

APPENDICES

Easton Research Park West Tentative Subdivision Map Project

Initial Study/
Mitigated Negative Declaration

Lead Agency:

City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670

September 2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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APPENDIX A

Air Quality and Greenhouse Gas Assessment, Easton Research Park West Project –
ECORP Consulting, Inc. July 2021

Air Quality and Greenhouse Gas Assessment

Easton Research Park West Project

Rancho Cordova, California

Prepared For:

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July 2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
µg/m3	Micrograms per cubic meter; ppm = parts per million
AB	Assembly Bill
ASF	Age Sensitivity Factor
AQMD	Air Quality Management District
BAAQMD	Bay Area Air Quality Management District
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH_4	Methane
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
County	Sacramento County
DPM	Diesel particulate matter
EO	Executive Order

LIST OF ACRONYMS AND ABBREVIATIONS

FAH	Fraction of Time at Home
GHG	Greenhouse gas
GLC	Ground level concentration
GWP	Global warming potential
HRA	Health Risk Assessment
IPCC	Intergovernmental Panel on Climate Change
LOS	Level of service
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen dioxide
NO_x	Nitric oxides
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
PM	Particulate matter
PM_{10}	Coarse particulate matter
$PM_{2.5}$	Fine particulate matter
ppb	Parts per billion
Project	Easton Research Park West Project
REL	Reference Exposure Level
ROGs	Reactive organic gases
SB	Senate Bill
SMAQMD	Sacramento Metropolitan Air Quality Management District
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SO_x	Sulfur oxides
SR	State Route
SRA	Source receptor area
SVAB	Sacramento Valley Air Basin
TACs	Toxic air contaminants
USEPA	U.S. Environmental Protection Agency
VOCs	Volatile organic compounds
VMT	Vehicle Miles Traveled

1.0 INTRODUCTION

This report documents the results of an Air Quality and Greenhouse Gas (GHG) Emissions Assessment completed for the Easton Research Park West Project (Project), which includes the development of 1,486,000 square feet (sf) of warehouse campus, associated parking and infrastructure in the City of Rancho Cordova, California. This assessment was prepared using methodologies and assumptions recommended in the rules and regulations of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate Project-generated criteria air pollutants and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

1.1 Project Location and Description

The ±105.5-acre Project Site is located near the southwestern corner of the Hazel Avenue/Folsom Boulevard intersection, within the City of Rancho Cordova in Sacramento County. The Project Site is within the Aerojet Special Planning Area, as identified in the City of Rancho Cordova's General Plan Land Use Map. The Site consists of flat terrain that was previously developed and includes paved areas and foundations that are proposed for demolition. It is surrounded by Folsom Boulevard to the north with Highway 50 beyond, Nimbus Road and undeveloped land beyond to the east, and undeveloped land to the south and west with commercial land uses beyond.

The Project is proposing the development of an eight building 1,486,000 sf warehouse campus, associated stormwater detention basins, parking lots, and interior private streets. Construction is anticipated to begin in early 2022 and would be phased over a 20-year buildout period with 2 buildings and associated features being constructed in each phase.

2.0 AIR QUALITY

2.1 Air Quality Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the Sacramento Valley Air Basin (SVAB), which encompasses the Project Site, pursuant to the regulatory authority of the SMAQMD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project Area.

2.1.1 Sacramento Valley Air Basin

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The Project Site is located in the SVAB, which is under the jurisdiction of the SMAQMD. The air basin is relatively flat, bordered by mountains to the east, west, and north and by the San Joaquin Valley to the south. Air flows into the SVAB through the Carquinez Strait, moving across the Sacramento Delta, and bringing pollutants from the heavily populated San Francisco Bay Area. The climate is characterized by hot, dry summers and cool, rainy winters. Characteristic of SVAB winter weather are periods of dense and persistent low-level fog, which are most prevalent between storm systems. From May to October, the region's intense heat and sunlight lead to high ozone pollutant concentrations. Summer inversions are strong and frequent but are less troublesome than those that occur in the fall. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not provide adequate dispersion of air pollutants.

Meteorological Influences on Air Quality

Regional flow patterns affect air quality patterns by directing pollutants downwind of sources. Localized meteorological conditions, such as moderate winds, disperse pollutants and reduce pollutant concentrations. However, the mountains surrounding the SVAB can create a barrier to airflow, which can trap air pollutants in the valley when meteorological conditions are right and a temperature inversion exists. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical air flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning or when temperature inversions trap cool air, fog, and pollutants near the ground.

The ozone season (May through October) in the valley is characterized by stagnant morning air or light winds, with the delta sea breeze arriving in the afternoon out of the southwest. Usually the evening breeze transports the airborne pollutants to the north out of the valley. During about half of the days from July to

September, however, a phenomenon called the Schultz Eddy prevents this from occurring. Instead of allowing the prevailing wind patterns to move north and carry the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of exceeding federal or state standards.

2.1.2 Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 2-1.

Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Manmade Sources	Human Health & Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N_2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} & $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: California Air Pollution Control Officers Association (CAPCOA 2013)

Carbon Monoxide

CO in the urban environment is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO levels in the SVAB are in compliance with the state and federal one- and eight-hour standards.

Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_x). Motor vehicle emissions are the main source of NO_x in urban areas. NO_x is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x, such as NO and NO_2, attribute to the formation of O_3 and $PM_{2.5}$. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROGs and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicle and other internal combustion engine exhaust. NO_x forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

Particulate Matter

PM includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and small than or equal to 2.5 microns in diameter ($PM_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x) and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM_{10} and $PM_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

2.1.3 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's $PM_{2.5}$ air quality problems. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Diesel Exhaust

Most recently, CARB identified DPM as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine (USEPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause

coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

2.1.4 Ambient Air Quality

Ambient air quality at the Project Site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region. As described in detail below, the region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10} (CARB 2019). The Folsom-Natoma Street air quality monitoring station, located at 50 Natoma Street approximately 5 miles northeast of the Project Site, monitors ambient concentrations of O_3 and $PM_{2.5}$. The Sacramento-Del Paso Manor air quality monitoring station, located at 2701 Avalon Drive, approximately 8.0 miles west of the Project Site, monitors ambient concentrations of PM_{10}. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the Project area.

Table 2-2 summarizes the published data concerning O_3, $PM_{2.5}$ and PM_{10} since 2017 for each year that the monitoring data is provided.

Table 2-2. Summary of Ambient Air Quality Data

Pollutant Standards	2017	2018	2019
O_3- Folsom-Natoma Street			
Max 1-hour concentration (ppm)	0.107	0.105	0.087
Max 8-hour concentration (ppm) (state/federal)	0.087 / 0.086	0.094 / 0.093	0.073 / 0.072
Number of days above 1-hour standard (state/federal)	4 / 0	5 / 0	0 / 0
Number of days above 8-hour standard (state/federal)	19 / 17	19 / 18	2 / 2
PM_{10}- Sacramento-Del Paso Manor			
Max 24-hour concentration (µg/m3) (state/federal)	65.8 / 59.0	224.0 / 212.0	110.4 / 53.0
Number of days above 24-hour standard (state/federal)	18.6 / 0	12.2 / 12.3	* / *
$PM_{2.5}$- Folsom-Natoma Street			
Max 24-hour concentration (µg/m3) (state/federal)	36.7 / 33.2	104.5 / 104.5	25.4 / 25.4
Number of days above federal 24-hour standard	0.0	9.0	*

Source: CARB 2020a
$\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million
* = Insufficient data available

The USEPA and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O_3, PM_{10} and $PM_{2.5}$ and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the Sacramento County portion of the SVAB, which encompasses the Project Site, is included in Table 2-3.

Table 2-3. Attainment Status of Criteria Pollutants in the Sacramento County Portion of the SVAB

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Attainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: CARB 2019

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10} (CARB 2019).

2.1.5 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptor to the Project Site is the Comfort Inn and Suites located directly across Folsom Boulevard as well as the Twilight RV and Mobile Home Park located approximately 691 feet northeast of the Project Site boundary. Additionally, there are approved residential land uses located directly east of the Project Site beyond Nimbus Road (Nimbus Road will be redesignated Hazel Avenue upon completion of the Hazel Avenue/US 50 Interchange Project).

2.2 Regulatory Framework

2.2.1 Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide (CO_2) is an air pollutant covered by the CAA; however, no NAAQS have been established for CO_2.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 2-3 lists the federal attainment status of the SVAB for the criteria pollutants.

2.2.2 State

California Clean Air Act

The California Clean Air Act (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS

revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

The SMAQMD *2017 Sacramento Regional 2008 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (including 2018 updates), the *PM_{10} Implementation/Maintenance Plan and Re-Designation Request* (2010), and *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area* (2013) are air quality attainment plans and reports that constitute the SIP for the Sacramento County portion of the SVAB. These air quality planning documents present comprehensive strategies to reduce the O_3 precursor pollutants (ROG and NOx) as well as PM emissions from stationary, area, mobile, and indirect sources.

Tanner Air Toxics Act & Air Toxics "Hot Spots" Information and Assessment Act

CARB's Statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment (HRA) and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Mobile Source Strategy

In 2016 CARB released the update to the Mobile Source Strategy (Strategy). This demonstrates how the state will meet air quality standards, achieve greenhouse gas emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next 15 years. This includes engine technology that is effectively 90 percent cleaner than today's current standards, with clean, renewable fuels comprising half the fuels burned.

The strategy also relies on the increased use of renewable fuels to ensure that air pollutant reductions are achieved while meeting the ongoing demand for liquid and gaseous fuels in applications where combustion technologies remain, including in heavy-duty trucks and equipment and light-duty hybrid vehicles. The estimated benefits of the Mobile Source Strategy in reducing emissions from mobile sources includes a substantial reduction of O_3-forming emissions (ROG and NO_x) and DPM.

Governor's Sustainable Freight Action Plan

Under the Governor's Sustainable Freight Action Plan strategy, CARB is working with agency partners and stakeholders to implement a broad program that includes regulations, incentives, and policies designed to support the transformation to a more sustainable freight system and reduce community impacts from freight operations in California. The Governor's Sustainable Freight Action Plan identifies strategies and actions to achieve a sustainable freight transportation system that meets California's environmental, energy, mobility, safety and economic needs. The plan also identifies and initiates corridor-level freight pilot projects within the state's primary trade corridors that integrate advanced technologies, alternative fuels, freight and fuel infrastructure and local economic development opportunities. The plan seeks to improve the state freight system efficiency 25 percent by "increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030" as well as to deploy over 100,000 zero-emission freight vehicles and equipment and maximizing near-zero equipment and equipment powered by renewable energy by 2030.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

In 2008, CARB approved the Truck and Bus Regulation to significantly reduce PM and NO_X emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks had to be retrofitted with PM filters beginning January 1, 2012, and older trucks had to be replaced by January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010-model-year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks by reporting and there are a number of extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of CARB's ATCM *to Limit Diesel-Fueled Commercial Motor Vehicle Idling* is to reduce public exposure to DPM and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles.[1] The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, *Requirements to Reduce Idling Emissions from New and In-Use Trucks*, which began in 2008, requires that new 2008 and subsequent model-year heavy-duty diesel engines be

[1] *The ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is codified in Title 13 of the* CCR*, Chapter 10, § 2485.*

equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

2.2.3 Local

Sacramento Metropolitan Air Quality Management District

The SMAQMD is the air pollution control agency for Sacramento County, including the Project Site. The agency's primary responsibility is ensuring that the NAAQS and CAAQS are attained and maintained in the Sacramento County portion of the SVAB. The SMAQMD coordinates the work of government agencies, businesses, and private citizens to achieve and maintain healthy air quality for the Sacramento area. The SMAQMD develops market-based programs to reduce emissions associated with mobile sources, processes permits, ensures compliance with permit conditions and with SMAQMD rules and regulations, and conducts long-term planning related to air quality. The SMAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities.

The following is a list of noteworthy SMAQMD rules that are required of construction activities associated with the Proposed Project:

- **Rule 201: General Permit Requirements.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Other general types of uses that require a permit include, but are not limited to, dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower is required to have a SMAQMD permit or a CARB portable equipment registration (PERP).
- **Rule 402: Nuisance.** The purpose of this rule is to limit emissions which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.
- **Rule 403: Fugitive Dust.** The purpose of this rule is to require that reasonable precautions be taken so as not to cause or allow the emissions of fugitive dust from non-combustion sources from being airborne beyond the property line from which the emission originates.

2.3 Air Quality Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would do any of the following:

1) Conflict with or obstruct implementation of any applicable air quality plan.

2) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

3) Expose sensitive receptors to substantial pollutant concentrations.

4) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

Sacramento Metropolitan Air Quality Management Thresholds

The significance criteria established by the applicable air quality management or air pollution control district (SMAQMD) may be relied upon to make the above determinations. According to the SMAQMD, an air quality impact is considered significant if the Proposed Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SMAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 2-4.

Table 2-4. SMAQMD Significance Thresholds

Air Pollutant	Construction Activities		Operations	
Reactive Organic Gas	-		65 pounds/day	
Nitrogen Oxide	85 pounds/day		65 pounds/day	
Carbon Monoxide	-		-	
Sulfur Oxide	-		-	
Coarse Particulate Matter	80 pounds/day (If all feasible BACT/BMP applied)	14.6 tons/year	80 pounds/day (If all feasible BACT/BMP applied)	14.6 tons/year
Fine Particulate Matter	82 pounds/day (If all feasible BACT/BMP applied)	15 tons/year	82 pounds/day	15 tons/year

Table 2-4. SMAQMD Significance Thresholds

Air Pollutant	Construction Activities		Operations	
			(If all feasible BACT/BMP applied)	

Source: SMAQMD 2019
Notes: BACT = best available control technology; BMP = best management practices

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Toxic Air Contaminant Threshold

The SMAQMD has not established quantitative thresholds of significance for mobile-sourced TAC emissions. However, SMAQMD has established a quantitative threshold for stationary sources of TACs. The SMAQMD consider the following types of projects significant:

- an incremental increase in cancer risk greater than 10 in one million at any off-site receptor; and/or
- an off-site ground-level concentration of non-carcinogenic TACs generated from the project that would result in a Hazard Index greater than 1 (unless approved by OEHHA).

Considering the absence of specific thresholds applicable to mobile-sourced TACs resulting from the use of heavy-duty diesel trucks on-site, the SMAQMD's threshold for health risks for stationary sources is applied to health risks from Project operations, which would constitute a conservative approach to this analysis.

2.3.2 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by the SMAQMD. Where Project-related criteria air pollutant quantification was required, emissions from off-road equipment and ground disturbance were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Emissions from worker commute trips were also calculated with CalEEMod. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project air pollutant emissions were calculated using a combination of model defaults for Sacramento County, Project Site plans, as well as the estimated traffic trip generation rates and fleet mix provided by Fehr & Peers (2021). All CalEEMod output files can be found in Attachment A.

Additionally, because the Project would attract heavy duty trucks that would spend time idling and maneuvering on the site, a health risk assessment (HRA) was prepared. The air dispersion modeling for the HRA was performed using the USEPA AERMOD Version 19121 dispersion model as a result of Project operations. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. The alberhill30m.dem file found at CARB's website for HARP Digital Elevation Model Files was used for elevation data for all sources and receptors in the Project domain.

AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Pre-processed meteorological data files provided by SMAQMD using USEPA's AERMET program designed to create AERMOD input files for the Sacramento Executive Airport were selected as being the most representative meteorology based on proximity.

The unit emission rate of one gram per second was utilized in AERMOD to create plot files which established source receptor relationships later to be combined in HARP with the emissions inventory to calculate the ground level concentrations (GLCs) related to Project operations. This allows for variable annual emissions to account for the changes in operational emission rates over time. All AERMOD inputs and output file can be found in Attachment B and Attachment C.

2.3.3 Impact Analysis

Project Construction-Generated Criteria Air Quality Emissions

Construction Significance Analysis

Emissions associated with Project construction would be temporary and short-term but have the potential to represent a significant air quality impact. Two basic sources of short-term emissions will be generated through Project construction: operation of the heavy-duty equipment (i.e., excavators, loaders, haul trucks) and the creation of fugitive dust during clearing and grading. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SMAQMD Rule 403, which, as previously described, requires taking reasonable precautions to prevent the emissions of fugitive dust, such as using water and limiting vehicle speeds, where possible, for control of dust during the clearing of land and other construction activities.

Emissions associated with Project off-road equipment, worker commute trips, and ground disturbance were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment A for more information regarding the construction assumptions, including types of construction equipment used and Project duration used in this analysis.

Predicted maximum daily emissions attributable to Project construction are summarized in Table 2-5. Such emissions are short-term and of temporary duration, lasting only as long as Project construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SMAQMD's thresholds of significance. The Project is anticipated to begin in early 2022 and will be phased over a 20-year buildout period with two buildings and associated features being constructed in each phase.

Table 2-5. Project Construction -Related Emissions

Construction Year	Pollutant					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Daily (pounds per day)						
Demolition and Grading Year 1	2.80	29.61	21.90	0.05	3.04	1.48
Demolition and Grading Year 2	3.39	34.55	28.55	0.06	4.96	2.75
Demolition and Grading Year 3 & Stormwater Drainage and Sewer Connection	7.88	63.32	67.28	0.13	24.42	13.88
Building Construction Phase 1 (Building 1 & 2) Year 1	11.12	27.59	38.26	0.08	3.00	1.48
Building Construction Phase 1 (Building 1 & 2) Year 2	11.08	27.47	37.89	0.08	3.00	1.48
Building Construction Phase 2 (Building 3 & 4) Year 1	12.46	28.16	38.32	0.08	3.30	1.56
Building Construction Phase 2 (Building 3 & 4) Year 2	12.41	28.05	37.99	0.08	3.30	1.56
Building Construction Phase 3 (Building 5 & 6) Year 1	14.85	29.34	38.90	0.09	3.83	1.71
Building Construction Phase 3 (Building 5 & 6) Year 2	15.17	22.94	39.89	0.09	3.33	1.27
Building Construction Phase 4 (Building 7 & 8) Year 1	5.79	17.72	35.46	0.07	1.31	0.72
Building Construction Phase 4 (Building 7 & 8) Year 2	5.78	17.70	35.37	0.07	1.31	0.72
SMAQMD Daily Significance Threshold	-	*85 pounds/day*	-	-	*80 pounds/day (If all feasible BACT/BMP applied)*	*82 pounds/day (If all feasible BACT/BMP applied)*
Exceed SMAQMD Daily Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Construction Year	**Pollutant**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Annual (tons per year)						
Demolition and Grading Year 1	**0**	**3**	**2**	**0**	**0**	**0**
Demolition and Grading Year 2	**0**	**3**	**2**	**0**	**0**	**0**

Table 2-5. Project Construction -Related Emissions

Construction Year	Pollutant					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Daily (pounds per day)						
Demolition and Grading Year 3 & Stormwater Drainage and Sewer Connection	**0**	**3**	**2**	**0**	**0**	**0**
Building Construction Phase 1 (Building 1 & 2) Year 1	**1**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 1 (Building 1 & 2) Year 2	**1**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 2 (Building 3 & 4) Year 1	**1**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 2 (Building 3 & 4) Year 2	**1**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 3 (Building 5 & 6) Year 1	**2**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 3 (Building 5 & 6) Year 2	**2**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 4 (Building 7 & 8) Year 1	**1**	**2**	**4**	**0**	**0**	**0**
Building Construction Phase 4 (Building 7 & 8) Year 2	**1**	**2**	**4**	**0**	**0**	**0**
SMAQMD Annual Significance Threshold	**-**	**-**	**-**	**-**	*14.6 tons/year*	*15 tons/year*
Exceed SMAQMD Annual Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.
Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SMAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour.
Daily construction emissions taken from the season (summer or winter) with the highest output.

As shown in Table 2-5, emissions generated during Project construction would not exceed the SMAQMD's annual thresholds of significance. Additionally, Project emissions resulting from construction would not exceed the SMAQMD daily significance criterion for NO_X, PM_{10}, or $PM_{2.5}$ with the implementation of mitigation measure **MM AQ-1.** SMAQMD states that projects generating less than 80 pounds of PM_{10} and less than 82 pounds of $PM_{2.5}$ daily while also implementing SMAQMD's Basic Construction Emission Control Practices, known as Best Management Practices (BMPs) are considered less than significant.

Mitigation measure **MM AQ-1** requires best available control technology (BACT) and BMPs to be implemented.

Mitigation Measures

MM AQ-1 The following practices are considered feasible for controlling fugitive dust from a construction site. Control of fugitive dust is required by District Rule 403 and enforced by SMAQMD staff.

- Water all exposed surfaces three times daily. Exposed surfaces include but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least 2 feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- All roadways, driveways, sidewalks, and parking lots to be paved should be completed as quickly as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Timing/Implementation: During all grading and construction within the Project area

Enforcement/Monitoring:County of Sacramento; Sacramento Metropolitan Air Quality Management District

Criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard. Since the Project's emissions do not exceed SMAQMD thresholds, no exceedance of the ambient air quality standards would occur, and no regional health effects from Project criteria pollutants would occur.

Project Operations Criteria Air Quality Emissions

Operational Significance Analysis

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROGs and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. As previously described, operational air pollutant emissions were based on the Project Site plans and the estimated traffic trip generation rates provided by Fehr & Peers (2021). Long-term operational emissions attributable to the Project are identified in Table 2-6 and compared to the operational significance thresholds promulgated by the SMAQMD.

Table 2-6. Operational-Related Emissions (Regional Significance Analysis)

Emission Source	Pollutant (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Summer Emissions						
Area	36.61	0.00	0.15	0.00	0.00	0.00
Energy	0.41	3.74	3.14	0.22	0.28	0.28
Mobile	1.74	41.76	21.22	0.19	11.17	3.02
Total:	**38.76**	**45.50**	**24.51**	**0.41**	**11.45**	**3.30**
SMAQMD Significance Threshold	*65 pounds/day*	*65 pounds/day*	-	-	*80 pounds/day*	*82 pounds/day*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area	35.61	0.00	0.15	0.00	0.00	0.00
Energy	0.41	3.74	3.14	0.22	0.28	0.28
Mobile	1.47	41.82	20.23	0.18	11.18	3.02
Total:	**37.48**	**45.56**	**23.52**	**0.40**	**11.46**	**3.30**
SMAQMD Significance Threshold	*65 pounds/day*	*65 pounds/day*	-	-	*80 pounds/day*	*82 pounds/day*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

As shown in Table 2-6, the Project's emissions would not exceed any SMAQMD thresholds for any criteria air pollutants during operation.

