.9000e-003	0.0900	0.0756	5.4000e-004		6.8400e-003	6.8400e-003		6.8400e-003	6.8400e-003		107.9829	107.9829	2.0700e-003	1.9800e-003	108.6246

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

6.0 Area Detail**6.1 Mitigation Measures Area**

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.3756	2.5000e-004	0.0275	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0589	0.0589	1.6000e-004		0.0628
Unmitigated	3.5795	2.5000e-004	0.0275	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0589	0.0589	1.6000e-004		0.0628

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4079					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5600e-003	2.5000e-004	0.0275	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0589	0.0589	1.6000e-004		0.0628
Total	3.5795	2.5000e-004	0.0275	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0589	0.0589	1.6000e-004		0.0628

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2039					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5600e-003	2.5000e-004	0.0275	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0589	0.0589	1.6000e-004		0.0628
Total	3.3756	2.5000e-004	0.0275	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0589	0.0589	1.6000e-004		0.0628

7.0 Water Detail

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

7.1 Mitigation Measures Water

Apply Water Conservation Strategy
Install Low Flow Bathroom Faucet
Install Low Flow Kitchen Faucet
Install Low Flow Toilet
Install Low Flow Shower
Use Water Efficient Irrigation System

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Summer

11.0 Vegetation

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Annual

Rancho Cucamonga Warehouse

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	151.14	1000sqft	3.47	151,141.00	0
General Office Building	8.13	1000sqft	0.19	8,127.00	0
Parking Lot	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Annual

Project Characteristics -

Land Use -

Construction Phase - Painting phase modified to reduce ROG emissions

Grading - Grading assumes maximum disturbance of 5 acres daily.

Construction Off-road Equipment Mitigation -

Area Mitigation - SCAQMD requires 50 g/L VOC

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	100	50
tblConstructionPhase	NumDays	18.00	30.00
tblConstructionPhase	PhaseEndDate	2/24/2022	3/14/2022
tblGrading	AcresOfGrading	4.00	5.00

2.0 Emissions Summary

Rancho Cucamonga Warehouse - San Bernardino-South Coast County, Annual

2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3218	2.8920	2.6402	5.6500e-003	0.2041	0.1354	0.3395	0.0740	0.1269	0.2009	0.0000	500.9144	500.9144	0.0880	0.0000	503.1144
2022	0.7626	0.1366	0.1808	3.2000e-004	6.4800e-003	6.8700e-003	0.0134	1.7300e-003	6.4600e-003	8.1900e-003	0.0000	28.2247	28.2247	5.9200e-003	0.0000	28.3728
Maximum	0.7626	2.8920	2.6402	5.6500e-003	0.2041	0.1354	0.3395	0.0740	0.1269	0.2009	0.0000	500.9144	500.9144	0.0880	0.0000	503.1144

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3218	2.8920	2.6402	5.6500e-003	0.1646	0.1354	0.3000	0.0529	0.1269	0.1798	0.0000	500.9140	500.9140	0.0880	0.0000	503.1140
2022	0.7626	0.1366	0.1808	3.2000e-004	6.4800e-003	6.8700e-003	0.0134	1.7300e-003	6.4600e-003	8.1900e-003	0.0000	28.2247	28.2247	5.9200e-003	0.0000	28.3727
Maximum	0.7626	2.8920	2.6402	5.6500e-003	0.1646	0.1354	0.3000	0.0529	0.1269	0.1798	0.0000	500.9140	500.9140	0.0880	0.0000	503.1140

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	18.78	0.00	11.21	27.86	0.00	10.09	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2021	4-3-2021	0.9245	0.9245
2	4-4-2021	7-3-2021	0.7572	0.7572
3	7-4-2021	10-3-2021	0.7655	0.7655
4	10-4-2021	1-3-2022	0.7627	0.7627
5	1-4-2022	4-3-2022	0.8858	0.8858
		Highest	0.9245	0.9245

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6531	3.0000e-005	3.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.6800e-003	6.6800e-003	2.0000e-005	0.0000	7.1200e-003
Energy	1.8100e-003	0.0164	0.0138	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	161.0859	161.0859	6.2500e-003	1.5500e-003	161.7045
Mobile	0.1136	0.8857	1.5254	6.3500e-003	0.4979	4.4900e-003	0.5024	0.1335	4.2100e-003	0.1377	0.0000	588.0232	588.0232	0.0286	0.0000	588.7386
Waste						0.0000	0.0000		0.0000	0.0000	30.3735	0.0000	30.3735	1.7950	0.0000	75.2492
Water						0.0000	0.0000		0.0000	0.0000	11.5468	154.1341	165.6809	1.1923	0.0293	204.2264
Total	0.7685	0.9022	1.5426	6.4500e-003	0.4979	5.7500e-003	0.5037	0.1335	5.4700e-003	0.1389	41.9203	903.2499	945.1702	3.0222	0.0309	1,029.9259