As identified in Table 2-3, the Sacramento County portion of the SVAB is listed as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10}. O_3 is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose and throat irritation and increases susceptibility to respiratory infections. PM can adversely affect the human respiratory system. As shown in Table 2-6, the Proposed Project would result in increased emissions of O_3 precursor emissions (ROG and NO_x), PM_{10} and $PM_{2.5}$; however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified. The overall strategy for reducing air pollution and related health effects in the SMAQMD is contained in the SMAQMD *2017 Sacramento Regional 8-Hour Ozone Attainment and*

Reasonable Further Progress Plan (2018), the *PM_{10} Implementation/Maintenance Plan and Re-Designation Request* (2010), and *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area* (2013). These air quality planning documents present comprehensive strategies to reduce the O_3 precursor pollutants (ROG and NOx) as well as PM emissions from stationary, area, mobile, and indirect sources. Each of these air quality planning documents provide control measures that reduce emissions to attain and maintain federal ambient air quality standards such as the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero and near-zero technologies and control methods. The CEQA thresholds of significance established by the SMAQMD are designed to meet the objectives of these air quality planning documents and in doing so achieve and maintain attainment status with state and federal standards. As noted above, the Project would increase the emission of certain pollutants, but would not exceed the thresholds of significance established by the SMAQMD for purposes of reducing air pollution and its deleterious health effects.

Project Consistency with Air Quality Planning

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the NAAQS and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project Site is located within the Sacramento County portion of the SVAB, which is under the jurisdiction of the SMAQMD. The SMAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. The SMAQMD is required to submit air quality plans and rate-of-progress milestone evaluations in accordance with the federal Clean Air Act. The SMAQMD air quality attainment plans and reports, which include the *2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2018), the *PM_{10} Implementation/Maintenance Plan and Re-Designation Request* (2010), and *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area* (2013), present comprehensive strategies to reduce the O_3 precursor pollutants (ROG and NO_x) as well as PM emissions from stationary, area, mobile, and indirect sources.

A Project is consistent with regional air quality planning efforts in part if it is consistent with the population and housing assumptions that were used in the development of the SMAQMD air quality plans and does nothing to inhibit the region's achievement of air quality standards. The Project would not be contributing to an increase in population or housing growth beyond that currently anticipated in Rancho Cordova. Furthermore, as shown in Tables 2-5 and 2-6 all Project emissions would fall below SMAQMD significance thresholds.

In conclusion, the Project would not conflict with the population or job growth projections used by SMAQMD to develop its air quality attainment plans. Project emissions would be emitted below SMAQMD significance thresholds. The Project would not conflict with SMAQMD's air quality planning.

Exposure of Sensitive Receptors to Toxic Air Contaminants

As previously described, sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest existing sensitive receptors receptor to the Project Site is the Comfort Inn and Suites located directly across Folsom Boulevard as well as the Twilight RV and Mobile Home Park located approximately 691 feet northeast of the Project Site boundary. Additionally, as previously described, there are proposed residential land uses located directly east of the Project Site beyond Nimbus Road.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); paving; and other miscellaneous activities. The Sacramento County portion of the SVAB is listed as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10}. Thus, existing O_3, PM_{10} and $PM_{2.5}$ levels in the SVAB are at unhealthy levels during certain periods. However, as shown in Table 2-5 the Project would not exceed the SMAQMD significance thresholds for construction emissions.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NOx) in excess of the SMAQMD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SMAQMD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

PM_{10} and $PM_{2.5}$ contain microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. PM exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary toxic air contaminant (TAC) of concern. The potential cancer risk from the inhalation of DPM outweighs the

potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. Given the dispersed nature of the Project site, the very small number of nearby sensitive receptors, the relatively short period of construction emissions that would occur in the vicinity of the nearest sensitive receptors (approximately 6 months), and the negligible level of operational emissions, the overall health risks from TACs would not be significant. As with O_3 and NO_x, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SJVAPCD's thresholds. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, Project construction would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Operational Air Contaminants

Health Risk

A health risk computation was performed to determine the risk of developing an excess cancer risk as a result of Project operations. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual (2015).

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average DPM concentrations are calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home or at work, and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kilogram body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function of the breathing rate, the exposure frequency, and the concentration of a substance in the air. For receptor exposure, the breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, third trimester, 0<2, 2<9, 2<16, 16<30, and 16-70 years. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\textbf{Dose-air} = (C_{air} * \{BR/BW\} * A * EF * 10^{-6})$$

Where:

Dose-air = dose through inhalation (mg/kg/day)

C_{air} = air concentration ($\mu g/m^3$) from air dispersion model

{BR/BW} = daily breathing rate normalized to body weight (L/kg body weight – day) (361 L\kg BW-day for 3rd Trimester, 1,090 L/kg BW-day for 0<2 years, 861 L/kg BW-day for 2<9 years, 745 L/kg BW-day for 2<16 years, 335 L/kg BW-day for 16<30 years, and 290 L/kg BW-day 16<70 years)

A = Inhalation absorption factor (unitless [1])

EF = exposure frequency (unitless), days/365 days (0.96 [approximately 350 days per year])

10^{-6} = conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to take into account the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age two years, an ASF of 3 for ages two through 15 years to account for potential increased sensitivity to carcinogens during childhood, and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the following FAH values: from the third trimester to age <two years, 85 percent of time is spent at home; from age two through <16 years, 72 percent of time is spent at home; from age 16 years and greater, 73 percent of time is spent at home.

Cancer Risk

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$\mathbf{Risk_{inh\text{-}res} = (Dose_{air} * CPH * ASF * ED/AT * FAH)}$$

Where:

$Risk_{inh\text{-}res}$	=	residential inhalation cancer risk (potential chances per million)
$Dose_{air}$	=	daily dose through inhalation (mg/kg-day)
CPF	=	inhalation cancer potency factor (mg/kg-day^{-1})
ASF	=	age sensitivity factor for a specified age group (unitless)
ED	=	exposure duration (in years) for a specified age group (0.25 years for 3rd trimester, 2 years for 0<2, 7 years for 2<9, 14 years for 2<16, 14 years for 16<30, 54 years for 16-70)
AT	=	averaging time of lifetime cancer risk (years)
FAH	=	fraction of time spent at home (unitless)

Chronic Non-Cancer Hazard

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

Hazard Quotient = Ci/RELi

Where:

Ci = Concentration in the air of substance i (annual average concentration in µg/m3)
RELi = Chronic noncancer Reference Exposure Level for substance i (µg/m3)

Acute Non-Cancer Hazard

The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts. The equation is as follows:

Acute HQ = Maximum Hourly Air Concentration (µg/m^3) / Acute REL (µg/m^3)

The modeled operational health risk for the Proposed Project is summarized below. Operational emissions sources in the model include line-volume sources to represent truck movement on the Project Site, Folsom Boulevard, Nimbus Road, Highway 50 East and Highway 50 West. The model was run to obtain the annual average concentration in micrograms per cubic meter (µg/m^3) at nearby sensitive receptors as well as locations where future sensitive receptors are approved for construction. The concentration estimates developed using this methodology are considered conservative and are not a specific prediction of the actual concentrations that would occur as a result of the Project any one point in time.

Table 2-7 presents the cancer risk at representative locations for 9, 30 and 70-year operational scenarios.

Table 2-7. Maximum Operational Health Risk at the Project Vicinity

Exposure Scenario	Maximum Cancer Risk (Risk per Million	Significance Threshold (Risk per Million)	Exceeds SMAQMD Significance Threshold?
Comfort Inn & Suites Rancho Cordova-Sacramento			
70-Year Exposure	1.18	*10*	**No**
30-Year Exposure	1.07	*10*	**No**
9-Year Exposure	0.76	*10*	**No**
Twilight RV and Mobile Home Park			
70-Year Exposure	1.00	*10*	**No**
30-Year Exposure	0.90	*10*	**No**
9-Year Exposure	0.64	*10*	**No**
Future Residential Development			
70-Year Exposure	2.43	*10*	**No**
30-Year Exposure	2.20	*10*	**No**
9-Year Exposure	1.57	*10*	**No**

Source: Refer to Attachments B and C for Model Data Outputs.

As seen in Table 2-7, cancer risk for operations is below the significance threshold of ten in one million.

In addition to cancer risk, the significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index at nearby sensitive receptors associated with DPM emissions is shown in Table 2-8.

Table 2-8. Maximum Operational Non-Cancer Risk at the Project Vicinity

Exposure Scenario	Maximum Non-Cancer Hazard	Index Significance Thresholds	Exceeds SMAQMD Significance Threshold?
Comfort Inn & Suites Rancho Cordova-Sacramento			
Chronic Hazard Index	0.00031	*1*	**No**
Acute Hazard Index	0.00826	*1*	**No**
Twilight RV and Mobile Home Park			
Chronic Hazard Index	0.00026	*1*	**No**
Acute Hazard Index	0.00695	*1*	**No**
Future Residential Development			
Chronic Hazard Index	0.00064	*1*	**No**
Acute Hazard Index	0.01690	*1*	**No**

Source: Refer to Attachments B and C for Model Data Outputs.

As shown, impacts related to non-cancer risk (chronic and acute hazard index) would not surpass significance thresholds at the nearby sensitive receptors.

Naturally Occurring Asbestos

Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally-occurring asbestos-containing soils. The Proposed Project is not located within an area designated by the State of California as likely to contain naturally-occurring asbestos (Department of Conservation [DOC] 2000). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in

California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SVAB is designated as in attainment. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 AQMP can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD is the air pollution control officer for much of southern California. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD), the air pollution control officer for the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

The Proposed Project is anticipated to result in 2,080 daily traffic trips on weekdays (Fehr & Peers 2021). Due to the nature of the Project, substantially less traffic trips are anticipated on the weekends. Thus, the Proposed Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day (or 44,000 vehicles per day) and there is no likelihood of the Project traffic exceeding CO values.

Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified as being associated with odors. Furthermore, the Proposed Project would also be required to comply with SMAQMD Rule 402 to prevent occurrences of public nuisances. Rule 402 prohibits the discharge from any source that causes nuisance, annoyance, or discomfort to a considerable number of persons.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), and N_2O. Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 3-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2 (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013).

Table 3-1. Greenhouse Gases

Greenhouse Gas	Description
CO_2	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
CH_4	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.[2]
N_2O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]

Sources: [1]USEPA 2016a, [2] USEPA 2016b, [3] USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

3.1.1 Sources of Greenhouse Gas Emissions

In 2020, CARB released the 2020 edition of the California GHG inventory covering calendar year 2018 emissions. In 2018, California emitted 425.3 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2018, accounting for approximately 30 percent of total GHG emissions in the state. This sector was followed by the industrial sector (21 percent) and the electric power sector including both in-state and out-of-state sources (15 percent) (CARB 2020b). Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural

practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing CO_2 from the atmosphere.

3.2 Regulatory Framework

3.2.1 State

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlines measures to meet the 2020 GHG reduction goals. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by the end of 2020.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2017 Scoping Plan Update, addresses the 2030 target established by Senate Bill (SB) 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by Executive Order (EO) B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

Senate Bill 100 of 2018

In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 standards are a major step toward meeting Zero Net Energy. The most significant efficiency improvement to the residential Standards include the introduction of photovoltaic into the perspective package, improvements for attics, walls, water heating and lighting. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards.

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 Building Standard (CalGreen), and establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. Like Part 6 of Title 24, the CalGreen standards are periodically updated, with increasing energy savings and efficiencies associated with each code update. CalGreen contains voluntary "Tier 1" and "Tier 2" standards that are not mandatory statewide but could be required by a City or County. These are 'reach' standards that can be adopted by local jurisdictions and may be incorporated as mandatory standards in future code cycles.

Phase I and 2 Heavy-Duty Vehicle GHG Standards

CARB has adopted a new regulation for GHG emissions from heavy-duty trucks and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the USEPA rule for new trucks and engines nationally. Existing heavy-duty truck vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer Greenhouse Gas Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. In September 2011, the USEPA adopted their new rule for heavy-duty trucks and engines. The USEPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year 2014 with stringency levels increasing through model year 2018. The rule organizes truck compliance into three groupings, which include a) heavy-duty pickups and vans; b) vocational vehicles; and c) combination tractors. The USEPA rule does not regulate trailers. CARB staff has worked jointly with the USEPA and the National Highway Traffic Safety Administration (NHTSA) on the next phase of federal GHG emission standards for medium-duty trucks and heavy-duty truck vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and

vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year heavy-duty truck vehicles, including trailers. In February 2019, the Office of Administrative Law (OAL) approved the Phase 2 Heavy-Duty Vehicle GHG Standards and became effective April 1, 2019. The Phase 2 GHG standards are needed to offset projected vehicle miles traveled (VMT) growth and keep heavy-duty truck CO_2 emissions declining. The federal Phase 2 standards establish for the first time, federal emissions requirements for trailers hauled by heavy-duty tractors. The federal Phase 2 standards are more technology-forcing than the federal Phase 1 standards, requiring manufacturers to improve existing technologies or develop new technologies to meet the standards. The federal Phase 2 standards for tractors, vocational vehicles, and heavy-duty pick-up trucks and vans (PUVs) will be phased-in from 2021-2027, additionally for trailers, the standards are phased-in from 2018 (2020 in California) through 2027.

3.2.2 Local

Sacramento Area Council of Government's Metropolitan Transportation Plan/Sustainable Communities Strategy

The Sacramento Area Council of Government's (SACOG's) Metropolitan Transportation Plan/Sustainable Communities Strategy 2020 (MTP/SCS) is the latest update of a long-range policy and planning program that establishes GHG emissions goals for automobiles and light-duty trucks for and the year 2035, and thus establishes an overall GHG target for the region beyond 2020 applicable to these subsectors of the transportation sector. CARB assigned SACOG a 19 percent GHG reduction target from 2005 levels by 2035. The GHG reduction target is the percent reduction in passenger vehicle GHG emission per capita, compared to year 2005. This change represents a reduction from just over 23 pounds per capita on a given weekday in 2005, to just under 19 pounds by 2035 (SACOG 2020).

Sacramento Metropolitan Air Quality Management District

The SMAQMD has primary responsibility for developing and implementing rules and regulations to maintain the NAAQS and attain the CAAQS, permitting new or modified sources, developing air quality management plans, and adopting and enforcing air pollution regulations for all projects in the SVAB. The AB 32 Scoping Plan does not specify an explicit role for local air districts with respect to implementing statewide GHG reduction strategies, but it does state that CARB will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting, but also via their role as a CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents.

The SMAQMD has recommended an approach for assessing a proposed development's GHG emissions. Specifically, SMAQMD recommends a comparison of a project's annual construction GHG emissions to a significance threshold of 1,100 metric tons per year. Similarly, SMAQMD recommends a comparison of a project's annual operational GHG emissions to a significance threshold of 1,100 metric tons per year. If a

threshold is exceeded, then the project may have a cumulatively considerable contribution to a significant cumulative environmental impact, and all feasible mitigation is required.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to greenhouse gas emissions if it would:

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases or

The Appendix G thresholds for GHG's do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines § 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 California Code of Regulations [CCR] 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA

Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines § 15130(f)). As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines § 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines § 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines § 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Specifically, the Project is first compared to the SMAQMD GHG significance thresholds for construction and operations. The SMAQMD has developed and adopted an update to its land development project GHG thresholds, which require a project to demonstrate consistency with CARB's 2017 Climate Change Scoping Plan. The significance threshold for the construction phase is 1,100 metric tons of CO_2e per year. With regard to operational emissions, the SMAQMD's technical support document, *SMAQMD Greenhouse Gas Thresholds for Sacramento County* (2020b), identifies operational measures that should be applied to all projects estimated to exceed a screening level threshold of 1,100 metric ton of CO_2e annually in order to demonstrate consistency with the 2017 Climate Change Scoping Plan. The measures target GHG emissions inventory areas where state measures did not fully achieve reductions, allowing for local supportive measures. These measures are known as Tier 1 and Tier 2 Best Management Practices (BMPs). The Tier 1 BMPs are:

- BMP 1 – projects shall be designed and constructed without natural gas infrastructure; and
- BMP 2 - projects shall meet the current CalGreen Tier 2 standards[2], except all electric vehicle capable spaces shall instead be electric vehicle ready.

If Tier 1 BMPs are not fully implemented then emissions, including natural gas emissions, should be estimated and the project should mitigate any natural gas emissions and require all prewiring necessary

[2] CalGreen contains voluntary "Tier 1" and "Tier 2" standards that are not mandatory statewide but could be required by a City or County. These are 'reach' standards, related to energy efficiency, that can be adopted by local jurisdictions and may be incorporated as mandatory standards in future code cycles.

so that the building is ready for a future retrofit to all-electric (e.g., such that electric space heating, water heating, drying, and cooking appliances could be installed). If emissions still exceed 1,100 metric tons of CO_2e per year, then the project must implement SMAQMD's Tier 2 BMP 3:

- Office projects must achieve a 15 percent reduction in vehicle miles traveled (VMT) per worker compared to existing average VMT per capita for the County.
- Residential projects must achieve a 15% reduction in VMT per resident compared to existing average VMT per capita in the County.
- Retail projects must achieve no net increase in total VMT.

If the project achieves BMP 3, then the operational impact is considered less than significant, and no further analysis is needed. If a project cannot incorporate the required BMPs, other reductions or purchasing and retiring GHG/carbon offsets from a registry approved by the SMAQMD may be required. Carbon offsets are instruments that can be bought, sold, and traded. Like a stock or equity that represents a unit of ownership in a company, a carbon offset represents a unit of GHG emissions reductions. Each offset is essentially a certification that a certain quantity of GHG emissions has been avoided, prevented, or sequestered. Offset registries that the SMAQMD may approve have developed a broad consensus around the standards that are necessary to ensure that offsets are environmentally sound, namely, that offsets be real, permanent, quantifiable, verifiable, enforceable, and additional. Approved registries may include but are not limited to any of the following: (i) the Climate Action Reserve, the American Carbon Registry and Verra, which are all approved by CARB; (ii) any entity approved at any time by CARB to act as an "offset project registry" under the state's cap-and-trade program; (iii) other regulatory or voluntary credits that demonstrate, based on substantial evidence, that the offsets are real, permanent, quantifiable, verifiable, enforceable, and additional.

Second, the Project is assessed for consistency with the Sacramento Area Council of Government's MTP/SCS. As previously described, the MTP/SCS is the latest update of a long-range policy and planning program that establishes GHG emissions goals for automobiles and light-duty trucks for the year 2035, and thus establishes an overall GHG target for the region beyond 2020 applicable to these subsectors of the transportation sector. CARB assigned SACOG a 19 percent GHG reduction target from 2005 levels by 2035 (SACOG 2020).

3.3.2 Methodology

GHG emissions-related impacts were assessed in accordance with methodologies recommended by the SMAQMD. Where GHG emission quantification was required, emissions were modeled using the CalEEMod, version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project GHG emissions were calculated using a combination of model defaults for Sacramento County, Project Site plans as well as the estimated traffic trip generation rates and fleet mix provided by Fehr & Peers (2021).

3.3.3 Impact Analysis

Generation of GHG Emissions

Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project Site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 3-2 illustrates the specific construction generated GHG emissions that would result from construction of the Project. Once construction is complete, the generation of these GHG emissions would cease. The Project is anticipated to begin in early 2022 and would be phased over a 20-year buildout period with two buildings and associated features being constructed in each phase.

Table 3-2. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Demolition and Grading Year 1	470
Demolition and Grading Year 2	446
Demolition and Grading Year 3 & Stormwater Drainage and Sewer Connection	740
Building Construction Phase 1 (Building 1 & 2) Year 1	783
Building Construction Phase 1 (Building 1 & 2) Year 2	792
Building Construction Phase 2 (Building 3 & 4) Year 1	821
Building Construction Phase 2 (Building 3 & 4) Year 2	816
Building Construction Phase 3 (Building 5 & 6) Year 1	877
Building Construction Phase 3 (Building 5 & 6) Year 2	965
Building Construction Phase 4 (Building 7 & 8) Year 1	678
Building Construction Phase 4 (Building 7 & 8) Year 2	689
SMAQMD Annual Significance Threshold	*1,100*
Exceed SMAQMD Threshold?	**No**

Source: CalEEMod version 2016.3.2; EMFAC 2017. Refer to Attachment A for Model Data Outputs.

As shown in Table 3-2, Project construction would not exceed the SMAQMD construction threshold for GHG emissions. Once construction is complete, the generation of these GHG emissions would cease.

Operational Significance Analysis

Operations of the Project would result in an increase in GHG emissions primarily associated with motor vehicle trips and onsite energy sources. Long-term operational GHG emissions attributed to the Project are identified in Table 3-3.

Table 3-3. Unmitigated Operational-Related Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons/ Year)
Area Source	0
Energy	4,699
Mobile	3,217
Waste	926
Water	502
Total	**9,344**
SMAQMD Significance Threshold	*1,100*
Exceed SMAQMD Threshold?	**Yes**

Source: CalEEMod version 2016.3.2. Refer to *Attachment A* for Model Data Outputs.
Notes: Emission projections predominately based on CalEEMod model defaults for Sacramento County. Total trips generated by the Project and feet mix provided by Fehr & Peers (2021).

As shown in Table 3-3, the Proposed Project's operational GHG emissions would be approximately 9,344 metric tons of CO_2e per year, which exceeds the SMAQMD significance threshold of 1,100 metric tons of CO_2e per year.

As addressed in the SMAQMD *Greenhouse Gas Thresholds for Sacramento County*, all new development predicted to generated more than 1,100 metric tons of CO_2e annually must demonstrate consistency with the GHG targets within the County through various mitigation measures. This includes implementation of BMP Tier 1. As previously discussed, the Tier 1 BMPs are:

- BMP 1 – projects shall be designed and constructed without natural gas infrastructure; and
- BMP 2 - projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

Table 3-4 shows long-term mitigated operational GHG emissions attributed to the Project with the implementation of BMP Tier 1.

Table 3-4. Mitigated Operational-Related Emissions Greenhouse Gas Emissions	
Emission Source	**CO_2e (Metric Tons/ Year)**
Area Source	0
Energy	3,654
Mobile	3,217
Waste	926
Water	502
Total	**8,299**
SMAQMD Significance Threshold	*1,100*
Exceed SMAQMD Threshold?	**Yes**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.
Notes: Emission projections predominately based on CalEEMod model defaults for Sacramento County. Total trips generated by the Project and feet mix provided by Fehr & Peers (2021). Only BMP 1 was implemented due to modeling software constraints. Project electricity use is increased to account for the increased reliance on it due to lack of natural gas use. .

As shown in Table 3-4, the Proposed Project's operational GHG emissions associated with energy sources would be reduced with the imposition of BMP 1; however, the total operational GHG emissions associated with the Project would still exceed the SMAQMD significance threshold of 1,100 metric tons of CO_2e per year.

Projects that continue to exceed 1,100 metric tons of CO_2e per year after implementation of the Tier 1 BMPs must also implement SMAQMD Tier 2 BMPs. As previously discussed, the SMAQMD's Tier 2 BMP are as follows:

- Office projects must achieve a 15 percent reduction in vehicle miles traveled (VMT) per worker compared to existing average VMT per capita for the County.
- Residential projects must achieve a 15% reduction in VMT per resident compared to existing average VMT per capita in the County.
- Retail projects must achieve no net increase in total VMT.

The Project is proposing the construction of a warehouse campus and does not qualify as an office, residential or retail project. As such the Project would not comply with Tier 2 BMPs.

If a project cannot comply with Tier 2 BMPs the purchasing and retiring GHG/carbon offsets from a registry approved by the SMAQMD may be required. As previously mentioned, carbon offsets are instruments that can be bought, sold, and traded. Like a stock or equity that represents a unit of ownership in a company, a carbon offset represents a unit of GHG emissions reductions. Each offset is

essentially a certification that a certain quantity of GHG emissions has been avoided, prevented, or sequestered.

Thus, the following mitigation measure is necessary in order to reduce Project potential impacts to a less than significant level in accordance with SMAQMD guidance.

Mitigation Measures

MM GHG-1 In coordination with the Sacramento Metropolitan Air Quality Management District and City of Rancho Cordova Planning Department, the Project applicant shall purchase greenhouse gas emissions/carbon offsets to counterbalance the Project operational greenhouse gas emissions exceeding the annual significance threshold from a Sacramento Metropolitan Air Quality Management District-approved registry, including (i) the Climate Action Reserve, the American Carbon Registry and Verra, which are all approved by CARB; (ii) any entity approved at any time by CARB to act as an "offset project registry" under the state's cap-and-trade program; (iii) other regulatory or voluntary credits that demonstrate, based on substantial evidence, that the offsets are real, permanent, quantifiable, verifiable, enforceable, and additional. The specific amount of offset credits necessary to reduce potential GHG emission-related impacts to less than significant levels shall be determined through consultation with the Sacramento Metropolitan Air Quality Management District and City of Rancho Cordova Planning Department.

Implementation of mitigation measure GHG-1 would ensure a less than significant GHG impact in accordance with SMAQMD guidance.

Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

Project GHG Emissions Consistency with the Metropolitan Transportation Plan/Sustainable Communities Strategy 2035 (MTP/SCS)

As previously described, SACOG's MTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks. As shown in Table 3-3 and Table 3-4, GHG emissions resulting from Project-related transportation sources is one of the most potent source of emissions, and therefore comparison to the MTP/SCS is an appropriate indicator of whether the Project is consistent with the MTP/SCS. Since the development site is classified as a "Developing Community" in the MTP/SCS (SACOG 2020, Appendix E3), it is included in an area where urban development is predicted by SACOG. According to the MTP/SCS, land uses in Developing Communities are typically situated on vacant land at the edge of existing urban or suburban development. Developing communities are considered prime for the next increment of urban expansion. Transportation options in Developing Communities often depend, to a great extent, on the timing of development and can be expected to improve as the density of development in the area increases. Therefore, the Project is consistent with the MTP/SCS and it can be assumed that regional mobile emissions will decrease in line with the goals of the MTP/SCS with implementation of the future development within the Project area.

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LIST OF ATTACHMENTS

Attachment A – CalEEMod Output Files Criteria Air Pollutants & Greenhouse Gas Emissions

Attachment B – Operational Health Risk Assessment- Diesel Particulate Matter

Attachment C – Emission Calculations

ATTACHMENT A

CalEEMod Output Files – Criteria Air Pollutants & Greenhouse Gas Emissions

Research Park- Demolition and Grading

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,486.00	1000sqft	105.50	1,486,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Research Park- Demolition and Grading - Sacramento County, Summer

Project Characteristics -

Land Use - This model run is being conducted for the demolition and grading on the Project site. Information updated to reflect the entire proposed project.

Construction Phase -

Demolition - Tons of debris calculated from building SF of existing buildings in the PD and remining asphalt SF on the Project site from google earth.

Vehicle Trips - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Energy Use - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Water And Wastewater - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Solid Waste - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Construction Off-road Equipment Mitigation - Applied to account for Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LotAcreage	34.11	105.50
tblSolidWaste	LandfillCaptureGasFlare	94.00	0.00
tblSolidWaste	LandfillNoGasCapture	6.00	0.00
tblSolidWaste	SolidWasteGenerationRate	1,842.64	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	343,637,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.8003	29.4740	21.9025	0.0522	3.9816	1.2556	5.2372	0.6497	1.1676	1.8173	0.0000	5,176.9398	5,176.9398	1.1290	0.0000	5,205.1642
2023	3.3917	34.5488	28.5583	0.0635	8.8255	1.4255	10.2510	3.6369	1.3114	4.9483	0.0000	6,153.7194	6,153.7194	1.9475	0.0000	6,202.4074
2024	3.2838	32.4070	28.1933	0.0634	8.8255	1.3364	10.1618	3.6369	1.2295	4.8663	0.0000	6,146.4537	6,146.4537	1.9466	0.0000	6,195.1197
Maximum	**3.3917**	**34.5488**	**28.5583**	**0.0635**	**8.8255**	**1.4255**	**10.2510**	**3.6369**	**1.3114**	**4.9483**	**0.0000**	**6,153.7194**	**6,153.7194**	**1.9475**	**0.0000**	**6,202.4074**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.8003	29.4740	21.9025	0.0522	1.7912	1.2556	3.0468	0.3180	1.1676	1.4856	0.0000	5,176.9398	5,176.9398	1.1290	0.0000	5,205.1642
2023	3.3917	34.5488	28.5583	0.0635	3.5347	1.4255	4.9602	1.4430	1.3114	2.7544	0.0000	6,153.7194	6,153.7194	1.9475	0.0000	6,202.4074
2024	3.2838	32.4070	28.1933	0.0634	3.5347	1.3364	4.8711	1.4430	1.2295	2.6725	0.0000	6,146.4537	6,146.4537	1.9466	0.0000	6,195.1197
Maximum	**3.3917**	**34.5488**	**28.5583**	**0.0635**	**3.5347**	**1.4255**	**4.9602**	**1.4430**	**1.3114**	**2.7544**	**0.0000**	**6,153.7194**	**6,153.7194**	**1.9475**	**0.0000**	**6,202.4074**

Research Park- Demolition and Grading - Sacramento 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.04**	**0.00**	**49.79**	**59.56**	**0.00**	**40.57**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	35.5886	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**35.5886**	**1.3900e-003**	**0.1520**	**1.0000e-005**	**0.0000**	**5.4000e-004**	**5.4000e-004**	**0.0000**	**5.4000e-004**	**5.4000e-004**		**0.3252**	**0.3252**	**8.6000e-004**	**0.0000**	**0.3467**

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	35.5886	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**35.5886**	**1.3900e-003**	**0.1520**	**1.0000e-005**	**0.0000**	**5.4000e-004**	**5.4000e-004**	**0.0000**	**5.4000e-004**	**5.4000e-004**		**0.3252**	**0.3252**	**8.6000e-004**	**0.0000**	**0.3467**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2022	12/5/2022	5	200	
2	Grading	Grading	5/23/2023	7/29/2024	5	310	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	3,183.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.5908	0.0000	3.5908	0.5437	0.0000	0.5437			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**3.5908**	**1.2427**	**4.8334**	**0.5437**	**1.1553**	**1.6990**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 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	0.1050	3.7269	0.8952	0.0123	0.2767	0.0122	0.2889	0.0757	0.0117	0.0874		1,319.3099	1,319.3099	0.0738		1,321.1548
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	0.0561	0.0277	0.4133	1.1100e-003	0.1141	7.5000e-004	0.1149	0.0303	6.9000e-004	0.0310		110.8487	110.8487	2.7500e-003		110.9174
Total	**0.1611**	**3.7546**	**1.3085**	**0.0134**	**0.3908**	**0.0129**	**0.4038**	**0.1060**	**0.0123**	**0.1183**		**1,430.1586**	**1,430.1586**	**0.0765**		**1,432.0722**

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					1.4004	0.0000	1.4004	0.2120	0.0000	0.2120			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**1.4004**	**1.2427**	**2.6431**	**0.2120**	**1.1553**	**1.3673**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 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	0.1050	3.7269	0.8952	0.0123	0.2767	0.0122	0.2889	0.0757	0.0117	0.0874		1,319.3099	1,319.3099	0.0738		1,321.1548
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	0.0561	0.0277	0.4133	1.1100e-003	0.1141	7.5000e-004	0.1149	0.0303	6.9000e-004	0.0310		110.8487	110.8487	2.7500e-003		110.9174
Total	**0.1611**	**3.7546**	**1.3085**	**0.0134**	**0.3908**	**0.0129**	**0.4038**	**0.1060**	**0.0123**	**0.1183**		**1,430.1586**	**1,430.1586**	**0.0765**		**1,432.0722**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**8.6733**	**1.4245**	**10.0978**	**3.5965**	**1.3105**	**4.9070**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0699	0.0332	0.5072	1.4300e-003	0.1521	9.8000e-004	0.1531	0.0404	9.0000e-004	0.0413		142.2416	142.2416	3.2900e-003		142.3238
Total	**0.0699**	**0.0332**	**0.5072**	**1.4300e-003**	**0.1521**	**9.8000e-004**	**0.1531**	**0.0404**	**9.0000e-004**	**0.0413**		**142.2416**	**142.2416**	**3.2900e-003**		**142.3238**

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					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**3.3826**	**1.4245**	**4.8071**	**1.4026**	**1.3105**	**2.7132**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0699	0.0332	0.5072	1.4300e-003	0.1521	9.8000e-004	0.1531	0.0404	9.0000e-004	0.0413		142.2416	142.2416	3.2900e-003		142.3238
Total	**0.0699**	**0.0332**	**0.5072**	**1.4300e-003**	**0.1521**	**9.8000e-004**	**0.1531**	**0.0404**	**9.0000e-004**	**0.0413**		**142.2416**	**142.2416**	**3.2900e-003**		**142.3238**

3.3 Grading - 2024

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**8.6733**	**1.3354**	**10.0087**	**3.5965**	**1.2286**	**4.8251**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

3.3 Grading - 2024

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	0.0657	0.0300	0.4705	1.3700e-003	0.1521	9.5000e-004	0.1531	0.0404	8.8000e-004	0.0412		136.7050	136.7050	2.9700e-003		136.7791
Total	**0.0657**	**0.0300**	**0.4705**	**1.3700e-003**	**0.1521**	**9.5000e-004**	**0.1531**	**0.0404**	**8.8000e-004**	**0.0412**		**136.7050**	**136.7050**	**2.9700e-003**		**136.7791**

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					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**3.3826**	**1.3354**	**4.7180**	**1.4026**	**1.2286**	**2.6312**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

3.3 Grading - 2024

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	0.0657	0.0300	0.4705	1.3700e-003	0.1521	9.5000e-004	0.1531	0.0404	8.8000e-004	0.0412		136.7050	136.7050	2.9700e-003		136.7791
Total	**0.0657**	**0.0300**	**0.4705**	**1.3700e-003**	**0.1521**	**9.5000e-004**	**0.1531**	**0.0404**	**8.8000e-004**	**0.0412**		**136.7050**	**136.7050**	**2.9700e-003**		**136.7791**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	35.5886	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Unmitigated	35.5886	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467

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	3.7740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0141	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Total	**35.5886**	**1.3900e-003**	**0.1520**	**1.0000e-005**		**5.4000e-004**	**5.4000e-004**		**5.4000e-004**	**5.4000e-004**		**0.3252**	**0.3252**	**8.6000e-004**		**0.3467**

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	3.7740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0141	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Total	**35.5886**	**1.3900e-003**	**0.1520**	**1.0000e-005**		**5.4000e-004**	**5.4000e-004**		**5.4000e-004**	**5.4000e-004**		**0.3252**	**0.3252**	**8.6000e-004**		**0.3467**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Demolition and Grading

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,486.00	1000sqft	105.50	1,486,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Research Park- Demolition and Grading - Sacramento County, Winter

Project Characteristics -

Land Use - This model run is being conducted for the demolition and grading on the Project site. Information updated to reflect the entire proposed project.

Construction Phase -

Demolition - Tons of debris calculated from building SF of existing buildings in the PD and remining asphalt SF on the Project site from google earth.

Vehicle Trips - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Energy Use - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Water And Wastewater - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Solid Waste - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Construction Off-road Equipment Mitigation - Applied to account for Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LotAcreage	34.11	105.50
tblSolidWaste	LandfillCaptureGasFlare	94.00	0.00
tblSolidWaste	LandfillNoGasCapture	6.00	0.00
tblSolidWaste	SolidWasteGenerationRate	1,842.64	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	343,637,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.7992	29.6157	21.9010	0.0519	3.9816	1.2560	5.2377	0.6497	1.1680	1.8177	0.0000	5,142.8271	5,142.8271	1.1320	0.0000	5,171.1266
2023	3.3864	34.5566	28.4799	0.0633	8.8255	1.4255	10.2510	3.6369	1.3114	4.9483	0.0000	6,136.4171	6,136.4171	1.9471	0.0000	6,185.0949
2024	3.2791	32.4140	28.1192	0.0633	8.8255	1.3364	10.1618	3.6369	1.2295	4.8663	0.0000	6,129.8333	6,129.8333	1.9463	0.0000	6,178.4899
Maximum	**3.3864**	**34.5566**	**28.4799**	**0.0633**	**8.8255**	**1.4255**	**10.2510**	**3.6369**	**1.3114**	**4.9483**	**0.0000**	**6,136.4171**	**6,136.4171**	**1.9471**	**0.0000**	**6,185.0949**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.7992	29.6157	21.9010	0.0519	1.7912	1.2560	3.0473	0.3180	1.1680	1.4861	0.0000	5,142.8271	5,142.8271	1.1320	0.0000	5,171.1266
2023	3.3864	34.5566	28.4799	0.0633	3.5347	1.4255	4.9602	1.4430	1.3114	2.7544	0.0000	6,136.4171	6,136.4171	1.9471	0.0000	6,185.0949
2024	3.2791	32.4140	28.1192	0.0633	3.5347	1.3364	4.8711	1.4430	1.2295	2.6725	0.0000	6,129.8332	6,129.8332	1.9463	0.0000	6,178.4899
Maximum	**3.3864**	**34.5566**	**28.4799**	**0.0633**	**3.5347**	**1.4255**	**4.9602**	**1.4430**	**1.3114**	**2.7544**	**0.0000**	**6,136.4171**	**6,136.4171**	**1.9471**	**0.0000**	**6,185.0949**

Research Park- Demolition and Grading - Sacramento County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.04**	**0.00**	**49.79**	**59.56**	**0.00**	**40.57**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	35.5886	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**35.5886**	**1.3900e-003**	**0.1520**	**1.0000e-005**	**0.0000**	**5.4000e-004**	**5.4000e-004**	**0.0000**	**5.4000e-004**	**5.4000e-004**		**0.3252**	**0.3252**	**8.6000e-004**	**0.0000**	**0.3467**

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	35.5886	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**35.5886**	**1.3900e-003**	**0.1520**	**1.0000e-005**	**0.0000**	**5.4000e-004**	**5.4000e-004**	**0.0000**	**5.4000e-004**	**5.4000e-004**		**0.3252**	**0.3252**	**8.6000e-004**	**0.0000**	**0.3467**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2022	12/5/2022	5	200	
2	Grading	Grading	5/23/2023	7/29/2024	5	310	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	3,183.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.5908	0.0000	3.5908	0.5437	0.0000	0.5437			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**3.5908**	**1.2427**	**4.8334**	**0.5437**	**1.1553**	**1.6990**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 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	0.1082	3.8621	0.9559	0.0121	0.2767	0.0126	0.2894	0.0757	0.0121	0.0878		1,298.6867	1,298.6867	0.0771		1,300.6150
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	0.0518	0.0342	0.3510	9.8000e-004	0.1141	7.5000e-004	0.1149	0.0303	6.9000e-004	0.0310		97.3592	97.3592	2.4100e-003		97.4196
Total	**0.1600**	**3.8963**	**1.3069**	**0.0131**	**0.3908**	**0.0134**	**0.4042**	**0.1060**	**0.0128**	**0.1188**		**1,396.0459**	**1,396.0459**	**0.0795**		**1,398.0345**

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					1.4004	0.0000	1.4004	0.2120	0.0000	0.2120			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**1.4004**	**1.2427**	**2.6431**	**0.2120**	**1.1553**	**1.3673**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 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	0.1082	3.8621	0.9559	0.0121	0.2767	0.0126	0.2894	0.0757	0.0121	0.0878		1,298.6867	1,298.6867	0.0771		1,300.6150
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	0.0518	0.0342	0.3510	9.8000e-004	0.1141	7.5000e-004	0.1149	0.0303	6.9000e-004	0.0310		97.3592	97.3592	2.4100e-003		97.4196
Total	**0.1600**	**3.8963**	**1.3069**	**0.0131**	**0.3908**	**0.0134**	**0.4042**	**0.1060**	**0.0128**	**0.1188**		**1,396.0459**	**1,396.0459**	**0.0795**		**1,398.0345**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**8.6733**	**1.4245**	**10.0978**	**3.5965**	**1.3105**	**4.9070**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0647	0.0410	0.4288	1.2500e-003	0.1521	9.8000e-004	0.1531	0.0404	9.0000e-004	0.0413		124.9394	124.9394	2.8800e-003		125.0114
Total	**0.0647**	**0.0410**	**0.4288**	**1.2500e-003**	**0.1521**	**9.8000e-004**	**0.1531**	**0.0404**	**9.0000e-004**	**0.0413**		**124.9394**	**124.9394**	**2.8800e-003**		**125.0114**

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					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**3.3826**	**1.4245**	**4.8071**	**1.4026**	**1.3105**	**2.7132**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0647	0.0410	0.4288	1.2500e-003	0.1521	9.8000e-004	0.1531	0.0404	9.0000e-004	0.0413		124.9394	124.9394	2.8800e-003		125.0114
Total	**0.0647**	**0.0410**	**0.4288**	**1.2500e-003**	**0.1521**	**9.8000e-004**	**0.1531**	**0.0404**	**9.0000e-004**	**0.0413**		**124.9394**	**124.9394**	**2.8800e-003**		**125.0114**

3.3 Grading - 2024

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**8.6733**	**1.3354**	**10.0087**	**3.5965**	**1.2286**	**4.8251**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

3.3 Grading - 2024

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	0.0609	0.0370	0.3964	1.2000e-003	0.1521	9.5000e-004	0.1531	0.0404	8.8000e-004	0.0412		120.0846	120.0846	2.5900e-003		120.1493
Total	**0.0609**	**0.0370**	**0.3964**	**1.2000e-003**	**0.1521**	**9.5000e-004**	**0.1531**	**0.0404**	**8.8000e-004**	**0.0412**		**120.0846**	**120.0846**	**2.5900e-003**		**120.1493**

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					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**3.3826**	**1.3354**	**4.7180**	**1.4026**	**1.2286**	**2.6312**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

3.3 Grading - 2024

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	0.0609	0.0370	0.3964	1.2000e-003	0.1521	9.5000e-004	0.1531	0.0404	8.8000e-004	0.0412		120.0846	120.0846	2.5900e-003		120.1493
Total	**0.0609**	**0.0370**	**0.3964**	**1.2000e-003**	**0.1521**	**9.5000e-004**	**0.1531**	**0.0404**	**8.8000e-004**	**0.0412**		**120.0846**	**120.0846**	**2.5900e-003**		**120.1493**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	35.5886	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Unmitigated	35.5886	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467

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	3.7740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0141	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Total	**35.5886**	**1.3900e-003**	**0.1520**	**1.0000e-005**		**5.4000e-004**	**5.4000e-004**		**5.4000e-004**	**5.4000e-004**		**0.3252**	**0.3252**	**8.6000e-004**		**0.3467**

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	3.7740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0141	1.3900e-003	0.1520	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		0.3252	0.3252	8.6000e-004		0.3467
Total	**35.5886**	**1.3900e-003**	**0.1520**	**1.0000e-005**		**5.4000e-004**	**5.4000e-004**		**5.4000e-004**	**5.4000e-004**		**0.3252**	**0.3252**	**8.6000e-004**		**0.3467**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Demolition and Grading

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,486.00	1000sqft	105.50	1,486,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Research Park- Demolition and Grading - Sacramento County, Annual

Project Characteristics -

Land Use - This model run is being conducted for the demolition and grading on the Project site. Information updated to reflect the entire proposed project.