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6159	3.0000e-005	3.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.6800e-003	6.6800e-003	2.0000e-005	0.0000	7.1200e-003
Energy	1.8100e-003	0.0164	0.0138	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	161.0859	161.0859	6.2500e-003	1.5500e-003	161.7045
Mobile	0.1136	0.8857	1.5254	6.3500e-003	0.4979	4.4900e-003	0.5024	0.1335	4.2100e-003	0.1377	0.0000	588.0232	588.0232	0.0286	0.0000	588.7386
Waste						0.0000	0.0000		0.0000	0.0000	7.5934	0.0000	7.5934	0.4488	0.0000	18.8123
Water						0.0000	0.0000		0.0000	0.0000	11.5468	154.1341	165.6809	1.1923	0.0293	204.2264
Total	0.7313	0.9022	1.5426	6.4500e-003	0.4979	5.7500e-003	0.5037	0.1335	5.4700e-003	0.1389	19.1402	903.2499	922.3901	1.6760	0.0309	973.4890

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54.34	0.00	2.41	44.55	0.00	5.48

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/5/2021	5	5	
3	Grading	Grading	2/6/2021	2/17/2021	5	8	
4	Building Construction	Building Construction	2/18/2021	1/5/2022	5	230	
5	Paving	Paving	1/6/2022	1/31/2022	5	18	
6	Architectural Coating	Architectural Coating	2/1/2022	3/14/2022	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5

Acres of Paving: 0.99

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 238,902; Non-Residential Outdoor: 79,634; Striped Parking Area: 2,640 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	85.00	33.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400

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3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400

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3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658

3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1012	0.0529	1.0000e-004		5.1100e-003	5.1100e-003		4.7000e-003	4.7000e-003	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265
Total	9.7200e-003	0.1012	0.0529	1.0000e-004	0.0452	5.1100e-003	0.0503	0.0248	4.7000e-003	0.0295	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265

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3.3 Site Preparation - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.6000e-004	1.6000e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4095	0.4095	1.0000e-005	0.0000	0.4097
Total	2.1000e-004	1.6000e-004	1.6000e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4095	0.4095	1.0000e-005	0.0000	0.4097

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0203	0.0000	0.0203	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1012	0.0529	1.0000e-004		5.1100e-003	5.1100e-003		4.7000e-003	4.7000e-003	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265
Total	9.7200e-003	0.1012	0.0529	1.0000e-004	0.0203	5.1100e-003	0.0254	0.0112	4.7000e-003	0.0159	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265

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3.3 Site Preparation - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.6000e-004	1.6000e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4095	0.4095	1.0000e-005	0.0000	0.4097
Total	2.1000e-004	1.6000e-004	1.6000e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4095	0.4095	1.0000e-005	0.0000	0.4097

3.4 Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0267	0.0000	0.0267	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.0990	0.0634	1.2000e-004		4.6400e-003	4.6400e-003		4.2700e-003	4.2700e-003	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057
Total	9.1600e-003	0.0990	0.0634	1.2000e-004	0.0267	4.6400e-003	0.0314	0.0135	4.2700e-003	0.0178	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057

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3.4 Grading - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.1400e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5459	0.5459	2.0000e-005	0.0000	0.5463
Total	2.8000e-004	2.1000e-004	2.1400e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5459	0.5459	2.0000e-005	0.0000	0.5463

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0120	0.0000	0.0120	6.0900e-003	0.0000	6.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.0990	0.0634	1.2000e-004		4.6400e-003	4.6400e-003		4.2700e-003	4.2700e-003	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057
Total	9.1600e-003	0.0990	0.0634	1.2000e-004	0.0120	4.6400e-003	0.0167	6.0900e-003	4.2700e-003	0.0104	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057

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3.4 Grading - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.1400e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5459	0.5459	2.0000e-005	0.0000	0.5463
Total	2.8000e-004	2.1000e-004	2.1400e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5459	0.5459	2.0000e-005	0.0000	0.5463