Construction Phase -

Demolition - Tons of debris calculated from building SF of existing buildings in the PD and remining asphalt SF on the Project site from google earth.

Vehicle Trips - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Energy Use - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Water And Wastewater - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Solid Waste - This model run is being conducted for the demolition and grading on the Project site. No operation information is included.

Construction Off-road Equipment Mitigation - Applied to account for Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LotAcreage	34.11	105.50
tblSolidWaste	LandfillCaptureGasFlare	94.00	0.00
tblSolidWaste	LandfillNoGasCapture	6.00	0.00
tblSolidWaste	SolidWasteGenerationRate	1,842.64	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	343,637,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2794	2.9598	2.1862	5.2000e-003	0.3969	0.1256	0.5225	0.0647	0.1168	0.1814	0.0000	467.8932	467.8932	0.1025	0.0000	470.4562
2023	0.2689	2.7469	2.2640	5.0400e-003	0.9014	0.1133	1.0147	0.3106	0.1043	0.4149	0.0000	442.8295	442.8295	0.1404	0.0000	446.3403
2024	0.2473	2.4470	2.1229	4.7800e-003	0.8767	0.1009	0.9776	0.2972	0.0928	0.3901	0.0000	420.0879	420.0879	0.1333	0.0000	423.4206
Maximum	**0.2794**	**2.9598**	**2.2640**	**5.2000e-003**	**0.9014**	**0.1256**	**1.0147**	**0.3106**	**0.1168**	**0.4149**	**0.0000**	**467.8932**	**467.8932**	**0.1404**	**0.0000**	**470.4562**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2794	2.9598	2.1862	5.2000e-003	0.1779	0.1256	0.3035	0.0315	0.1168	0.1483	0.0000	467.8928	467.8928	0.1025	0.0000	470.4558
2023	0.2689	2.7469	2.2640	5.0400e-003	0.3587	0.1133	0.4720	0.1230	0.1043	0.2273	0.0000	442.8290	442.8290	0.1404	0.0000	446.3397
2024	0.2473	2.4470	2.1229	4.7800e-003	0.3487	0.1009	0.4496	0.1177	0.0928	0.2106	0.0000	420.0874	420.0874	0.1333	0.0000	423.4201
Maximum	**0.2794**	**2.9598**	**2.2640**	**5.2000e-003**	**0.3587**	**0.1256**	**0.4720**	**0.1230**	**0.1168**	**0.2273**	**0.0000**	**467.8928**	**467.8928**	**0.1404**	**0.0000**	**470.4558**

Research Park- Demolition and Grading - Sacramento County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.30**	**0.00**	**51.29**	**59.52**	**0.00**	**40.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-1-2022**	**5-31-2022**	1.0620	1.0620
2	**6-1-2022**	**8-31-2022**	1.0604	1.0604
3	**9-1-2022**	**11-30-2022**	1.0520	1.0520
4	**12-1-2022**	**2-28-2023**	0.0579	0.0579
5	**3-1-2023**	**5-31-2023**	0.1220	0.1220
6	**6-1-2023**	**8-31-2023**	1.2466	1.2466
7	**9-1-2023**	**11-30-2023**	1.2331	1.2331
8	**12-1-2023**	**2-29-2024**	1.1849	1.1849
9	**3-1-2024**	**5-31-2024**	1.1727	1.1727
10	**6-1-2024**	**8-31-2024**	0.7521	0.7521
		Highest	1.2466	1.2466

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	6.4941	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0369	0.0369	1.0000e-004	0.0000	0.0393
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4941**	**1.7000e-004**	**0.0190**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0369**	**0.0369**	**1.0000e-004**	**0.0000**	**0.0393**

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	6.4941	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0369	0.0369	1.0000e-004	0.0000	0.0393
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4941**	**1.7000e-004**	**0.0190**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0369**	**0.0369**	**1.0000e-004**	**0.0000**	**0.0393**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2022	12/5/2022	5	200	
2	Grading	Grading	5/23/2023	7/29/2024	5	310	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	3,183.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3591	0.0000	0.3591	0.0544	0.0000	0.0544	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9023	339.9023	0.0955	0.0000	342.2892
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**	**0.3591**	**0.1243**	**0.4834**	**0.0544**	**0.1155**	**0.1699**	**0.0000**	**339.9023**	**339.9023**	**0.0955**	**0.0000**	**342.2892**

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	0.0106	0.3848	0.0919	1.2200e-003	0.0268	1.2400e-003	0.0281	7.3700e-003	1.1800e-003	8.5500e-003	0.0000	118.9000	118.9000	6.8200e-003	0.0000	119.0705
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8500e-003	3.0500e-003	0.0349	1.0000e-004	0.0110	8.0000e-005	0.0111	2.9300e-003	7.0000e-005	3.0000e-003	0.0000	9.0910	9.0910	2.2000e-004	0.0000	9.0965
Total	**0.0155**	**0.3878**	**0.1268**	**1.3200e-003**	**0.0379**	**1.3200e-003**	**0.0392**	**0.0103**	**1.2500e-003**	**0.0116**	**0.0000**	**127.9910**	**127.9910**	**7.0400e-003**	**0.0000**	**128.1671**

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1400	0.0000	0.1400	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9019	339.9019	0.0955	0.0000	342.2887
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**	**0.1400**	**0.1243**	**0.2643**	**0.0212**	**0.1155**	**0.1367**	**0.0000**	**339.9019**	**339.9019**	**0.0955**	**0.0000**	**342.2887**

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	0.0106	0.3848	0.0919	1.2200e-003	0.0268	1.2400e-003	0.0281	7.3700e-003	1.1800e-003	8.5500e-003	0.0000	118.9000	118.9000	6.8200e-003	0.0000	119.0705
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8500e-003	3.0500e-003	0.0349	1.0000e-004	0.0110	8.0000e-005	0.0111	2.9300e-003	7.0000e-005	3.0000e-003	0.0000	9.0910	9.0910	2.2000e-004	0.0000	9.0965
Total	**0.0155**	**0.3878**	**0.1268**	**1.3200e-003**	**0.0379**	**1.3200e-003**	**0.0392**	**0.0103**	**1.2500e-003**	**0.0116**	**0.0000**	**127.9910**	**127.9910**	**7.0400e-003**	**0.0000**	**128.1671**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8897	0.0000	0.8897	0.3075	0.0000	0.3075	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2641	2.7440	2.2301	4.9400e-003		0.1133	0.1133		0.1042	0.1042	0.0000	433.5549	433.5549	0.1402	0.0000	437.0604
Total	**0.2641**	**2.7440**	**2.2301**	**4.9400e-003**	**0.8897**	**0.1133**	**1.0030**	**0.3075**	**0.1042**	**0.4117**	**0.0000**	**433.5549**	**433.5549**	**0.1402**	**0.0000**	**437.0604**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8200e-003	2.9100e-003	0.0340	1.0000e-004	0.0117	8.0000e-005	0.0118	3.1100e-003	7.0000e-005	3.1800e-003	0.0000	9.2746	9.2746	2.1000e-004	0.0000	9.2798
Total	**4.8200e-003**	**2.9100e-003**	**0.0340**	**1.0000e-004**	**0.0117**	**8.0000e-005**	**0.0118**	**3.1100e-003**	**7.0000e-005**	**3.1800e-003**	**0.0000**	**9.2746**	**9.2746**	**2.1000e-004**	**0.0000**	**9.2798**

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3470	0.0000	0.3470	0.1199	0.0000	0.1199	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2641	2.7440	2.2301	4.9400e-003		0.1133	0.1133		0.1042	0.1042	0.0000	433.5544	433.5544	0.1402	0.0000	437.0599
Total	**0.2641**	**2.7440**	**2.2301**	**4.9400e-003**	**0.3470**	**0.1133**	**0.4602**	**0.1199**	**0.1042**	**0.2241**	**0.0000**	**433.5544**	**433.5544**	**0.1402**	**0.0000**	**437.0599**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8200e-003	2.9100e-003	0.0340	1.0000e-004	0.0117	8.0000e-005	0.0118	3.1100e-003	7.0000e-005	3.1800e-003	0.0000	9.2746	9.2746	2.1000e-004	0.0000	9.2798
Total	**4.8200e-003**	**2.9100e-003**	**0.0340**	**1.0000e-004**	**0.0117**	**8.0000e-005**	**0.0118**	**3.1100e-003**	**7.0000e-005**	**3.1800e-003**	**0.0000**	**9.2746**	**9.2746**	**2.1000e-004**	**0.0000**	**9.2798**

3.3 Grading - 2024

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					0.8656	0.0000	0.8656	0.2943	0.0000	0.2943	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2430	2.4445	2.0931	4.6900e-003		0.1008	0.1008		0.0928	0.0928	0.0000	411.6224	411.6224	0.1331	0.0000	414.9506
Total	**0.2430**	**2.4445**	**2.0931**	**4.6900e-003**	**0.8656**	**0.1008**	**0.9664**	**0.2943**	**0.0928**	**0.3871**	**0.0000**	**411.6224**	**411.6224**	**0.1331**	**0.0000**	**414.9506**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-003	2.5000e-003	0.0299	9.0000e-005	0.0111	7.0000e-005	0.0112	2.9500e-003	7.0000e-005	3.0200e-003	0.0000	8.4655	8.4655	1.8000e-004	0.0000	8.4701
Total	**4.3000e-003**	**2.5000e-003**	**0.0299**	**9.0000e-005**	**0.0111**	**7.0000e-005**	**0.0112**	**2.9500e-003**	**7.0000e-005**	**3.0200e-003**	**0.0000**	**8.4655**	**8.4655**	**1.8000e-004**	**0.0000**	**8.4701**

3.3 Grading - 2024

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					0.3376	0.0000	0.3376	0.1148	0.0000	0.1148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2430	2.4445	2.0931	4.6900e-003		0.1008	0.1008		0.0928	0.0928	0.0000	411.6219	411.6219	0.1331	0.0000	414.9501
Total	**0.2430**	**2.4445**	**2.0931**	**4.6900e-003**	**0.3376**	**0.1008**	**0.4384**	**0.1148**	**0.0928**	**0.2075**	**0.0000**	**411.6219**	**411.6219**	**0.1331**	**0.0000**	**414.9501**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-003	2.5000e-003	0.0299	9.0000e-005	0.0111	7.0000e-005	0.0112	2.9500e-003	7.0000e-005	3.0200e-003	0.0000	8.4655	8.4655	1.8000e-004	0.0000	8.4701
Total	**4.3000e-003**	**2.5000e-003**	**0.0299**	**9.0000e-005**	**0.0111**	**7.0000e-005**	**0.0112**	**2.9500e-003**	**7.0000e-005**	**3.0200e-003**	**0.0000**	**8.4655**	**8.4655**	**1.8000e-004**	**0.0000**	**8.4701**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.4941	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0369	0.0369	1.0000e-004	0.0000	0.0393
Unmitigated	6.4941	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0369	0.0369	1.0000e-004	0.0000	0.0393

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	0.6888					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8036					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7700e-003	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0369	0.0369	1.0000e-004	0.0000	0.0393
Total	**6.4941**	**1.7000e-004**	**0.0190**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0369**	**0.0369**	**1.0000e-004**	**0.0000**	**0.0393**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.6888					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8036					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7700e-003	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0369	0.0369	1.0000e-004	0.0000	0.0393
Total	**6.4941**	**1.7000e-004**	**0.0190**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0369**	**0.0369**	**1.0000e-004**	**0.0000**	**0.0393**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Stormwater Drainage & Sewer Connection

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	255.50	1000sqft	5.87	255,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Area estimated from the Impact Limits PDF (Mackay & Somps 2021)

Construction Phase - Construction phasing and updated to occur prior to any building construction.

Off-road Equipment - Equipment updated to match construction phases.

Off-road Equipment - Equipment updated to match construction phases.

Vehicle Trips - Model run being done for construction only- no operations.

Water And Wastewater - Model run being done for construction only- no operations.

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	81.00
tblConstructionPhase	NumDays	230.00	81.00
tblConstructionPhase	NumDays	20.00	81.00
tblConstructionPhase	PhaseEndDate	9/12/2022	12/31/2024
tblConstructionPhase	PhaseEndDate	7/18/2022	12/31/2024
tblConstructionPhase	PhaseEndDate	8/30/2021	9/9/2024
tblConstructionPhase	PhaseEndDate	8/15/2022	12/31/2024
tblConstructionPhase	PhaseEndDate	8/2/2021	8/12/2024
tblConstructionPhase	PhaseStartDate	8/16/2022	9/10/2024
tblConstructionPhase	PhaseStartDate	8/31/2021	9/10/2024
tblConstructionPhase	PhaseStartDate	8/3/2021	8/13/2024
tblConstructionPhase	PhaseStartDate	7/19/2022	9/10/2024
tblConstructionPhase	PhaseStartDate	7/20/2021	7/30/2024
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	4.6095	30.9153	39.3947	0.0759	18.2184	1.3738	19.5592	9.9710	1.2816	11.2135	0.0000	7,413.1591	7,413.1591	1.5134	0.0000	7,450.9944
Maximum	**4.6095**	**30.9153**	**39.3947**	**0.0759**	**18.2184**	**1.3738**	**19.5592**	**9.9710**	**1.2816**	**11.2135**	**0.0000**	**7,413.1591**	**7,413.1591**	**1.5134**	**0.0000**	**7,450.9944**

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					
2024	4.6095	30.9153	39.3947	0.0759	18.2184	1.3738	19.5592	9.9710	1.2816	11.2135	0.0000	7,413.1591	7,413.1591	1.5134	0.0000	7,450.9944
Maximum	**4.6095**	**30.9153**	**39.3947**	**0.0759**	**18.2184**	**1.3738**	**19.5592**	**9.9710**	**1.2816**	**11.2135**	**0.0000**	**7,413.1591**	**7,413.1591**	**1.5134**	**0.0000**	**7,450.9944**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1124	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1124**	**2.4000e-004**	**0.0261**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0559**	**0.0559**	**1.5000e-004**	**0.0000**	**0.0596**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1124	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1124**	**2.4000e-004**	**0.0261**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0559**	**0.0559**	**1.5000e-004**	**0.0000**	**0.0596**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/30/2024	8/12/2024	5	10	
2	Grading	Grading	8/13/2024	9/9/2024	5	20	
3	Construction of Storm Drain & Sewer Connection	Building Construction	9/10/2024	12/31/2024	5	81	
4	Paving	Paving	9/10/2024	12/31/2024	5	81	
5	Architectural Coating	Architectural Coating	9/10/2024	12/31/2024	5	81	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 5.87

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 15,330 (Architectural Coating – sqft)

OffRoad Equipment

Research Park- Stormwater Drainage & Sewer Connection - Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Concrete/Industrial Saws	1	8.00	81	0.73
Construction of Storm Drain & Sewer Connection	Trenchers	1	8.00	78	0.50
Grading	Excavators	1	8.00	158	0.38
Construction of Storm Drain & Sewer Connection	Cranes	1	7.00	231	0.29
Construction of Storm Drain & Sewer Connection	Forklifts	3	8.00	89	0.20
Construction of Storm Drain & Sewer Connection	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Construction of Storm Drain & Sewer Connection	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Construction of Storm Drain & Sewer Connection	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Construction of Storm Drain & Sewer Conne	10	107.00	42.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	21.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2024

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	2.9738	29.5903	21.9857	0.0443		1.3399	1.3399		1.2416	1.2416		4,280.6746	4,280.6746	1.2209		4,311.1980
Total	**2.9738**	**29.5903**	**21.9857**	**0.0443**	**18.0663**	**1.3399**	**19.4062**	**9.9307**	**1.2416**	**11.1722**		**4,280.6746**	**4,280.6746**	**1.2209**		**4,311.1980**

3.2 Site Preparation - 2024

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	0.0657	0.0300	0.4705	1.3700e-003	0.1521	9.5000e-004	0.1531	0.0404	8.8000e-004	0.0412		136.7050	136.7050	2.9700e-003		136.7791
Total	**0.0657**	**0.0300**	**0.4705**	**1.3700e-003**	**0.1521**	**9.5000e-004**	**0.1531**	**0.0404**	**8.8000e-004**	**0.0412**		**136.7050**	**136.7050**	**2.9700e-003**		**136.7791**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.9738	29.5903	21.9857	0.0443		1.3399	1.3399		1.2416	1.2416	0.0000	4,280.6746	4,280.6746	1.2209		4,311.1980
Total	**2.9738**	**29.5903**	**21.9857**	**0.0443**	**18.0663**	**1.3399**	**19.4062**	**9.9307**	**1.2416**	**11.1722**	**0.0000**	**4,280.6746**	**4,280.6746**	**1.2209**		**4,311.1980**

3.2 Site Preparation - 2024

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	0.0657	0.0300	0.4705	1.3700e-003	0.1521	9.5000e-004	0.1531	0.0404	8.8000e-004	0.0412		136.7050	136.7050	2.9700e-003		136.7791
Total	**0.0657**	**0.0300**	**0.4705**	**1.3700e-003**	**0.1521**	**9.5000e-004**	**0.1531**	**0.0404**	**8.8000e-004**	**0.0412**		**136.7050**	**136.7050**	**2.9700e-003**		**136.7791**

3.3 Grading - 2024

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665		2,873.0541	2,873.0541	0.9292		2,896.2842
Total	**1.6617**	**17.0310**	**14.7594**	**0.0297**	**6.5523**	**0.7244**	**7.2768**	**3.3675**	**0.6665**	**4.0340**		**2,873.0541**	**2,873.0541**	**0.9292**		**2,896.2842**

3.3 Grading - 2024

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	0.0493	0.0225	0.3529	1.0300e-003	0.1141	7.2000e-004	0.1148	0.0303	6.6000e-004	0.0309		102.5288	102.5288	2.2200e-003		102.5844
Total	**0.0493**	**0.0225**	**0.3529**	**1.0300e-003**	**0.1141**	**7.2000e-004**	**0.1148**	**0.0303**	**6.6000e-004**	**0.0309**		**102.5288**	**102.5288**	**2.2200e-003**		**102.5844**

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665	0.0000	2,873.0541	2,873.0541	0.9292		2,896.2842
Total	**1.6617**	**17.0310**	**14.7594**	**0.0297**	**6.5523**	**0.7244**	**7.2768**	**3.3675**	**0.6665**	**4.0340**	**0.0000**	**2,873.0541**	**2,873.0541**	**0.9292**		**2,896.2842**

3.3 Grading - 2024

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	0.0493	0.0225	0.3529	1.0300e-003	0.1141	7.2000e-004	0.1148	0.0303	6.6000e-004	0.0309		102.5288	102.5288	2.2200e-003		102.5844
Total	**0.0493**	**0.0225**	**0.3529**	**1.0300e-003**	**0.1141**	**7.2000e-004**	**0.1148**	**0.0303**	**6.6000e-004**	**0.0309**		**102.5288**	**102.5288**	**2.2200e-003**		**102.5844**

3.4 Construction of Storm Drain & Sewer Connection - 2024

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	1.8133	16.6190	18.7719	0.0303		0.8330	0.8330		0.7790	0.7790		2,884.4948	2,884.4948	0.7107		2,902.2620
Total	**1.8133**	**16.6190**	**18.7719**	**0.0303**		**0.8330**	**0.8330**		**0.7790**	**0.7790**		**2,884.4948**	**2,884.4948**	**0.7107**		**2,902.2620**

3.4 Construction of Storm Drain & Sewer Connection - 2024

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	0.0907	3.3382	0.8229	0.0100	0.2526	4.5500e-003	0.2572	0.0727	4.3500e-003	0.0770		1,062.2283	1,062.2283	0.0517		1,063.5211
Worker	0.3513	0.1607	2.5171	7.3400e-003	0.8140	5.1100e-003	0.8191	0.2159	4.7000e-003	0.2206		731.3718	731.3718	0.0159		731.7683
Total	**0.4420**	**3.4989**	**3.3400**	**0.0174**	**1.0666**	**9.6600e-003**	**1.0762**	**0.2886**	**9.0500e-003**	**0.2977**		**1,793.6001**	**1,793.6001**	**0.0676**		**1,795.2894**

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	1.8133	16.6190	18.7719	0.0303		0.8330	0.8330		0.7790	0.7790	0.0000	2,884.4948	2,884.4948	0.7107		2,902.2620
Total	**1.8133**	**16.6190**	**18.7719**	**0.0303**		**0.8330**	**0.8330**		**0.7790**	**0.7790**	**0.0000**	**2,884.4948**	**2,884.4948**	**0.7107**		**2,902.2620**

3.4 Construction of Storm Drain & Sewer Connection - 2024

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	0.0907	3.3382	0.8229	0.0100	0.2526	4.5500e-003	0.2572	0.0727	4.3500e-003	0.0770		1,062.2283	1,062.2283	0.0517		1,063.5211
Worker	0.3513	0.1607	2.5171	7.3400e-003	0.8140	5.1100e-003	0.8191	0.2159	4.7000e-003	0.2206		731.3718	731.3718	0.0159		731.7683
Total	**0.4420**	**3.4989**	**3.3400**	**0.0174**	**1.0666**	**9.6600e-003**	**1.0762**	**0.2886**	**9.0500e-003**	**0.2977**		**1,793.6001**	**1,793.6001**	**0.0676**		**1,795.2894**

3.5 Paving - 2024

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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1899					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1780**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.5 Paving - 2024

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	0.0493	0.0225	0.3529	1.0300e-003	0.1141	7.2000e-004	0.1148	0.0303	6.6000e-004	0.0309		102.5288	102.5288	2.2200e-003		102.5844
Total	**0.0493**	**0.0225**	**0.3529**	**1.0300e-003**	**0.1141**	**7.2000e-004**	**0.1148**	**0.0303**	**6.6000e-004**	**0.0309**		**102.5288**	**102.5288**	**2.2200e-003**		**102.5844**

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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1899					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1780**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.5 Paving - 2024

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	0.0493	0.0225	0.3529	1.0300e-003	0.1141	7.2000e-004	0.1148	0.0303	6.6000e-004	0.0309		102.5288	102.5288	2.2200e-003		102.5844
Total	**0.0493**	**0.0225**	**0.3529**	**1.0300e-003**	**0.1141**	**7.2000e-004**	**0.1148**	**0.0303**	**6.6000e-004**	**0.0309**		**102.5288**	**102.5288**	**2.2200e-003**		**102.5844**

3.6 Architectural Coating - 2024

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	0.8772					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**1.0580**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0690	0.0315	0.4940	1.4400e-003	0.1598	1.0000e-003	0.1608	0.0424	9.2000e-004	0.0433		143.5403	143.5403	3.1100e-003		143.6181
Total	**0.0690**	**0.0315**	**0.4940**	**1.4400e-003**	**0.1598**	**1.0000e-003**	**0.1608**	**0.0424**	**9.2000e-004**	**0.0433**		**143.5403**	**143.5403**	**3.1100e-003**		**143.6181**

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	0.8772					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**1.0580**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0690	0.0315	0.4940	1.4400e-003	0.1598	1.0000e-003	0.1608	0.0424	9.2000e-004	0.0433		143.5403	143.5403	3.1100e-003		143.6181
Total	**0.0690**	**0.0315**	**0.4940**	**1.4400e-003**	**0.1598**	**1.0000e-003**	**0.1608**	**0.0424**	**9.2000e-004**	**0.0433**		**143.5403**	**143.5403**	**3.1100e-003**		**143.6181**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1124	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Unmitigated	0.1124	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596

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	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0905					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4200e-003	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Total	**0.1124**	**2.4000e-004**	**0.0261**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0559**	**0.0559**	**1.5000e-004**		**0.0596**

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	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0905					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4200e-003	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Total	**0.1124**	**2.4000e-004**	**0.0261**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0559**	**0.0559**	**1.5000e-004**		**0.0596**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Stormwater Drainage & Sewer Connection

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	255.50	1000sqft	5.87	255,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Area estimated from the Impact Limits PDF (Mackay & Somps 2021)

Construction Phase - Construction phasing and updated to occur prior to any building construction.