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9785	1.8813	3.0600e-003		0.1088	0.1088		0.1023	0.1023	0.0000	262.9083	262.9083	0.0634	0.0000	264.4940
Total	0.2158	1.9785	1.8813	3.0600e-003		0.1088	0.1088		0.1023	0.1023	0.0000	262.9083	262.9083	0.0634	0.0000	264.4940

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3.5 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.9300e-003	0.3644	0.0741	9.9000e-004	0.0236	6.3000e-004	0.0242	6.8200e-003	6.0000e-004	7.4100e-003	0.0000	95.1220	95.1220	6.4100e-003	0.0000	95.2822
Worker	0.0444	0.0336	0.3438	9.7000e-004	0.1058	6.9000e-004	0.1065	0.0281	6.4000e-004	0.0287	0.0000	87.7827	87.7827	2.4600e-003	0.0000	87.8441
Total	0.0543	0.3980	0.4179	1.9600e-003	0.1294	1.3200e-003	0.1307	0.0349	1.2400e-003	0.0361	0.0000	182.9046	182.9046	8.8700e-003	0.0000	183.1263

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9785	1.8813	3.0600e-003		0.1088	0.1088		0.1023	0.1023	0.0000	262.9080	262.9080	0.0634	0.0000	264.4937
Total	0.2158	1.9785	1.8813	3.0600e-003		0.1088	0.1088		0.1023	0.1023	0.0000	262.9080	262.9080	0.0634	0.0000	264.4937

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3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.9300e-003	0.3644	0.0741	9.9000e-004	0.0236	6.3000e-004	0.0242	6.8200e-003	6.0000e-004	7.4100e-003	0.0000	95.1220	95.1220	6.4100e-003	0.0000	95.2822
Worker	0.0444	0.0336	0.3438	9.7000e-004	0.1058	6.9000e-004	0.1065	0.0281	6.4000e-004	0.0287	0.0000	87.7827	87.7827	2.4600e-003	0.0000	87.8441
Total	0.0543	0.3980	0.4179	1.9600e-003	0.1294	1.3200e-003	0.1307	0.0349	1.2400e-003	0.0361	0.0000	182.9046	182.9046	8.8700e-003	0.0000	183.1263

3.5 Building Construction - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.5600e-003	0.0234	0.0246	4.0000e-005		1.2100e-003	1.2100e-003		1.1400e-003	1.1400e-003	0.0000	3.4759	3.4759	8.3000e-004	0.0000	3.4967
Total	2.5600e-003	0.0234	0.0246	4.0000e-005		1.2100e-003	1.2100e-003		1.1400e-003	1.1400e-003	0.0000	3.4759	3.4759	8.3000e-004	0.0000	3.4967

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3.5 Building Construction - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	4.5600e-003	9.1000e-004	1.0000e-005	3.1000e-004	1.0000e-005	3.2000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.2469	1.2469	8.0000e-005	0.0000	1.2489
Worker	5.5000e-004	4.0000e-004	4.1700e-003	1.0000e-005	1.4000e-003	1.0000e-005	1.4100e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.1183	1.1183	3.0000e-005	0.0000	1.1191
Total	6.7000e-004	4.9600e-003	5.0800e-003	2.0000e-005	1.7100e-003	2.0000e-005	1.7300e-003	4.6000e-004	2.0000e-005	4.8000e-004	0.0000	2.3652	2.3652	1.1000e-004	0.0000	2.3680

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.5600e-003	0.0234	0.0246	4.0000e-005		1.2100e-003	1.2100e-003		1.1400e-003	1.1400e-003	0.0000	3.4759	3.4759	8.3000e-004	0.0000	3.4967
Total	2.5600e-003	0.0234	0.0246	4.0000e-005		1.2100e-003	1.2100e-003		1.1400e-003	1.1400e-003	0.0000	3.4759	3.4759	8.3000e-004	0.0000	3.4967

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3.5 Building Construction - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	4.5600e-003	9.1000e-004	1.0000e-005	3.1000e-004	1.0000e-005	3.2000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.2469	1.2469	8.0000e-005	0.0000	1.2489
Worker	5.5000e-004	4.0000e-004	4.1700e-003	1.0000e-005	1.4000e-003	1.0000e-005	1.4100e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.1183	1.1183	3.0000e-005	0.0000	1.1191
Total	6.7000e-004	4.9600e-003	5.0800e-003	2.0000e-005	1.7100e-003	2.0000e-005	1.7300e-003	4.6000e-004	2.0000e-005	4.8000e-004	0.0000	2.3652	2.3652	1.1000e-004	0.0000	2.3680

3.6 Paving - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.7900e-003	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540
Paving	1.3000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0101	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540

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3.6 Paving - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.6000e-004	5.8800e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5788	1.5788	4.0000e-005	0.0000	1.5798
Total	7.7000e-004	5.6000e-004	5.8800e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5788	1.5788	4.0000e-005	0.0000	1.5798

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.7900e-003	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540
Paving	1.3000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0101	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540

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3.6 Paving - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.6000e-004	5.8800e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5788	1.5788	4.0000e-005	0.0000	1.5798
Total	7.7000e-004	5.6000e-004	5.8800e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5788	1.5788	4.0000e-005	0.0000	1.5798

3.7 Architectural Coating - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7443					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0700e-003	0.0211	0.0272	4.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	3.8299	3.8299	2.5000e-004	0.0000	3.8361
Total	0.7474	0.0211	0.0272	4.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	3.8299	3.8299	2.5000e-004	0.0000	3.8361

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3.7 Architectural Coating - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-003	8.0000e-004	8.3300e-003	2.0000e-005	2.8000e-003	2.0000e-005	2.8100e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.2366	2.2366	6.0000e-005	0.0000	2.2381
Total	1.1000e-003	8.0000e-004	8.3300e-003	2.0000e-005	2.8000e-003	2.0000e-005	2.8100e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.2366	2.2366	6.0000e-005	0.0000	2.2381

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7443					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0700e-003	0.0211	0.0272	4.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	3.8299	3.8299	2.5000e-004	0.0000	3.8361
Total	0.7474	0.0211	0.0272	4.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	3.8299	3.8299	2.5000e-004	0.0000	3.8361

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3.7 Architectural Coating - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-003	8.0000e-004	8.3300e-003	2.0000e-005	2.8000e-003	2.0000e-005	2.8100e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.2366	2.2366	6.0000e-005	0.0000	2.2381
Total	1.1000e-003	8.0000e-004	8.3300e-003	2.0000e-005	2.8000e-003	2.0000e-005	2.8100e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.2366	2.2366	6.0000e-005	0.0000	2.2381

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1136	0.8857	1.5254	6.3500e-003	0.4979	4.4900e-003	0.5024	0.1335	4.2100e-003	0.1377	0.0000	588.0232	588.0232	0.0286	0.0000	588.7386
Unmitigated	0.1136	0.8857	1.5254	6.3500e-003	0.4979	4.4900e-003	0.5024	0.1335	4.2100e-003	0.1377	0.0000	588.0232	588.0232	0.0286	0.0000	588.7386

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	89.64	19.99	8.53	219,395	219,395
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	253.92	253.92	253.92	1,088,216	1,088,216
Total	343.56	273.91	262.45	1,307,611	1,307,611

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Parking Lot	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Unrefrigerated Warehouse-No Rail	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	143.2082	143.2082	5.9100e-003	1.2200e-003	143.7205
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	143.2082	143.2082	5.9100e-003	1.2200e-003	143.7205
NaturalGas Mitigated	1.8100e-003	0.0164	0.0138	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.8778	17.8778	3.4000e-004	3.3000e-004	17.9840
NaturalGas Unmitigated	1.8100e-003	0.0164	0.0138	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.8778	17.8778	3.4000e-004	3.3000e-004	17.9840

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5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	28200.7	1.5000e-004	1.3800e-003	1.1600e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5049	1.5049	3.0000e-005	3.0000e-005	1.5138
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	306816	1.6500e-003	0.0150	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.3729	16.3729	3.1000e-004	3.0000e-004	16.4702
Total		1.8000e-003	0.0164	0.0138	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.8778	17.8778	3.4000e-004	3.3000e-004	17.9840

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	28200.7	1.5000e-004	1.3800e-003	1.1600e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5049	1.5049	3.0000e-005	3.0000e-005	1.5138
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	306816	1.6500e-003	0.0150	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.3729	16.3729	3.1000e-004	3.0000e-004	16.4702
Total		1.8000e-003	0.0164	0.0138	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.8778	17.8778	3.4000e-004	3.3000e-004	17.9840

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	77369	24.6514	1.0200e-003	2.1000e-004	24.7396
Parking Lot	15400	4.9068	2.0000e-004	4.0000e-005	4.9243
Unrefrigerated Warehouse-No Rail	356693	113.6500	4.6900e-003	9.7000e-004	114.0565
Total		143.2082	5.9100e-003	1.2200e-003	143.7205