Off-road Equipment - Equipment updated to match construction phases.

Off-road Equipment - Equipment updated to match construction phases.

Vehicle Trips - Model run being done for construction only- no operations.

Water And Wastewater - Model run being done for construction only- no operations.

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	81.00
tblConstructionPhase	NumDays	230.00	81.00
tblConstructionPhase	NumDays	20.00	81.00
tblConstructionPhase	PhaseEndDate	9/12/2022	12/31/2024
tblConstructionPhase	PhaseEndDate	7/18/2022	12/31/2024
tblConstructionPhase	PhaseEndDate	8/30/2021	9/9/2024
tblConstructionPhase	PhaseEndDate	8/15/2022	12/31/2024
tblConstructionPhase	PhaseEndDate	8/2/2021	8/12/2024
tblConstructionPhase	PhaseStartDate	8/16/2022	9/10/2024
tblConstructionPhase	PhaseStartDate	8/31/2021	9/10/2024
tblConstructionPhase	PhaseStartDate	8/3/2021	8/13/2024
tblConstructionPhase	PhaseStartDate	7/19/2022	9/10/2024
tblConstructionPhase	PhaseStartDate	7/20/2021	7/30/2024
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	4.5811	30.9977	38.9912	0.0745	18.2184	1.3742	19.5592	9.9710	1.2819	11.2135	0.0000	7,267.0053	7,267.0053	1.5149	0.0000	7,304.8775
Maximum	**4.5811**	**30.9977**	**38.9912**	**0.0745**	**18.2184**	**1.3742**	**19.5592**	**9.9710**	**1.2819**	**11.2135**	**0.0000**	**7,267.0053**	**7,267.0053**	**1.5149**	**0.0000**	**7,304.8775**

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					
2024	4.5811	30.9977	38.9912	0.0745	18.2184	1.3742	19.5592	9.9710	1.2819	11.2135	0.0000	7,267.0053	7,267.0053	1.5149	0.0000	7,304.8775
Maximum	**4.5811**	**30.9977**	**38.9912**	**0.0745**	**18.2184**	**1.3742**	**19.5592**	**9.9710**	**1.2819**	**11.2135**	**0.0000**	**7,267.0053**	**7,267.0053**	**1.5149**	**0.0000**	**7,304.8775**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1124	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1124**	**2.4000e-004**	**0.0261**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0559**	**0.0559**	**1.5000e-004**	**0.0000**	**0.0596**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1124	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1124**	**2.4000e-004**	**0.0261**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0559**	**0.0559**	**1.5000e-004**	**0.0000**	**0.0596**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/30/2024	8/12/2024	5	10	
2	Grading	Grading	8/13/2024	9/9/2024	5	20	
3	Construction of Storm Drain & Sewer Connection	Building Construction	9/10/2024	12/31/2024	5	81	
4	Paving	Paving	9/10/2024	12/31/2024	5	81	
5	Architectural Coating	Architectural Coating	9/10/2024	12/31/2024	5	81	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 5.87

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 15,330 (Architectural Coating – sqft)

OffRoad Equipment

Research Park- Stormwater Drainage & Sewer Connection - Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Concrete/Industrial Saws	1	8.00	81	0.73
Construction of Storm Drain & Sewer Connection	Trenchers	1	8.00	78	0.50
Grading	Excavators	1	8.00	158	0.38
Construction of Storm Drain & Sewer Connection	Cranes	1	7.00	231	0.29
Construction of Storm Drain & Sewer Connection	Forklifts	3	8.00	89	0.20
Construction of Storm Drain & Sewer Connection	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Construction of Storm Drain & Sewer Connection	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Construction of Storm Drain & Sewer Connection	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Construction of Storm Drain & Sewer Conne	10	107.00	42.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	21.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2024

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	2.9738	29.5903	21.9857	0.0443		1.3399	1.3399		1.2416	1.2416		4,280.6746	4,280.6746	1.2209		4,311.1980
Total	**2.9738**	**29.5903**	**21.9857**	**0.0443**	**18.0663**	**1.3399**	**19.4062**	**9.9307**	**1.2416**	**11.1722**		**4,280.6746**	**4,280.6746**	**1.2209**		**4,311.1980**

3.2 Site Preparation - 2024

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	0.0609	0.0370	0.3964	1.2000e-003	0.1521	9.5000e-004	0.1531	0.0404	8.8000e-004	0.0412		120.0846	120.0846	2.5900e-003		120.1493
Total	**0.0609**	**0.0370**	**0.3964**	**1.2000e-003**	**0.1521**	**9.5000e-004**	**0.1531**	**0.0404**	**8.8000e-004**	**0.0412**		**120.0846**	**120.0846**	**2.5900e-003**		**120.1493**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.9738	29.5903	21.9857	0.0443		1.3399	1.3399		1.2416	1.2416	0.0000	4,280.6746	4,280.6746	1.2209		4,311.1980
Total	**2.9738**	**29.5903**	**21.9857**	**0.0443**	**18.0663**	**1.3399**	**19.4062**	**9.9307**	**1.2416**	**11.1722**	**0.0000**	**4,280.6746**	**4,280.6746**	**1.2209**		**4,311.1980**

3.2 Site Preparation - 2024

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	0.0609	0.0370	0.3964	1.2000e-003	0.1521	9.5000e-004	0.1531	0.0404	8.8000e-004	0.0412		120.0846	120.0846	2.5900e-003		120.1493
Total	**0.0609**	**0.0370**	**0.3964**	**1.2000e-003**	**0.1521**	**9.5000e-004**	**0.1531**	**0.0404**	**8.8000e-004**	**0.0412**		**120.0846**	**120.0846**	**2.5900e-003**		**120.1493**

3.3 Grading - 2024

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665		2,873.0541	2,873.0541	0.9292		2,896.2842
Total	**1.6617**	**17.0310**	**14.7594**	**0.0297**	**6.5523**	**0.7244**	**7.2768**	**3.3675**	**0.6665**	**4.0340**		**2,873.0541**	**2,873.0541**	**0.9292**		**2,896.2842**

3.3 Grading - 2024

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	0.0457	0.0278	0.2973	9.0000e-004	0.1141	7.2000e-004	0.1148	0.0303	6.6000e-004	0.0309		90.0634	90.0634	1.9400e-003		90.1120
Total	**0.0457**	**0.0278**	**0.2973**	**9.0000e-004**	**0.1141**	**7.2000e-004**	**0.1148**	**0.0303**	**6.6000e-004**	**0.0309**		**90.0634**	**90.0634**	**1.9400e-003**		**90.1120**

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665	0.0000	2,873.0541	2,873.0541	0.9292		2,896.2842
Total	**1.6617**	**17.0310**	**14.7594**	**0.0297**	**6.5523**	**0.7244**	**7.2768**	**3.3675**	**0.6665**	**4.0340**	**0.0000**	**2,873.0541**	**2,873.0541**	**0.9292**		**2,896.2842**

3.3 Grading - 2024

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	0.0457	0.0278	0.2973	9.0000e-004	0.1141	7.2000e-004	0.1148	0.0303	6.6000e-004	0.0309		90.0634	90.0634	1.9400e-003		90.1120
Total	**0.0457**	**0.0278**	**0.2973**	**9.0000e-004**	**0.1141**	**7.2000e-004**	**0.1148**	**0.0303**	**6.6000e-004**	**0.0309**		**90.0634**	**90.0634**	**1.9400e-003**		**90.1120**

3.4 Construction of Storm Drain & Sewer Connection - 2024

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	1.8133	16.6190	18.7719	0.0303		0.8330	0.8330		0.7790	0.7790		2,884.4948	2,884.4948	0.7107		2,902.2620
Total	**1.8133**	**16.6190**	**18.7719**	**0.0303**		**0.8330**	**0.8330**		**0.7790**	**0.7790**		**2,884.4948**	**2,884.4948**	**0.7107**		**2,902.2620**

3.4 Construction of Storm Drain & Sewer Connection - 2024

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	0.0963	3.3705	0.9489	9.7500e-003	0.2526	4.9200e-003	0.2576	0.0727	4.7100e-003	0.0774		1,034.9107	1,034.9107	0.0559		1,036.3072
Worker	0.3259	0.1982	2.1209	6.4500e-003	0.8140	5.1100e-003	0.8191	0.2159	4.7000e-003	0.2206		642.4524	642.4524	0.0139		642.7990
Total	**0.4222**	**3.5687**	**3.0698**	**0.0162**	**1.0666**	**0.0100**	**1.0766**	**0.2886**	**9.4100e-003**	**0.2980**		**1,677.3631**	**1,677.3631**	**0.0697**		**1,679.1061**

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	1.8133	16.6190	18.7719	0.0303		0.8330	0.8330		0.7790	0.7790	0.0000	2,884.4948	2,884.4948	0.7107		2,902.2620
Total	**1.8133**	**16.6190**	**18.7719**	**0.0303**		**0.8330**	**0.8330**		**0.7790**	**0.7790**	**0.0000**	**2,884.4948**	**2,884.4948**	**0.7107**		**2,902.2620**

3.4 Construction of Storm Drain & Sewer Connection - 2024

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	0.0963	3.3705	0.9489	9.7500e-003	0.2526	4.9200e-003	0.2576	0.0727	4.7100e-003	0.0774		1,034.9107	1,034.9107	0.0559		1,036.3072
Worker	0.3259	0.1982	2.1209	6.4500e-003	0.8140	5.1100e-003	0.8191	0.2159	4.7000e-003	0.2206		642.4524	642.4524	0.0139		642.7990
Total	**0.4222**	**3.5687**	**3.0698**	**0.0162**	**1.0666**	**0.0100**	**1.0766**	**0.2886**	**9.4100e-003**	**0.2980**		**1,677.3631**	**1,677.3631**	**0.0697**		**1,679.1061**

3.5 Paving - 2024

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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1899					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1780**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.5 Paving - 2024

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	0.0457	0.0278	0.2973	9.0000e-004	0.1141	7.2000e-004	0.1148	0.0303	6.6000e-004	0.0309		90.0634	90.0634	1.9400e-003		90.1120
Total	**0.0457**	**0.0278**	**0.2973**	**9.0000e-004**	**0.1141**	**7.2000e-004**	**0.1148**	**0.0303**	**6.6000e-004**	**0.0309**		**90.0634**	**90.0634**	**1.9400e-003**		**90.1120**

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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1899					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1780**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.5 Paving - 2024

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	0.0457	0.0278	0.2973	9.0000e-004	0.1141	7.2000e-004	0.1148	0.0303	6.6000e-004	0.0309		90.0634	90.0634	1.9400e-003		90.1120
Total	**0.0457**	**0.0278**	**0.2973**	**9.0000e-004**	**0.1141**	**7.2000e-004**	**0.1148**	**0.0303**	**6.6000e-004**	**0.0309**		**90.0634**	**90.0634**	**1.9400e-003**		**90.1120**

3.6 Architectural Coating - 2024

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	0.8772					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**1.0580**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0640	0.0389	0.4163	1.2700e-003	0.1598	1.0000e-003	0.1608	0.0424	9.2000e-004	0.0433		126.0888	126.0888	2.7200e-003		126.1568
Total	**0.0640**	**0.0389**	**0.4163**	**1.2700e-003**	**0.1598**	**1.0000e-003**	**0.1608**	**0.0424**	**9.2000e-004**	**0.0433**		**126.0888**	**126.0888**	**2.7200e-003**		**126.1568**

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	0.8772					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**1.0580**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0640	0.0389	0.4163	1.2700e-003	0.1598	1.0000e-003	0.1608	0.0424	9.2000e-004	0.0433		126.0888	126.0888	2.7200e-003		126.1568
Total	**0.0640**	**0.0389**	**0.4163**	**1.2700e-003**	**0.1598**	**1.0000e-003**	**0.1608**	**0.0424**	**9.2000e-004**	**0.0433**		**126.0888**	**126.0888**	**2.7200e-003**		**126.1568**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1124	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Unmitigated	0.1124	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596

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	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0905					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4200e-003	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Total	**0.1124**	**2.4000e-004**	**0.0261**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0559**	**0.0559**	**1.5000e-004**		**0.0596**

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	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0905					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4200e-003	2.4000e-004	0.0261	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0559	0.0559	1.5000e-004		0.0596
Total	**0.1124**	**2.4000e-004**	**0.0261**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0559**	**0.0559**	**1.5000e-004**		**0.0596**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Stormwater Drainage & Sewer Connection

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	255.50	1000sqft	5.87	255,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Area estimated from the Impact Limits PDF (Mackay & Somps 2021)

Construction Phase - Construction phasing and updated to occur prior to any building construction.

Off-road Equipment - Equipment updated to match construction phases.

Off-road Equipment - Equipment updated to match construction phases.

Vehicle Trips - Model run being done for construction only- no operations.

Water And Wastewater - Model run being done for construction only- no operations.

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	81.00
tblConstructionPhase	NumDays	230.00	81.00
tblConstructionPhase	NumDays	20.00	81.00
tblConstructionPhase	PhaseEndDate	9/12/2022	12/31/2024
tblConstructionPhase	PhaseEndDate	7/18/2022	12/31/2024
tblConstructionPhase	PhaseEndDate	8/30/2021	9/9/2024
tblConstructionPhase	PhaseEndDate	8/15/2022	12/31/2024
tblConstructionPhase	PhaseEndDate	8/2/2021	8/12/2024
tblConstructionPhase	PhaseStartDate	8/16/2022	9/10/2024
tblConstructionPhase	PhaseStartDate	8/31/2021	9/10/2024
tblConstructionPhase	PhaseStartDate	8/3/2021	8/13/2024
tblConstructionPhase	PhaseStartDate	7/19/2022	9/10/2024
tblConstructionPhase	PhaseStartDate	7/20/2021	7/30/2024
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2164	1.5734	1.8384	3.5700e-003	0.2102	0.0696	0.2798	0.0980	0.0648	0.1628	0.0000	315.3841	315.3841	0.0696	0.0000	317.1236
Maximum	**0.2164**	**1.5734**	**1.8384**	**3.5700e-003**	**0.2102**	**0.0696**	**0.2798**	**0.0980**	**0.0648**	**0.1628**	**0.0000**	**315.3841**	**315.3841**	**0.0696**	**0.0000**	**317.1236**

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					
2024	0.2164	1.5734	1.8384	3.5700e-003	0.2102	0.0696	0.2798	0.0980	0.0648	0.1628	0.0000	315.3838	315.3838	0.0696	0.0000	317.1233
Maximum	**0.2164**	**1.5734**	**1.8384**	**3.5700e-003**	**0.2102**	**0.0696**	**0.2798**	**0.0980**	**0.0648**	**0.1628**	**0.0000**	**315.3838**	**315.3838**	**0.0696**	**0.0000**	**317.1233**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
13	**6-22-2024**	**9-21-2024**	0.5032	0.5032
14	**9-22-2024**	**9-30-2024**	0.1142	0.1142
		Highest	0.5032	0.5032

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	0.0204	3.0000e-005	3.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3400e-003	6.3400e-003	2.0000e-005	0.0000	6.7600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0204**	**3.0000e-005**	**3.2600e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.3400e-003**	**6.3400e-003**	**2.0000e-005**	**0.0000**	**6.7600e-003**

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	0.0204	3.0000e-005	3.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3400e-003	6.3400e-003	2.0000e-005	0.0000	6.7600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0204**	**3.0000e-005**	**3.2600e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.3400e-003**	**6.3400e-003**	**2.0000e-005**	**0.0000**	**6.7600e-003**

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

3.0 Construction Detail

Construction Phase

Research Park- Stormwater Drainage & Sewer Connection - Sacramento County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/30/2024	8/12/2024	5	10	
2	Grading	Grading	8/13/2024	9/9/2024	5	20	
3	Construction of Storm Drain & Sewer Connection	Building Construction	9/10/2024	12/31/2024	5	81	
4	Paving	Paving	9/10/2024	12/31/2024	5	81	
5	Architectural Coating	Architectural Coating	9/10/2024	12/31/2024	5	81	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 5.87

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 15,330 (Architectural Coating – sqft)

OffRoad Equipment

Research Park- Stormwater Drainage & Sewer Connection - Sacramento County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Concrete/Industrial Saws	1	8.00	81	0.73
Construction of Storm Drain & Sewer Connection	Trenchers	1	8.00	78	0.50
Grading	Excavators	1	8.00	158	0.38
Construction of Storm Drain & Sewer Connection	Cranes	1	7.00	231	0.29
Construction of Storm Drain & Sewer Connection	Forklifts	3	8.00	89	0.20
Construction of Storm Drain & Sewer Connection	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Construction of Storm Drain & Sewer Connection	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Construction of Storm Drain & Sewer Connection	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Construction of Storm Drain & Sewer Conne	10	107.00	42.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	21.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2024

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1480	0.1099	2.2000e-004		6.7000e-003	6.7000e-003		6.2100e-003	6.2100e-003	0.0000	19.4168	19.4168	5.5400e-003	0.0000	19.5553
Total	**0.0149**	**0.1480**	**0.1099**	**2.2000e-004**	**0.0903**	**6.7000e-003**	**0.0970**	**0.0497**	**6.2100e-003**	**0.0559**	**0.0000**	**19.4168**	**19.4168**	**5.5400e-003**	**0.0000**	**19.5553**

3.2 Site Preparation - 2024

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	1.7000e-004	1.9800e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5606	0.5606	1.0000e-005	0.0000	0.5609
Total	**2.8000e-004**	**1.7000e-004**	**1.9800e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.4000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5606**	**0.5606**	**1.0000e-005**	**0.0000**	**0.5609**

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1480	0.1099	2.2000e-004		6.7000e-003	6.7000e-003		6.2100e-003	6.2100e-003	0.0000	19.4168	19.4168	5.5400e-003	0.0000	19.5552
Total	**0.0149**	**0.1480**	**0.1099**	**2.2000e-004**	**0.0903**	**6.7000e-003**	**0.0970**	**0.0497**	**6.2100e-003**	**0.0559**	**0.0000**	**19.4168**	**19.4168**	**5.5400e-003**	**0.0000**	**19.5552**

3.2 Site Preparation - 2024

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	1.7000e-004	1.9800e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5606	0.5606	1.0000e-005	0.0000	0.5609
Total	**2.8000e-004**	**1.7000e-004**	**1.9800e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.4000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5606**	**0.5606**	**1.0000e-005**	**0.0000**	**0.5609**

3.3 Grading - 2024

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					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1703	0.1476	3.0000e-004		7.2400e-003	7.2400e-003		6.6600e-003	6.6600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2747
Total	**0.0166**	**0.1703**	**0.1476**	**3.0000e-004**	**0.0655**	**7.2400e-003**	**0.0728**	**0.0337**	**6.6600e-003**	**0.0403**	**0.0000**	**26.0639**	**26.0639**	**8.4300e-003**	**0.0000**	**26.2747**

3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.5000e-004	2.9700e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8410	0.8410	2.0000e-005	0.0000	0.8414
Total	**4.3000e-004**	**2.5000e-004**	**2.9700e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8410**	**0.8410**	**2.0000e-005**	**0.0000**	**0.8414**

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					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1703	0.1476	3.0000e-004		7.2400e-003	7.2400e-003		6.6600e-003	6.6600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2746
Total	**0.0166**	**0.1703**	**0.1476**	**3.0000e-004**	**0.0655**	**7.2400e-003**	**0.0728**	**0.0337**	**6.6600e-003**	**0.0403**	**0.0000**	**26.0639**	**26.0639**	**8.4300e-003**	**0.0000**	**26.2746**

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.5000e-004	2.9700e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8410	0.8410	2.0000e-005	0.0000	0.8414
Total	**4.3000e-004**	**2.5000e-004**	**2.9700e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8410**	**0.8410**	**2.0000e-005**	**0.0000**	**0.8414**

3.4 Construction of Storm Drain & Sewer Connection - 2024

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	0.0734	0.6731	0.7603	1.2300e-003		0.0337	0.0337		0.0316	0.0316	0.0000	105.9792	105.9792	0.0261	0.0000	106.6320
Total	**0.0734**	**0.6731**	**0.7603**	**1.2300e-003**		**0.0337**	**0.0337**		**0.0316**	**0.0316**	**0.0000**	**105.9792**	**105.9792**	**0.0261**	**0.0000**	**106.6320**

3.4 Construction of Storm Drain & Sewer Connection - 2024

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	3.7400e-003	0.1370	0.0355	4.0000e-004	9.9400e-003	1.9000e-004	0.0101	2.8700e-003	1.8000e-004	3.0500e-003	0.0000	38.6055	38.6055	1.9600e-003	0.0000	38.6547
Worker	0.0123	7.1700e-003	0.0857	2.7000e-004	0.0318	2.1000e-004	0.0320	8.4600e-003	1.9000e-004	8.6600e-003	0.0000	24.2949	24.2949	5.2000e-004	0.0000	24.3079
Total	**0.0161**	**0.1441**	**0.1212**	**6.7000e-004**	**0.0418**	**4.0000e-004**	**0.0422**	**0.0113**	**3.7000e-004**	**0.0117**	**0.0000**	**62.9005**	**62.9005**	**2.4800e-003**	**0.0000**	**62.9626**

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	0.0734	0.6731	0.7603	1.2300e-003		0.0337	0.0337		0.0316	0.0316	0.0000	105.9790	105.9790	0.0261	0.0000	106.6318
Total	**0.0734**	**0.6731**	**0.7603**	**1.2300e-003**		**0.0337**	**0.0337**		**0.0316**	**0.0316**	**0.0000**	**105.9790**	**105.9790**	**0.0261**	**0.0000**	**106.6318**

3.4 Construction of Storm Drain & Sewer Connection - 2024

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	3.7400e-003	0.1370	0.0355	4.0000e-004	9.9400e-003	1.9000e-004	0.0101	2.8700e-003	1.8000e-004	3.0500e-003	0.0000	38.6055	38.6055	1.9600e-003	0.0000	38.6547
Worker	0.0123	7.1700e-003	0.0857	2.7000e-004	0.0318	2.1000e-004	0.0320	8.4600e-003	1.9000e-004	8.6600e-003	0.0000	24.2949	24.2949	5.2000e-004	0.0000	24.3079
Total	**0.0161**	**0.1441**	**0.1212**	**6.7000e-004**	**0.0418**	**4.0000e-004**	**0.0422**	**0.0113**	**3.7000e-004**	**0.0117**	**0.0000**	**62.9005**	**62.9005**	**2.4800e-003**	**0.0000**	**62.9626**

3.5 Paving - 2024

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	0.0400	0.3858	0.5923	9.2000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	81.1075	81.1075	0.0262	0.0000	81.7633
Paving	7.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0477**	**0.3858**	**0.5923**	**9.2000e-004**		**0.0190**	**0.0190**		**0.0175**	**0.0175**	**0.0000**	**81.1075**	**81.1075**	**0.0262**	**0.0000**	**81.7633**

3.5 Paving - 2024

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	1.7300e-003	1.0100e-003	0.0120	4.0000e-005	4.4600e-003	3.0000e-005	4.4900e-003	1.1900e-003	3.0000e-005	1.2100e-003	0.0000	3.4058	3.4058	7.0000e-005	0.0000	3.4077
Total	**1.7300e-003**	**1.0100e-003**	**0.0120**	**4.0000e-005**	**4.4600e-003**	**3.0000e-005**	**4.4900e-003**	**1.1900e-003**	**3.0000e-005**	**1.2100e-003**	**0.0000**	**3.4058**	**3.4058**	**7.0000e-005**	**0.0000**	**3.4077**

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	0.0400	0.3858	0.5923	9.2000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	81.1074	81.1074	0.0262	0.0000	81.7632
Paving	7.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0477**	**0.3858**	**0.5923**	**9.2000e-004**		**0.0190**	**0.0190**		**0.0175**	**0.0175**	**0.0000**	**81.1074**	**81.1074**	**0.0262**	**0.0000**	**81.7632**

3.5 Paving - 2024

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	1.7300e-003	1.0100e-003	0.0120	4.0000e-005	4.4600e-003	3.0000e-005	4.4900e-003	1.1900e-003	3.0000e-005	1.2100e-003	0.0000	3.4058	3.4058	7.0000e-005	0.0000	3.4077
Total	**1.7300e-003**	**1.0100e-003**	**0.0120**	**4.0000e-005**	**4.4600e-003**	**3.0000e-005**	**4.4900e-003**	**1.1900e-003**	**3.0000e-005**	**1.2100e-003**	**0.0000**	**3.4058**	**3.4058**	**7.0000e-005**	**0.0000**	**3.4077**

3.6 Architectural Coating - 2024

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	0.0355					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3200e-003	0.0494	0.0733	1.2000e-004		2.4700e-003	2.4700e-003		2.4700e-003	2.4700e-003	0.0000	10.3407	10.3407	5.8000e-004	0.0000	10.3552
Total	**0.0429**	**0.0494**	**0.0733**	**1.2000e-004**		**2.4700e-003**	**2.4700e-003**		**2.4700e-003**	**2.4700e-003**	**0.0000**	**10.3407**	**10.3407**	**5.8000e-004**	**0.0000**	**10.3552**

3.6 Architectural Coating - 2024

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	2.4200e-003	1.4100e-003	0.0168	5.0000e-005	6.2500e-003	4.0000e-005	6.2900e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	4.7682	4.7682	1.0000e-004	0.0000	4.7707
Total	**2.4200e-003**	**1.4100e-003**	**0.0168**	**5.0000e-005**	**6.2500e-003**	**4.0000e-005**	**6.2900e-003**	**1.6600e-003**	**4.0000e-005**	**1.7000e-003**	**0.0000**	**4.7682**	**4.7682**	**1.0000e-004**	**0.0000**	**4.7707**

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	0.0355					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3200e-003	0.0494	0.0733	1.2000e-004		2.4700e-003	2.4700e-003		2.4700e-003	2.4700e-003	0.0000	10.3407	10.3407	5.8000e-004	0.0000	10.3552
Total	**0.0429**	**0.0494**	**0.0733**	**1.2000e-004**		**2.4700e-003**	**2.4700e-003**		**2.4700e-003**	**2.4700e-003**	**0.0000**	**10.3407**	**10.3407**	**5.8000e-004**	**0.0000**	**10.3552**

3.6 Architectural Coating - 2024

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	2.4200e-003	1.4100e-003	0.0168	5.0000e-005	6.2500e-003	4.0000e-005	6.2900e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	4.7682	4.7682	1.0000e-004	0.0000	4.7707
Total	**2.4200e-003**	**1.4100e-003**	**0.0168**	**5.0000e-005**	**6.2500e-003**	**4.0000e-005**	**6.2900e-003**	**1.6600e-003**	**4.0000e-005**	**1.7000e-003**	**0.0000**	**4.7682**	**4.7682**	**1.0000e-004**	**0.0000**	**4.7707**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	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	0.0204	3.0000e-005	3.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3400e-003	6.3400e-003	2.0000e-005	0.0000	6.7600e-003
Unmitigated	0.0204	3.0000e-005	3.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3400e-003	6.3400e-003	2.0000e-005	0.0000	6.7600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0165					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3400e-003	6.3400e-003	2.0000e-005	0.0000	6.7600e-003
Total	**0.0204**	**3.0000e-005**	**3.2600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.3400e-003**	**6.3400e-003**	**2.0000e-005**	**0.0000**	**6.7600e-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	3.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0165					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3400e-003	6.3400e-003	2.0000e-005	0.0000	6.7600e-003
Total	**0.0204**	**3.0000e-005**	**3.2600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.3400e-003**	**6.3400e-003**	**2.0000e-005**	**0.0000**	**6.7600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 1 Building Construction- Building 1&2

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	374.00	1000sqft	8.59	374,000.00	0
Other Non-Asphalt Surfaces	14.88	1000sqft	17.81	14,882.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 1 Building Construction- Building 1&2 - Sacramento County, Summer

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan.

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Energy Use - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Water And Wastewater - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Solid Waste - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Construction Off-road Equipment Mitigation - Rule 403

Phase 1 Building Construction- Building 1&2 - Sacramento County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LandUseSquareFeet	14,880.00	14,882.00
tblLandUse	LotAcreage	0.34	17.81
tblSolidWaste	SolidWasteGenerationRate	463.76	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	IndoorWaterUseRate	86,487,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	11.1284	27.4787	38.2630	0.0818	1.9900	1.0141	3.0041	0.5365	0.9482	1.4847	0.0000	8,038.5069	8,038.5069	1.4363	0.0000	8,074.4128
2026	11.0885	27.3656	37.8964	0.0812	1.9900	1.0134	3.0034	0.5365	0.9476	1.4841	0.0000	7,978.2851	7,978.2851	1.4329	0.0000	8,014.1067
Maximum	**11.1284**	**27.4787**	**38.2630**	**0.0818**	**1.9900**	**1.0141**	**3.0041**	**0.5365**	**0.9482**	**1.4847**	**0.0000**	**8,038.5069**	**8,038.5069**	**1.4363**	**0.0000**	**8,074.4128**

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					
2025	11.1284	27.4787	38.2630	0.0818	1.9900	1.0141	3.0041	0.5365	0.9482	1.4847	0.0000	8,038.5069	8,038.5069	1.4363	0.0000	8,074.4128
2026	11.0885	27.3656	37.8964	0.0812	1.9900	1.0134	3.0034	0.5365	0.9476	1.4841	0.0000	7,978.2851	7,978.2851	1.4329	0.0000	8,014.1067
Maximum	**11.1284**	**27.4787**	**38.2630**	**0.0818**	**1.9900**	**1.0141**	**3.0041**	**0.5365**	**0.9482**	**1.4847**	**0.0000**	**8,038.5069**	**8,038.5069**	**1.4363**	**0.0000**	**8,074.4128**

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

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	8.9635	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.9635**	**3.6000e-004**	**0.0397**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**1.4000e-004**		**0.0851**	**0.0851**	**2.2000e-004**	**0.0000**	**0.0907**

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	8.9635	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.9635**	**3.6000e-004**	**0.0397**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**1.4000e-004**		**0.0851**	**0.0851**	**2.2000e-004**	**0.0000**	**0.0907**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2025	11/6/2026	5	440	
2	Paving	Paving	3/1/2025	11/6/2026	5	440	
3	Architectural Coating	Architectural Coating	3/1/2025	11/6/2026	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 17.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 561,000; Non-Residential Outdoor: 187,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase 1 Building Construction- Building 1&2 - Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	163.00	64.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2025

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1325	4.9940	1.1874	0.0152	0.3849	6.5900e-003	0.3915	0.1108	6.3000e-003	0.1171		1,609.4195	1,609.4195	0.0779		1,611.3663
Worker	0.5049	0.2223	3.5565	0.0107	1.2399	7.6300e-003	1.2476	0.3289	7.0300e-003	0.3359		1,069.4807	1,069.4807	0.0219		1,070.0284
Total	**0.6374**	**5.2164**	**4.7439**	**0.0259**	**1.6249**	**0.0142**	**1.6391**	**0.4397**	**0.0133**	**0.4530**		**2,678.9002**	**2,678.9002**	**0.0998**		**2,681.3947**

3.2 Building Construction - 2025

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1325	4.9940	1.1874	0.0152	0.3849	6.5900e-003	0.3915	0.1108	6.3000e-003	0.1171		1,609.4195	1,609.4195	0.0779		1,611.3663
Worker	0.5049	0.2223	3.5565	0.0107	1.2399	7.6300e-003	1.2476	0.3289	7.0300e-003	0.3359		1,069.4807	1,069.4807	0.0219		1,070.0284
Total	**0.6374**	**5.2164**	**4.7439**	**0.0259**	**1.6249**	**0.0142**	**1.6391**	**0.4397**	**0.0133**	**0.4530**		**2,678.9002**	**2,678.9002**	**0.0998**		**2,681.3947**

3.2 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1275	4.9058	1.1333	0.0151	0.3849	6.2400e-003	0.3912	0.1108	5.9700e-003	0.1167		1,600.6579	1,600.6579	0.0770		1,602.5837
Worker	0.4779	0.2032	3.3151	0.0103	1.2399	7.4100e-003	1.2474	0.3289	6.8200e-003	0.3357		1,029.7271	1,029.7271	0.0200		1,030.2259
Total	**0.6055**	**5.1089**	**4.4484**	**0.0254**	**1.6249**	**0.0137**	**1.6385**	**0.4397**	**0.0128**	**0.4524**		**2,630.3850**	**2,630.3850**	**0.0970**		**2,632.8096**

3.2 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1275	4.9058	1.1333	0.0151	0.3849	6.2400e-003	0.3912	0.1108	5.9700e-003	0.1167		1,600.6579	1,600.6579	0.0770		1,602.5837
Worker	0.4779	0.2032	3.3151	0.0103	1.2399	7.4100e-003	1.2474	0.3289	6.8200e-003	0.3357		1,029.7271	1,029.7271	0.0200		1,030.2259
Total	**0.6055**	**5.1089**	**4.4484**	**0.0254**	**1.6249**	**0.0137**	**1.6385**	**0.4397**	**0.0128**	**0.4524**		**2,630.3850**	**2,630.3850**	**0.0970**		**2,632.8096**

3.3 Paving - 2025

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0465	0.0205	0.3273	9.9000e-004	0.1141	7.0000e-004	0.1148	0.0303	6.5000e-004	0.0309		98.4185	98.4185	2.0200e-003		98.4689
Total	**0.0465**	**0.0205**	**0.3273**	**9.9000e-004**	**0.1141**	**7.0000e-004**	**0.1148**	**0.0303**	**6.5000e-004**	**0.0309**		**98.4185**	**98.4185**	**2.0200e-003**		**98.4689**

3.3 Paving - 2025

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0465	0.0205	0.3273	9.9000e-004	0.1141	7.0000e-004	0.1148	0.0303	6.5000e-004	0.0309		98.4185	98.4185	2.0200e-003		98.4689
Total	**0.0465**	**0.0205**	**0.3273**	**9.9000e-004**	**0.1141**	**7.0000e-004**	**0.1148**	**0.0303**	**6.5000e-004**	**0.0309**		**98.4185**	**98.4185**	**2.0200e-003**		**98.4689**

3.3 Paving - 2026

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0440	0.0187	0.3051	9.5000e-004	0.1141	6.8000e-004	0.1148	0.0303	6.3000e-004	0.0309		94.7602	94.7602	1.8400e-003		94.8061
Total	**0.0440**	**0.0187**	**0.3051**	**9.5000e-004**	**0.1141**	**6.8000e-004**	**0.1148**	**0.0303**	**6.3000e-004**	**0.0309**		**94.7602**	**94.7602**	**1.8400e-003**		**94.8061**

3.3 Paving - 2026

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0440	0.0187	0.3051	9.5000e-004	0.1141	6.8000e-004	0.1148	0.0303	6.3000e-004	0.0309		94.7602	94.7602	1.8400e-003		94.8061
Total	**0.0440**	**0.0187**	**0.3051**	**9.5000e-004**	**0.1141**	**6.8000e-004**	**0.1148**	**0.0303**	**6.3000e-004**	**0.0309**		**94.7602**	**94.7602**	**1.8400e-003**		**94.8061**

3.4 Architectural Coating - 2025

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	7.8889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**8.0598**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.1022	0.0450	0.7200	2.1700e-003	0.2510	1.5500e-003	0.2526	0.0666	1.4200e-003	0.0680		216.5206	216.5206	4.4400e-003		216.6315
Total	**0.1022**	**0.0450**	**0.7200**	**2.1700e-003**	**0.2510**	**1.5500e-003**	**0.2526**	**0.0666**	**1.4200e-003**	**0.0680**		**216.5206**	**216.5206**	**4.4400e-003**		**216.6315**

3.4 Architectural Coating - 2025

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	7.8889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**8.0598**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.1022	0.0450	0.7200	2.1700e-003	0.2510	1.5500e-003	0.2526	0.0666	1.4200e-003	0.0680		216.5206	216.5206	4.4400e-003		216.6315
Total	**0.1022**	**0.0450**	**0.7200**	**2.1700e-003**	**0.2510**	**1.5500e-003**	**0.2526**	**0.0666**	**1.4200e-003**	**0.0680**		**216.5206**	**216.5206**	**4.4400e-003**		**216.6315**

3.4 Architectural Coating - 2026

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	7.8889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**8.0598**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0968	0.0411	0.6712	2.0900e-003	0.2510	1.5000e-003	0.2525	0.0666	1.3800e-003	0.0680		208.4724	208.4724	4.0400e-003		208.5733
Total	**0.0968**	**0.0411**	**0.6712**	**2.0900e-003**	**0.2510**	**1.5000e-003**	**0.2525**	**0.0666**	**1.3800e-003**	**0.0680**		**208.4724**	**208.4724**	**4.0400e-003**		**208.5733**

3.4 Architectural Coating - 2026

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	7.8889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**8.0598**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0968	0.0411	0.6712	2.0900e-003	0.2510	1.5000e-003	0.2525	0.0666	1.3800e-003	0.0680		208.4724	208.4724	4.0400e-003		208.5733
Total	**0.0968**	**0.0411**	**0.6712**	**2.0900e-003**	**0.2510**	**1.5000e-003**	**0.2525**	**0.0666**	**1.3800e-003**	**0.0680**		**208.4724**	**208.4724**	**4.0400e-003**		**208.5733**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.9635	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Unmitigated	8.9635	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907

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	0.9510					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0089					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.6800e-003	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Total	**8.9635**	**3.6000e-004**	**0.0397**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**		**0.0851**	**0.0851**	**2.2000e-004**		**0.0907**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9510					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0089					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.6800e-003	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Total	**8.9635**	**3.6000e-004**	**0.0397**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**		**0.0851**	**0.0851**	**2.2000e-004**		**0.0907**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 1 Building Construction- Building 1&2

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	374.00	1000sqft	8.59	374,000.00	0
Other Non-Asphalt Surfaces	14.88	1000sqft	17.81	14,882.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 1 Building Construction- Building 1&2 - Sacramento County, Winter

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan.

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Energy Use - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Water And Wastewater - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Solid Waste - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Construction Off-road Equipment Mitigation - Rule 403

Phase 1 Building Construction- Building 1&2 - Sacramento County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LandUseSquareFeet	14,880.00	14,882.00
tblLandUse	LotAcreage	0.34	17.81
tblSolidWaste	SolidWasteGenerationRate	463.76	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	IndoorWaterUseRate	86,487,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	11.0907	27.5924	37.7094	0.0797	1.9900	1.0146	3.0046	0.5365	0.9487	1.4852	0.0000	7,829.0696	7,829.0696	1.4389	0.0000	7,865.0409
2026	11.0547	27.4713	37.3737	0.0792	1.9900	1.0139	3.0039	0.5365	0.9480	1.4846	0.0000	7,775.5439	7,775.5439	1.4357	0.0000	7,811.4363
Maximum	**11.0907**	**27.5924**	**37.7094**	**0.0797**	**1.9900**	**1.0146**	**3.0046**	**0.5365**	**0.9487**	**1.4852**	**0.0000**	**7,829.0696**	**7,829.0696**	**1.4389**	**0.0000**	**7,865.0409**

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					
2025	11.0907	27.5924	37.7094	0.0797	1.9900	1.0146	3.0046	0.5365	0.9487	1.4852	0.0000	7,829.0696	7,829.0696	1.4389	0.0000	7,865.0409
2026	11.0547	27.4713	37.3737	0.0792	1.9900	1.0139	3.0039	0.5365	0.9480	1.4846	0.0000	7,775.5439	7,775.5439	1.4357	0.0000	7,811.4363
Maximum	**11.0907**	**27.5924**	**37.7094**	**0.0797**	**1.9900**	**1.0146**	**3.0046**	**0.5365**	**0.9487**	**1.4852**	**0.0000**	**7,829.0696**	**7,829.0696**	**1.4389**	**0.0000**	**7,865.0409**

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

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	8.9635	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.9635**	**3.6000e-004**	**0.0397**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**1.4000e-004**		**0.0851**	**0.0851**	**2.2000e-004**	**0.0000**	**0.0907**

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	8.9635	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.9635**	**3.6000e-004**	**0.0397**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**1.4000e-004**		**0.0851**	**0.0851**	**2.2000e-004**	**0.0000**	**0.0907**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2025	11/6/2026	5	440	
2	Paving	Paving	3/1/2025	11/6/2026	5	440	
3	Architectural Coating	Architectural Coating	3/1/2025	11/6/2026	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 17.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 561,000; Non-Residential Outdoor: 187,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase 1 Building Construction- Building 1&2 - Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	163.00	64.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2025

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1407	5.0408	1.3684	0.0148	0.3849	7.0900e-003	0.3920	0.1108	6.7800e-003	0.1175		1,568.2116	1,568.2116	0.0841		1,570.3144
Worker	0.4695	0.2741	2.9890	9.4300e-003	1.2399	7.6300e-003	1.2476	0.3289	7.0300e-003	0.3359		939.5215	939.5215	0.0191		939.9992
Total	**0.6101**	**5.3149**	**4.3574**	**0.0242**	**1.6249**	**0.0147**	**1.6396**	**0.4397**	**0.0138**	**0.4535**		**2,507.7331**	**2,507.7331**	**0.1032**		**2,510.3136**

3.2 Building Construction - 2025

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1407	5.0408	1.3684	0.0148	0.3849	7.0900e-003	0.3920	0.1108	6.7800e-003	0.1175		1,568.2116	1,568.2116	0.0841		1,570.3144
Worker	0.4695	0.2741	2.9890	9.4300e-003	1.2399	7.6300e-003	1.2476	0.3289	7.0300e-003	0.3359		939.5215	939.5215	0.0191		939.9992
Total	**0.6101**	**5.3149**	**4.3574**	**0.0242**	**1.6249**	**0.0147**	**1.6396**	**0.4397**	**0.0138**	**0.4535**		**2,507.7331**	**2,507.7331**	**0.1032**		**2,510.3136**