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	77369	24.6514	1.0200e-003	2.1000e-004	24.7396
Parking Lot	15400	4.9068	2.0000e-004	4.0000e-005	4.9243
Unrefrigerated Warehouse-No Rail	356693	113.6500	4.6900e-003	9.7000e-004	114.0565
Total		143.2082	5.9100e-003	1.2200e-003	143.7205

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6.0 Area Detail**6.1 Mitigation Measures Area**

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6159	3.0000e-005	3.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.6800e-003	6.6800e-003	2.0000e-005	0.0000	7.1200e-003
Unmitigated	0.6531	3.0000e-005	3.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.6800e-003	6.6800e-003	2.0000e-005	0.0000	7.1200e-003

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0744					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5784					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.2000e-004	3.0000e-005	3.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.6800e-003	6.6800e-003	2.0000e-005	0.0000	7.1200e-003
Total	0.6531	3.0000e-005	3.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.6800e-003	6.6800e-003	2.0000e-005	0.0000	7.1200e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5784					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.2000e-004	3.0000e-005	3.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.6800e-003	6.6800e-003	2.0000e-005	0.0000	7.1200e-003
Total	0.6159	3.0000e-005	3.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.6800e-003	6.6800e-003	2.0000e-005	0.0000	7.1200e-003

7.0 Water Detail

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7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	165.6809	1.1923	0.0293	204.2264
Unmitigated	165.6809	1.1923	0.0293	204.2264

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7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.44498 / 0.88563	9.5883	0.0475	1.1900e-003	11.1294
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	34.9511 / 0	156.0925	1.1449	0.0281	193.0970
Total		165.6809	1.1923	0.0293	204.2264

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.44498 / 0.88563	9.5883	0.0475	1.1900e-003	11.1294
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	34.9511 / 0	156.0925	1.1449	0.0281	193.0970
Total		165.6809	1.1923	0.0293	204.2264

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8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.5934	0.4488	0.0000	18.8123
Unmitigated	30.3735	1.7950	0.0000	75.2492

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	7.56	1.5346	0.0907	0.0000	3.8019
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	142.07	28.8389	1.7043	0.0000	71.4472
Total		30.3735	1.7950	0.0000	75.2492

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	1.89	0.3837	0.0227	0.0000	0.9505
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	35.5175	7.2097	0.4261	0.0000	17.8618
Total		7.5934	0.4488	0.0000	18.8123

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9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Greenhouse Gas Emission Worksheet
N2O Mobile Emissions

RC Warehouse

From URBEMIS 2015 Vehicle Fleet Mix Output:

Annual VMT: 1,307,611

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)*	CH4 Emission (g/mile)**	N2O Emission Factor (g/mile)*	N2O Emission (g/mile)**
Light Auto	53.3%	0.04	0.02132	0.04	0.02132
Light Truck < 3750 lbs	4.0%	0.05	0.002	0.06	0.0024
Light Truck 3751-5750 lbs	18.3%	0.05	0.00915	0.06	0.01098
Med Truck 5751-8500 lbs	12.6%	0.12	0.01512	0.2	0.0252
Lite-Heavy Truck 8501-10,000 lbs	1.8%	0.12	0.00216	0.2	0.0036
Lite-Heavy Truck 10,001-14,000 lbs	0.5%	0.09	0.00045	0.125	0.000625
Med-Heavy Truck 14,001-33,000 lbs	1.7%	0.06	0.00102	0.05	0.00085
Heavy-Heavy Truck 33,001-60,000 lbs	6.2%	0.06	0.00372	0.05	0.0031
Other Bus	0.1%	0.06	0.00006	0.05	0.00005
Urban Bus	0.1%	0.06	0.00006	0.05	0.00005
Motorcycle	0.4%	0.09	0.00036	0.01	0.00004
School Bus	0.9%	0.06	0.00054	0.05	0.00045
Motor Home	0.1%	0.09	0.00009	0.125	0.000125
Total	100.0%		0.05605		0.06879

Total Emissions (metric tons) =

Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4 25 GWP
N2O 298 GWP
1 ton (short, US) = 0.90718474 metric ton

Annual Mobile Emissions:

	Total Emissions	Total CO2e units
N2O Emissions:	0.0900 metric tons N2O	26.81 metric tons CO2e
	Project Total:	26.81 metric tons CO2e

References

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009
Assume Model year 2000-present, gasoline fueled.

** Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009

*** From URBEMIS 2007 results for mobile sources