3.2 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1353	4.9504	1.3052	0.0147	0.3849	6.6800e-003	0.3916	0.1108	6.3900e-003	0.1171		1,559.8661	1,559.8661	0.0832		1,561.9461
Worker	0.4458	0.2504	2.7785	9.0700e-003	1.2399	7.4100e-003	1.2474	0.3289	6.8200e-003	0.3357		904.6193	904.6193	0.0174		905.0536
Total	**0.5811**	**5.2007**	**4.0837**	**0.0238**	**1.6249**	**0.0141**	**1.6390**	**0.4397**	**0.0132**	**0.4529**		**2,464.4854**	**2,464.4854**	**0.1006**		**2,466.9997**

3.2 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1353	4.9504	1.3052	0.0147	0.3849	6.6800e-003	0.3916	0.1108	6.3900e-003	0.1171		1,559.8661	1,559.8661	0.0832		1,561.9461
Worker	0.4458	0.2504	2.7785	9.0700e-003	1.2399	7.4100e-003	1.2474	0.3289	6.8200e-003	0.3357		904.6193	904.6193	0.0174		905.0536
Total	**0.5811**	**5.2007**	**4.0837**	**0.0238**	**1.6249**	**0.0141**	**1.6390**	**0.4397**	**0.0132**	**0.4529**		**2,464.4854**	**2,464.4854**	**0.1006**		**2,466.9997**

3.3 Paving - 2025

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0432	0.0252	0.2751	8.7000e-004	0.1141	7.0000e-004	0.1148	0.0303	6.5000e-004	0.0309		86.4590	86.4590	1.7600e-003		86.5030
Total	**0.0432**	**0.0252**	**0.2751**	**8.7000e-004**	**0.1141**	**7.0000e-004**	**0.1148**	**0.0303**	**6.5000e-004**	**0.0309**		**86.4590**	**86.4590**	**1.7600e-003**		**86.5030**

3.3 Paving - 2025

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0432	0.0252	0.2751	8.7000e-004	0.1141	7.0000e-004	0.1148	0.0303	6.5000e-004	0.0309		86.4590	86.4590	1.7600e-003		86.5030
Total	**0.0432**	**0.0252**	**0.2751**	**8.7000e-004**	**0.1141**	**7.0000e-004**	**0.1148**	**0.0303**	**6.5000e-004**	**0.0309**		**86.4590**	**86.4590**	**1.7600e-003**		**86.5030**

3.3 Paving - 2026

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0410	0.0230	0.2557	8.3000e-004	0.1141	6.8000e-004	0.1148	0.0303	6.3000e-004	0.0309		83.2472	83.2472	1.6000e-003		83.2871
Total	**0.0410**	**0.0230**	**0.2557**	**8.3000e-004**	**0.1141**	**6.8000e-004**	**0.1148**	**0.0303**	**6.3000e-004**	**0.0309**		**83.2472**	**83.2472**	**1.6000e-003**		**83.2871**

3.3 Paving - 2026

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0410	0.0230	0.2557	8.3000e-004	0.1141	6.8000e-004	0.1148	0.0303	6.3000e-004	0.0309		83.2472	83.2472	1.6000e-003		83.2871
Total	**0.0410**	**0.0230**	**0.2557**	**8.3000e-004**	**0.1141**	**6.8000e-004**	**0.1148**	**0.0303**	**6.3000e-004**	**0.0309**		**83.2472**	**83.2472**	**1.6000e-003**		**83.2871**

3.4 Architectural Coating - 2025

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	7.8889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**8.0598**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0950	0.0555	0.6051	1.9100e-003	0.2510	1.5500e-003	0.2526	0.0666	1.4200e-003	0.0680		190.2099	190.2099	3.8700e-003		190.3066
Total	**0.0950**	**0.0555**	**0.6051**	**1.9100e-003**	**0.2510**	**1.5500e-003**	**0.2526**	**0.0666**	**1.4200e-003**	**0.0680**		**190.2099**	**190.2099**	**3.8700e-003**		**190.3066**

3.4 Architectural Coating - 2025

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	7.8889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**8.0598**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0950	0.0555	0.6051	1.9100e-003	0.2510	1.5500e-003	0.2526	0.0666	1.4200e-003	0.0680		190.2099	190.2099	3.8700e-003		190.3066
Total	**0.0950**	**0.0555**	**0.6051**	**1.9100e-003**	**0.2510**	**1.5500e-003**	**0.2526**	**0.0666**	**1.4200e-003**	**0.0680**		**190.2099**	**190.2099**	**3.8700e-003**		**190.3066**

3.4 Architectural Coating - 2026

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	7.8889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**8.0598**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0903	0.0507	0.5625	1.8400e-003	0.2510	1.5000e-003	0.2525	0.0666	1.3800e-003	0.0680		183.1438	183.1438	3.5200e-003		183.2317
Total	**0.0903**	**0.0507**	**0.5625**	**1.8400e-003**	**0.2510**	**1.5000e-003**	**0.2525**	**0.0666**	**1.3800e-003**	**0.0680**		**183.1438**	**183.1438**	**3.5200e-003**		**183.2317**

3.4 Architectural Coating - 2026

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	7.8889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**8.0598**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0903	0.0507	0.5625	1.8400e-003	0.2510	1.5000e-003	0.2525	0.0666	1.3800e-003	0.0680		183.1438	183.1438	3.5200e-003		183.2317
Total	**0.0903**	**0.0507**	**0.5625**	**1.8400e-003**	**0.2510**	**1.5000e-003**	**0.2525**	**0.0666**	**1.3800e-003**	**0.0680**		**183.1438**	**183.1438**	**3.5200e-003**		**183.2317**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.9635	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Unmitigated	8.9635	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907

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	0.9510					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0089					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.6800e-003	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Total	**8.9635**	**3.6000e-004**	**0.0397**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**		**0.0851**	**0.0851**	**2.2000e-004**		**0.0907**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9510					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0089					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.6800e-003	3.6000e-004	0.0397	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0851	0.0851	2.2000e-004		0.0907
Total	**8.9635**	**3.6000e-004**	**0.0397**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**		**0.0851**	**0.0851**	**2.2000e-004**		**0.0907**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 1 Building Construction- Building 1&2

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	374.00	1000sqft	8.59	374,000.00	0
Other Non-Asphalt Surfaces	14.88	1000sqft	17.81	14,882.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 1 Building Construction- Building 1&2 - Sacramento County, Annual

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan.

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Energy Use - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Water And Wastewater - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Solid Waste - This model run is being conducted for the construction of building 1 &2 on the Project site. No operation information is included.

Construction Off-road Equipment Mitigation - Rule 403

Phase 1 Building Construction- Building 1&2 - Sacramento County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LandUseSquareFeet	14,880.00	14,882.00
tblLandUse	LotAcreage	0.34	17.81
tblSolidWaste	SolidWasteGenerationRate	463.76	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	IndoorWaterUseRate	86,487,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	1.2039	3.0053	4.0985	8.7500e-003	0.2097	0.1106	0.3202	0.0567	0.1034	0.1601	0.0000	780.0418	780.0418	0.1420	0.0000	783.5912
2026	1.2221	3.0474	4.1376	8.8500e-003	0.2135	0.1125	0.3260	0.0577	0.1052	0.1630	0.0000	788.8067	788.8067	0.1443	0.0000	792.4133
Maximum	**1.2221**	**3.0474**	**4.1376**	**8.8500e-003**	**0.2135**	**0.1125**	**0.3260**	**0.0577**	**0.1052**	**0.1630**	**0.0000**	**788.8067**	**788.8067**	**0.1443**	**0.0000**	**792.4133**

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					
2025	1.2039	3.0053	4.0985	8.7500e-003	0.2097	0.1106	0.3202	0.0567	0.1034	0.1601	0.0000	780.0412	780.0412	0.1420	0.0000	783.5906
2026	1.2221	3.0473	4.1376	8.8500e-003	0.2135	0.1125	0.3260	0.0577	0.1052	0.1630	0.0000	788.8061	788.8061	0.1443	0.0000	792.4127
Maximum	**1.2221**	**3.0473**	**4.1376**	**8.8500e-003**	**0.2135**	**0.1125**	**0.3260**	**0.0577**	**0.1052**	**0.1630**	**0.0000**	**788.8061**	**788.8061**	**0.1443**	**0.0000**	**792.4127**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
15	12-15-2024	3-14-2025	0.1934	0.1934
16	3-15-2025	6-14-2025	1.2690	1.2690
17	6-15-2025	9-14-2025	1.2685	1.2685
18	9-15-2025	12-14-2025	1.2568	1.2568
19	12-15-2025	3-14-2026	1.2393	1.2393
20	3-15-2026	6-14-2026	1.2639	1.2639
21	6-15-2026	9-14-2026	1.2635	1.2635
22	9-15-2026	9-30-2026	0.2197	0.2197
		Highest	1.2690	1.2690

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6356	5.0000e-005	4.9600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.6500e-003	9.6500e-003	3.0000e-005	0.0000	0.0103
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6356**	**5.0000e-005**	**4.9600e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.6500e-003**	**9.6500e-003**	**3.0000e-005**	**0.0000**	**0.0103**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6356	5.0000e-005	4.9600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.6500e-003	9.6500e-003	3.0000e-005	0.0000	0.0103
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6356**	**5.0000e-005**	**4.9600e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.6500e-003**	**9.6500e-003**	**3.0000e-005**	**0.0000**	**0.0103**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2025	11/6/2026	5	440	
2	Paving	Paving	3/1/2025	11/6/2026	5	440	
3	Architectural Coating	Architectural Coating	3/1/2025	11/6/2026	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 17.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 561,000; Non-Residential Outdoor: 187,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	163.00	64.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2025

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	0.1491	1.3592	1.7532	2.9400e-003		0.0575	0.0575		0.0541	0.0541	0.0000	252.7922	252.7922	0.0594	0.0000	254.2778
Total	**0.1491**	**1.3592**	**1.7532**	**2.9400e-003**		**0.0575**	**0.0575**		**0.0541**	**0.0541**	**0.0000**	**252.7922**	**252.7922**	**0.0594**	**0.0000**	**254.2778**

3.2 Building Construction - 2025

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	0.0147	0.5513	0.1377	1.6300e-003	0.0408	7.4000e-004	0.0415	0.0118	7.1000e-004	0.0125	0.0000	157.4321	157.4321	7.9600e-003	0.0000	157.6312
Worker	0.0478	0.0267	0.3255	1.0600e-003	0.1305	8.3000e-004	0.1313	0.0347	7.7000e-004	0.0355	0.0000	95.6193	95.6193	1.9300e-003	0.0000	95.6676
Total	**0.0625**	**0.5780**	**0.4632**	**2.6900e-003**	**0.1713**	**1.5700e-003**	**0.1728**	**0.0465**	**1.4800e-003**	**0.0480**	**0.0000**	**253.0514**	**253.0514**	**9.8900e-003**	**0.0000**	**253.2988**

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	0.1491	1.3592	1.7532	2.9400e-003		0.0575	0.0575		0.0541	0.0541	0.0000	252.7919	252.7919	0.0594	0.0000	254.2775
Total	**0.1491**	**1.3592**	**1.7532**	**2.9400e-003**		**0.0575**	**0.0575**		**0.0541**	**0.0541**	**0.0000**	**252.7919**	**252.7919**	**0.0594**	**0.0000**	**254.2775**

3.2 Building Construction - 2025

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	0.0147	0.5513	0.1377	1.6300e-003	0.0408	7.4000e-004	0.0415	0.0118	7.1000e-004	0.0125	0.0000	157.4321	157.4321	7.9600e-003	0.0000	157.6312
Worker	0.0478	0.0267	0.3255	1.0600e-003	0.1305	8.3000e-004	0.1313	0.0347	7.7000e-004	0.0355	0.0000	95.6193	95.6193	1.9300e-003	0.0000	95.6676
Total	**0.0625**	**0.5780**	**0.4632**	**2.6900e-003**	**0.1713**	**1.5700e-003**	**0.1728**	**0.0465**	**1.4800e-003**	**0.0480**	**0.0000**	**253.0514**	**253.0514**	**9.8900e-003**	**0.0000**	**253.2988**

3.2 Building Construction - 2026

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	0.1518	1.3841	1.7854	2.9900e-003		0.0586	0.0586		0.0551	0.0551	0.0000	257.4306	257.4306	0.0605	0.0000	258.9434
Total	**0.1518**	**1.3841**	**1.7854**	**2.9900e-003**		**0.0586**	**0.0586**		**0.0551**	**0.0551**	**0.0000**	**257.4306**	**257.4306**	**0.0605**	**0.0000**	**258.9434**

3.2 Building Construction - 2026

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	0.0144	0.5514	0.1338	1.6500e-003	0.0415	7.1000e-004	0.0422	0.0120	6.8000e-004	0.0127	0.0000	159.4561	159.4561	8.0200e-003	0.0000	159.6567
Worker	0.0461	0.0248	0.3086	1.0400e-003	0.1329	8.2000e-004	0.1337	0.0353	7.6000e-004	0.0361	0.0000	93.7560	93.7560	1.7900e-003	0.0000	93.8007
Total	**0.0606**	**0.5762**	**0.4424**	**2.6900e-003**	**0.1744**	**1.5300e-003**	**0.1759**	**0.0473**	**1.4400e-003**	**0.0488**	**0.0000**	**253.2121**	**253.2121**	**9.8100e-003**	**0.0000**	**253.4574**

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	0.1518	1.3841	1.7854	2.9900e-003		0.0586	0.0586		0.0551	0.0551	0.0000	257.4303	257.4303	0.0605	0.0000	258.9431
Total	**0.1518**	**1.3841**	**1.7854**	**2.9900e-003**		**0.0586**	**0.0586**		**0.0551**	**0.0551**	**0.0000**	**257.4303**	**257.4303**	**0.0605**	**0.0000**	**258.9431**

3.2 Building Construction - 2026

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	0.0144	0.5514	0.1338	1.6500e-003	0.0415	7.1000e-004	0.0422	0.0120	6.8000e-004	0.0127	0.0000	159.4561	159.4561	8.0200e-003	0.0000	159.6567
Worker	0.0461	0.0248	0.3086	1.0400e-003	0.1329	8.2000e-004	0.1337	0.0353	7.6000e-004	0.0361	0.0000	93.7560	93.7560	1.7900e-003	0.0000	93.8007
Total	**0.0606**	**0.5762**	**0.4424**	**2.6900e-003**	**0.1744**	**1.5300e-003**	**0.1759**	**0.0473**	**1.4400e-003**	**0.0488**	**0.0000**	**253.2121**	**253.2121**	**9.8100e-003**	**0.0000**	**253.4574**

3.3 Paving - 2025

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	0.0998	0.9354	1.5890	2.4900e-003		0.0456	0.0456		0.0420	0.0420	0.0000	218.2099	218.2099	0.0706	0.0000	219.9742
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**0.9354**	**1.5890**	**2.4900e-003**		**0.0456**	**0.0456**		**0.0420**	**0.0420**	**0.0000**	**218.2099**	**218.2099**	**0.0706**	**0.0000**	**219.9742**

3.3 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-003	2.4600e-003	0.0300	1.0000e-004	0.0120	8.0000e-005	0.0121	3.1900e-003	7.0000e-005	3.2600e-003	0.0000	8.7993	8.7993	1.8000e-004	0.0000	8.8038
Total	**4.4000e-003**	**2.4600e-003**	**0.0300**	**1.0000e-004**	**0.0120**	**8.0000e-005**	**0.0121**	**3.1900e-003**	**7.0000e-005**	**3.2600e-003**	**0.0000**	**8.7993**	**8.7993**	**1.8000e-004**	**0.0000**	**8.8038**

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	0.0998	0.9354	1.5890	2.4900e-003		0.0456	0.0456		0.0420	0.0420	0.0000	218.2096	218.2096	0.0706	0.0000	219.9740
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**0.9354**	**1.5890**	**2.4900e-003**		**0.0456**	**0.0456**		**0.0420**	**0.0420**	**0.0000**	**218.2096**	**218.2096**	**0.0706**	**0.0000**	**219.9740**

3.3 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-003	2.4600e-003	0.0300	1.0000e-004	0.0120	8.0000e-005	0.0121	3.1900e-003	7.0000e-005	3.2600e-003	0.0000	8.7993	8.7993	1.8000e-004	0.0000	8.8038
Total	**4.4000e-003**	**2.4600e-003**	**0.0300**	**1.0000e-004**	**0.0120**	**8.0000e-005**	**0.0121**	**3.1900e-003**	**7.0000e-005**	**3.2600e-003**	**0.0000**	**8.7993**	**8.7993**	**1.8000e-004**	**0.0000**	**8.8038**

3.3 Paving - 2026

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	0.1016	0.9526	1.6182	2.5300e-003		0.0465	0.0465		0.0427	0.0427	0.0000	222.2137	222.2137	0.0719	0.0000	224.0104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1016**	**0.9526**	**1.6182**	**2.5300e-003**		**0.0465**	**0.0465**		**0.0427**	**0.0427**	**0.0000**	**222.2137**	**222.2137**	**0.0719**	**0.0000**	**224.0104**

3.3 Paving - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2500e-003	2.2900e-003	0.0284	1.0000e-004	0.0122	8.0000e-005	0.0123	3.2500e-003	7.0000e-005	3.3200e-003	0.0000	8.6279	8.6279	1.6000e-004	0.0000	8.6320
Total	**4.2500e-003**	**2.2900e-003**	**0.0284**	**1.0000e-004**	**0.0122**	**8.0000e-005**	**0.0123**	**3.2500e-003**	**7.0000e-005**	**3.3200e-003**	**0.0000**	**8.6279**	**8.6279**	**1.6000e-004**	**0.0000**	**8.6320**

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	0.1016	0.9526	1.6182	2.5300e-003		0.0465	0.0465		0.0427	0.0427	0.0000	222.2135	222.2135	0.0719	0.0000	224.0102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1016**	**0.9526**	**1.6182**	**2.5300e-003**		**0.0465**	**0.0465**		**0.0427**	**0.0427**	**0.0000**	**222.2135**	**222.2135**	**0.0719**	**0.0000**	**224.0102**

3.3 Paving - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2500e-003	2.2900e-003	0.0284	1.0000e-004	0.0122	8.0000e-005	0.0123	3.2500e-003	7.0000e-005	3.3200e-003	0.0000	8.6279	8.6279	1.6000e-004	0.0000	8.6320
Total	**4.2500e-003**	**2.2900e-003**	**0.0284**	**1.0000e-004**	**0.0122**	**8.0000e-005**	**0.0123**	**3.2500e-003**	**7.0000e-005**	**3.3200e-003**	**0.0000**	**8.6279**	**8.6279**	**1.6000e-004**	**0.0000**	**8.6320**

3.4 Architectural Coating - 2025

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	0.8599					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1249	0.1972	3.2000e-004		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	27.8305	27.8305	1.5200e-003	0.0000	27.8684
Total	**0.8785**	**0.1249**	**0.1972**	**3.2000e-004**		**5.6100e-003**	**5.6100e-003**		**5.6100e-003**	**5.6100e-003**	**0.0000**	**27.8305**	**27.8305**	**1.5200e-003**	**0.0000**	**27.8684**

3.4 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6800e-003	5.4000e-003	0.0659	2.1000e-004	0.0264	1.7000e-004	0.0266	7.0300e-003	1.6000e-004	7.1800e-003	0.0000	19.3585	19.3585	3.9000e-004	0.0000	19.3683
Total	**9.6800e-003**	**5.4000e-003**	**0.0659**	**2.1000e-004**	**0.0264**	**1.7000e-004**	**0.0266**	**7.0300e-003**	**1.6000e-004**	**7.1800e-003**	**0.0000**	**19.3585**	**19.3585**	**3.9000e-004**	**0.0000**	**19.3683**

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	0.8599					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1249	0.1972	3.2000e-004		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	27.8304	27.8304	1.5200e-003	0.0000	27.8684
Total	**0.8785**	**0.1249**	**0.1972**	**3.2000e-004**		**5.6100e-003**	**5.6100e-003**		**5.6100e-003**	**5.6100e-003**	**0.0000**	**27.8304**	**27.8304**	**1.5200e-003**	**0.0000**	**27.8684**

3.4 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6800e-003	5.4000e-003	0.0659	2.1000e-004	0.0264	1.7000e-004	0.0266	7.0300e-003	1.6000e-004	7.1800e-003	0.0000	19.3585	19.3585	3.9000e-004	0.0000	19.3683
Total	**9.6800e-003**	**5.4000e-003**	**0.0659**	**2.1000e-004**	**0.0264**	**1.7000e-004**	**0.0266**	**7.0300e-003**	**1.6000e-004**	**7.1800e-003**	**0.0000**	**19.3585**	**19.3585**	**3.9000e-004**	**0.0000**	**19.3683**

3.4 Architectural Coating - 2026

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	0.8757					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0190	0.1272	0.2008	3.3000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	28.3411	28.3411	1.5500e-003	0.0000	28.3798
Total	**0.8946**	**0.1272**	**0.2008**	**3.3000e-004**		**5.7200e-003**	**5.7200e-003**		**5.7200e-003**	**5.7200e-003**	**0.0000**	**28.3411**	**28.3411**	**1.5500e-003**	**0.0000**	**28.3798**

3.4 Architectural Coating - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3400e-003	5.0300e-003	0.0625	2.1000e-004	0.0269	1.7000e-004	0.0271	7.1600e-003	1.5000e-004	7.3100e-003	0.0000	18.9813	18.9813	3.6000e-004	0.0000	18.9903
Total	**9.3400e-003**	**5.0300e-003**	**0.0625**	**2.1000e-004**	**0.0269**	**1.7000e-004**	**0.0271**	**7.1600e-003**	**1.5000e-004**	**7.3100e-003**	**0.0000**	**18.9813**	**18.9813**	**3.6000e-004**	**0.0000**	**18.9903**

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	0.8757					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0190	0.1272	0.2008	3.3000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	28.3411	28.3411	1.5500e-003	0.0000	28.3797
Total	**0.8946**	**0.1272**	**0.2008**	**3.3000e-004**		**5.7200e-003**	**5.7200e-003**		**5.7200e-003**	**5.7200e-003**	**0.0000**	**28.3411**	**28.3411**	**1.5500e-003**	**0.0000**	**28.3797**

3.4 Architectural Coating - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3400e-003	5.0300e-003	0.0625	2.1000e-004	0.0269	1.7000e-004	0.0271	7.1600e-003	1.5000e-004	7.3100e-003	0.0000	18.9813	18.9813	3.6000e-004	0.0000	18.9903
Total	**9.3400e-003**	**5.0300e-003**	**0.0625**	**2.1000e-004**	**0.0269**	**1.7000e-004**	**0.0271**	**7.1600e-003**	**1.5000e-004**	**7.3100e-003**	**0.0000**	**18.9813**	**18.9813**	**3.6000e-004**	**0.0000**	**18.9903**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6356	5.0000e-005	4.9600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.6500e-003	9.6500e-003	3.0000e-005	0.0000	0.0103
Unmitigated	1.6356	5.0000e-005	4.9600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.6500e-003	9.6500e-003	3.0000e-005	0.0000	0.0103

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	0.1736					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.6000e-004	5.0000e-005	4.9600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.6500e-003	9.6500e-003	3.0000e-005	0.0000	0.0103
Total	**1.6356**	**5.0000e-005**	**4.9600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.6500e-003**	**9.6500e-003**	**3.0000e-005**	**0.0000**	**0.0103**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1736					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.6000e-004	5.0000e-005	4.9600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.6500e-003	9.6500e-003	3.0000e-005	0.0000	0.0103
Total	**1.6356**	**5.0000e-005**	**4.9600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.6500e-003**	**9.6500e-003**	**3.0000e-005**	**0.0000**	**0.0103**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 2 Building Construction- Building 3 & 4

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	436.00	1000sqft	10.01	436,000.00	0
Other Non-Asphalt Surfaces	14.88	1000sqft	16.39	14,882.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 2 Building Construction- Building 3 & 4 - Sacramento County, Summer

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan.

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Energy Use - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Water And Wastewater - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Solid Waste - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Construction Off-road Equipment Mitigation - Rule 403

Phase 2 Building Construction- Building 3 & 4 - Sacramento County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	PhaseEndDate	10/9/2023	11/3/2028
tblConstructionPhase	PhaseEndDate	7/3/2023	11/3/2028
tblConstructionPhase	PhaseEndDate	8/21/2023	11/3/2028
tblConstructionPhase	PhaseStartDate	8/22/2023	3/1/2027
tblConstructionPhase	PhaseStartDate	10/26/2021	3/1/2027
tblConstructionPhase	PhaseStartDate	7/4/2023	3/1/2027
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LotAcreage	0.34	16.39
tblSolidWaste	SolidWasteGenerationRate	540.64	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	100,825,000.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	12.4615	28.0514	38.3264	0.0849	2.2859	1.0149	3.3008	0.6164	0.9490	1.5654	0.0000	8,361.9388	8,361.9388	1.4451	0.0000	8,398.0670
2028	12.4172	27.9485	37.9956	0.0843	2.2859	1.0139	3.2998	0.6164	0.9481	1.5644	0.0000	8,306.9955	8,306.9955	1.4419	0.0000	8,343.0435
Maximum	**12.4615**	**28.0514**	**38.3264**	**0.0849**	**2.2859**	**1.0149**	**3.3008**	**0.6164**	**0.9490**	**1.5654**	**0.0000**	**8,361.9388**	**8,361.9388**	**1.4451**	**0.0000**	**8,398.0670**

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					
2027	12.4615	28.0514	38.3264	0.0849	2.2859	1.0149	3.3008	0.6164	0.9490	1.5654	0.0000	8,361.9388	8,361.9388	1.4451	0.0000	8,398.0670
2028	12.4172	27.9485	37.9956	0.0843	2.2859	1.0139	3.2998	0.6164	0.9481	1.5644	0.0000	8,306.9955	8,306.9955	1.4419	0.0000	8,343.0435
Maximum	**12.4615**	**28.0514**	**38.3264**	**0.0849**	**2.2859**	**1.0149**	**3.3008**	**0.6164**	**0.9490**	**1.5654**	**0.0000**	**8,361.9388**	**8,361.9388**	**1.4451**	**0.0000**	**8,398.0670**

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

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	10.4484	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**10.4484**	**4.2000e-004**	**0.0460**	**0.0000**	**0.0000**	**1.6000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**1.6000e-004**		**0.0987**	**0.0987**	**2.6000e-004**	**0.0000**	**0.1052**

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	10.4484	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**10.4484**	**4.2000e-004**	**0.0460**	**0.0000**	**0.0000**	**1.6000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**1.6000e-004**		**0.0987**	**0.0987**	**2.6000e-004**	**0.0000**	**0.1052**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2027	11/3/2028	5	440	
2	Paving	Paving	3/1/2027	11/3/2028	5	440	
3	Architectural Coating	Architectural Coating	3/1/2027	11/3/2028	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 16.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 654,000; Non-Residential Outdoor: 218,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase 2 Building Construction- Building 3 & 4 - Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	189.00	74.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1424	5.5785	1.2561	0.0173	0.4450	6.8800e-003	0.4519	0.1280	6.5800e-003	0.1346		1,841.2379	1,841.2379	0.0881		1,843.4408
Worker	0.5237	0.2156	3.5914	0.0116	1.4377	8.1700e-003	1.4459	0.3814	7.5200e-003	0.3889		1,152.7699	1,152.7699	0.0211		1,153.2971
Total	**0.6661**	**5.7941**	**4.8475**	**0.0289**	**1.8828**	**0.0151**	**1.8978**	**0.5094**	**0.0141**	**0.5235**		**2,994.0077**	**2,994.0077**	**0.1092**		**2,996.7379**

3.2 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1424	5.5785	1.2561	0.0173	0.4450	6.8800e-003	0.4519	0.1280	6.5800e-003	0.1346		1,841.2379	1,841.2379	0.0881		1,843.4408
Worker	0.5237	0.2156	3.5914	0.0116	1.4377	8.1700e-003	1.4459	0.3814	7.5200e-003	0.3889		1,152.7699	1,152.7699	0.0211		1,153.2971
Total	**0.6661**	**5.7941**	**4.8475**	**0.0289**	**1.8828**	**0.0151**	**1.8978**	**0.5094**	**0.0141**	**0.5235**		**2,994.0077**	**2,994.0077**	**0.1092**		**2,996.7379**

3.2 Building Construction - 2028

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1379	5.4983	1.2104	0.0172	0.4450	6.5800e-003	0.4516	0.1280	6.2900e-003	0.1343		1,833.0904	1,833.0904	0.0872		1,835.2694
Worker	0.4926	0.1979	3.3687	0.0112	1.4377	7.6200e-003	1.4454	0.3814	7.0200e-003	0.3884		1,116.2227	1,116.2227	0.0193		1,116.7060
Total	**0.6305**	**5.6962**	**4.5791**	**0.0284**	**1.8827**	**0.0142**	**1.8969**	**0.5094**	**0.0133**	**0.5227**		**2,949.3131**	**2,949.3131**	**0.1065**		**2,951.9754**

3.2 Building Construction - 2028

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1379	5.4983	1.2104	0.0172	0.4450	6.5800e-003	0.4516	0.1280	6.2900e-003	0.1343		1,833.0904	1,833.0904	0.0872		1,835.2694
Worker	0.4926	0.1979	3.3687	0.0112	1.4377	7.6200e-003	1.4454	0.3814	7.0200e-003	0.3884		1,116.2227	1,116.2227	0.0193		1,116.7060
Total	**0.6305**	**5.6962**	**4.5791**	**0.0284**	**1.8827**	**0.0142**	**1.8969**	**0.5094**	**0.0133**	**0.5227**		**2,949.3131**	**2,949.3131**	**0.1065**		**2,951.9754**

3.3 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0416	0.0171	0.2850	9.2000e-004	0.1141	6.5000e-004	0.1148	0.0303	6.0000e-004	0.0309		91.4897	91.4897	1.6700e-003		91.5315
Total	**0.0416**	**0.0171**	**0.2850**	**9.2000e-004**	**0.1141**	**6.5000e-004**	**0.1148**	**0.0303**	**6.0000e-004**	**0.0309**		**91.4897**	**91.4897**	**1.6700e-003**		**91.5315**

3.3 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0416	0.0171	0.2850	9.2000e-004	0.1141	6.5000e-004	0.1148	0.0303	6.0000e-004	0.0309		91.4897	91.4897	1.6700e-003		91.5315
Total	**0.0416**	**0.0171**	**0.2850**	**9.2000e-004**	**0.1141**	**6.5000e-004**	**0.1148**	**0.0303**	**6.0000e-004**	**0.0309**		**91.4897**	**91.4897**	**1.6700e-003**		**91.5315**

3.3 Paving - 2028

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0391	0.0157	0.2674	8.9000e-004	0.1141	6.1000e-004	0.1147	0.0303	5.6000e-004	0.0308		88.5891	88.5891	1.5300e-003		88.6275
Total	**0.0391**	**0.0157**	**0.2674**	**8.9000e-004**	**0.1141**	**6.1000e-004**	**0.1147**	**0.0303**	**5.6000e-004**	**0.0308**		**88.5891**	**88.5891**	**1.5300e-003**		**88.6275**

3.3 Paving - 2028

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0391	0.0157	0.2674	8.9000e-004	0.1141	6.1000e-004	0.1147	0.0303	5.6000e-004	0.0308		88.5891	88.5891	1.5300e-003		88.6275
Total	**0.0391**	**0.0157**	**0.2674**	**8.9000e-004**	**0.1141**	**6.1000e-004**	**0.1147**	**0.0303**	**5.6000e-004**	**0.0308**		**88.5891**	**88.5891**	**1.5300e-003**		**88.6275**

3.4 Architectural Coating - 2027

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	9.1951					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**9.3660**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.1053	0.0434	0.7221	2.3200e-003	0.2891	1.6400e-003	0.2907	0.0767	1.5100e-003	0.0782		231.7738	231.7738	4.2400e-003		231.8798
Total	**0.1053**	**0.0434**	**0.7221**	**2.3200e-003**	**0.2891**	**1.6400e-003**	**0.2907**	**0.0767**	**1.5100e-003**	**0.0782**		**231.7738**	**231.7738**	**4.2400e-003**		**231.8798**

3.4 Architectural Coating - 2027

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	9.1951					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**9.3660**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.1053	0.0434	0.7221	2.3200e-003	0.2891	1.6400e-003	0.2907	0.0767	1.5100e-003	0.0782		231.7738	231.7738	4.2400e-003		231.8798
Total	**0.1053**	**0.0434**	**0.7221**	**2.3200e-003**	**0.2891**	**1.6400e-003**	**0.2907**	**0.0767**	**1.5100e-003**	**0.0782**		**231.7738**	**231.7738**	**4.2400e-003**		**231.8798**

3.4 Architectural Coating - 2028

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	9.1951					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**9.3660**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0990	0.0398	0.6773	2.2500e-003	0.2891	1.5300e-003	0.2906	0.0767	1.4100e-003	0.0781		224.4257	224.4257	3.8900e-003		224.5229
Total	**0.0990**	**0.0398**	**0.6773**	**2.2500e-003**	**0.2891**	**1.5300e-003**	**0.2906**	**0.0767**	**1.4100e-003**	**0.0781**		**224.4257**	**224.4257**	**3.8900e-003**		**224.5229**

3.4 Architectural Coating - 2028

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	9.1951					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**9.3660**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0990	0.0398	0.6773	2.2500e-003	0.2891	1.5300e-003	0.2906	0.0767	1.4100e-003	0.0781		224.4257	224.4257	3.8900e-003		224.5229
Total	**0.0990**	**0.0398**	**0.6773**	**2.2500e-003**	**0.2891**	**1.5300e-003**	**0.2906**	**0.0767**	**1.4100e-003**	**0.0781**		**224.4257**	**224.4257**	**3.8900e-003**		**224.5229**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.4484	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Unmitigated	10.4484	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052

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	1.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.3357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2600e-003	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Total	**10.4484**	**4.2000e-004**	**0.0460**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0987**	**0.0987**	**2.6000e-004**		**0.1052**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.3357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2600e-003	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Total	**10.4484**	**4.2000e-004**	**0.0460**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0987**	**0.0987**	**2.6000e-004**		**0.1052**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 2 Building Construction- Building 3 & 4

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	436.00	1000sqft	10.01	436,000.00	0
Other Non-Asphalt Surfaces	14.88	1000sqft	16.39	14,882.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 2 Building Construction- Building 3 & 4 - Sacramento County, Winter

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan.

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Energy Use - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Water And Wastewater - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Solid Waste - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Construction Off-road Equipment Mitigation - Rule 403

Phase 2 Building Construction- Building 3 & 4 - Sacramento County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	PhaseEndDate	10/9/2023	11/3/2028
tblConstructionPhase	PhaseEndDate	7/3/2023	11/3/2028
tblConstructionPhase	PhaseEndDate	8/21/2023	11/3/2028
tblConstructionPhase	PhaseStartDate	8/22/2023	3/1/2027
tblConstructionPhase	PhaseStartDate	10/26/2021	3/1/2027
tblConstructionPhase	PhaseStartDate	7/4/2023	3/1/2027
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LotAcreage	0.34	16.39
tblSolidWaste	SolidWasteGenerationRate	540.64	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	100,825,000.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	12.4268	28.1646	37.7605	0.0826	2.2859	1.0154	3.3013	0.6164	0.9494	1.5658	0.0000	8,135.8318	8,135.8318	1.4487	0.0000	8,172.0480
2028	12.3857	28.0549	37.4586	0.0821	2.2859	1.0143	3.3002	0.6164	0.9485	1.5648	0.0000	8,086.9122	8,086.9122	1.4456	0.0000	8,123.0522
Maximum	**12.4268**	**28.1646**	**37.7605**	**0.0826**	**2.2859**	**1.0154**	**3.3013**	**0.6164**	**0.9494**	**1.5658**	**0.0000**	**8,135.8318**	**8,135.8318**	**1.4487**	**0.0000**	**8,172.0480**

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					
2027	12.4268	28.1646	37.7605	0.0826	2.2859	1.0154	3.3013	0.6164	0.9494	1.5658	0.0000	8,135.8318	8,135.8318	1.4487	0.0000	8,172.0480
2028	12.3857	28.0549	37.4586	0.0821	2.2859	1.0143	3.3002	0.6164	0.9485	1.5648	0.0000	8,086.9122	8,086.9122	1.4456	0.0000	8,123.0522
Maximum	**12.4268**	**28.1646**	**37.7605**	**0.0826**	**2.2859**	**1.0154**	**3.3013**	**0.6164**	**0.9494**	**1.5658**	**0.0000**	**8,135.8318**	**8,135.8318**	**1.4487**	**0.0000**	**8,172.0480**

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

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	10.4484	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**10.4484**	**4.2000e-004**	**0.0460**	**0.0000**	**0.0000**	**1.6000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**1.6000e-004**		**0.0987**	**0.0987**	**2.6000e-004**	**0.0000**	**0.1052**

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	10.4484	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**10.4484**	**4.2000e-004**	**0.0460**	**0.0000**	**0.0000**	**1.6000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**1.6000e-004**		**0.0987**	**0.0987**	**2.6000e-004**	**0.0000**	**0.1052**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2027	11/3/2028	5	440	
2	Paving	Paving	3/1/2027	11/3/2028	5	440	
3	Architectural Coating	Architectural Coating	3/1/2027	11/3/2028	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 16.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 654,000; Non-Residential Outdoor: 218,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase 2 Building Construction- Building 3 & 4 - Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	189.00	74.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1510	5.6277	1.4455	0.0169	0.4450	7.3300e-003	0.4524	0.1280	7.0100e-003	0.1351		1,794.5155	1,794.5155	0.0952		1,796.8948
Worker	0.4899	0.2656	3.0016	0.0102	1.4377	8.1700e-003	1.4459	0.3814	7.5200e-003	0.3889		1,012.6719	1,012.6719	0.0183		1,013.1301
Total	**0.6409**	**5.8933**	**4.4471**	**0.0271**	**1.8828**	**0.0155**	**1.8983**	**0.5094**	**0.0145**	**0.5239**		**2,807.1874**	**2,807.1874**	**0.1135**		**2,810.0250**

3.2 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1510	5.6277	1.4455	0.0169	0.4450	7.3300e-003	0.4524	0.1280	7.0100e-003	0.1351		1,794.5155	1,794.5155	0.0952		1,796.8948
Worker	0.4899	0.2656	3.0016	0.0102	1.4377	8.1700e-003	1.4459	0.3814	7.5200e-003	0.3889		1,012.6719	1,012.6719	0.0183		1,013.1301
Total	**0.6409**	**5.8933**	**4.4471**	**0.0271**	**1.8828**	**0.0155**	**1.8983**	**0.5094**	**0.0145**	**0.5239**		**2,807.1874**	**2,807.1874**	**0.1135**		**2,810.0250**

3.2 Building Construction - 2028

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1461	5.5460	1.3916	0.0168	0.4450	6.9900e-003	0.4520	0.1280	6.6800e-003	0.1347		1,786.8025	1,786.8025	0.0941		1,789.1556
Worker	0.4616	0.2437	2.8079	9.8300e-003	1.4377	7.6200e-003	1.4454	0.3814	7.0200e-003	0.3884		980.4899	980.4899	0.0168		980.9091
Total	**0.6077**	**5.7897**	**4.1995**	**0.0266**	**1.8827**	**0.0146**	**1.8973**	**0.5094**	**0.0137**	**0.5231**		**2,767.2924**	**2,767.2924**	**0.1109**		**2,770.0647**

3.2 Building Construction - 2028

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1461	5.5460	1.3916	0.0168	0.4450	6.9900e-003	0.4520	0.1280	6.6800e-003	0.1347		1,786.8025	1,786.8025	0.0941		1,789.1556
Worker	0.4616	0.2437	2.8079	9.8300e-003	1.4377	7.6200e-003	1.4454	0.3814	7.0200e-003	0.3884		980.4899	980.4899	0.0168		980.9091
Total	**0.6077**	**5.7897**	**4.1995**	**0.0266**	**1.8827**	**0.0146**	**1.8973**	**0.5094**	**0.0137**	**0.5231**		**2,767.2924**	**2,767.2924**	**0.1109**		**2,770.0647**

3.3 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0389	0.0211	0.2382	8.1000e-004	0.1141	6.5000e-004	0.1148	0.0303	6.0000e-004	0.0309		80.3708	80.3708	1.4500e-003		80.4072
Total	**0.0389**	**0.0211**	**0.2382**	**8.1000e-004**	**0.1141**	**6.5000e-004**	**0.1148**	**0.0303**	**6.0000e-004**	**0.0309**		**80.3708**	**80.3708**	**1.4500e-003**		**80.4072**

3.3 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0389	0.0211	0.2382	8.1000e-004	0.1141	6.5000e-004	0.1148	0.0303	6.0000e-004	0.0309		80.3708	80.3708	1.4500e-003		80.4072
Total	**0.0389**	**0.0211**	**0.2382**	**8.1000e-004**	**0.1141**	**6.5000e-004**	**0.1148**	**0.0303**	**6.0000e-004**	**0.0309**		**80.3708**	**80.3708**	**1.4500e-003**		**80.4072**

3.3 Paving - 2028

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0366	0.0193	0.2229	7.8000e-004	0.1141	6.1000e-004	0.1147	0.0303	5.6000e-004	0.0308		77.8167	77.8167	1.3300e-003		77.8499
Total	**0.0366**	**0.0193**	**0.2229**	**7.8000e-004**	**0.1141**	**6.1000e-004**	**0.1147**	**0.0303**	**5.6000e-004**	**0.0308**		**77.8167**	**77.8167**	**1.3300e-003**		**77.8499**

3.3 Paving - 2028

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0366	0.0193	0.2229	7.8000e-004	0.1141	6.1000e-004	0.1147	0.0303	5.6000e-004	0.0308		77.8167	77.8167	1.3300e-003		77.8499
Total	**0.0366**	**0.0193**	**0.2229**	**7.8000e-004**	**0.1141**	**6.1000e-004**	**0.1147**	**0.0303**	**5.6000e-004**	**0.0308**		**77.8167**	**77.8167**	**1.3300e-003**		**77.8499**

3.4 Architectural Coating - 2027

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	9.1951					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**9.3660**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0985	0.0534	0.6035	2.0400e-003	0.2891	1.6400e-003	0.2907	0.0767	1.5100e-003	0.0782		203.6060	203.6060	3.6900e-003		203.6981
Total	**0.0985**	**0.0534**	**0.6035**	**2.0400e-003**	**0.2891**	**1.6400e-003**	**0.2907**	**0.0767**	**1.5100e-003**	**0.0782**		**203.6060**	**203.6060**	**3.6900e-003**		**203.6981**

3.4 Architectural Coating - 2027

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	9.1951					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**9.3660**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0985	0.0534	0.6035	2.0400e-003	0.2891	1.6400e-003	0.2907	0.0767	1.5100e-003	0.0782		203.6060	203.6060	3.6900e-003		203.6981
Total	**0.0985**	**0.0534**	**0.6035**	**2.0400e-003**	**0.2891**	**1.6400e-003**	**0.2907**	**0.0767**	**1.5100e-003**	**0.0782**		**203.6060**	**203.6060**	**3.6900e-003**		**203.6981**

3.4 Architectural Coating - 2028

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	9.1951					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**9.3660**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0928	0.0490	0.5646	1.9800e-003	0.2891	1.5300e-003	0.2906	0.0767	1.4100e-003	0.0781		197.1355	197.1355	3.3700e-003		197.2198
Total	**0.0928**	**0.0490**	**0.5646**	**1.9800e-003**	**0.2891**	**1.5300e-003**	**0.2906**	**0.0767**	**1.4100e-003**	**0.0781**		**197.1355**	**197.1355**	**3.3700e-003**		**197.2198**

3.4 Architectural Coating - 2028

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	9.1951					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**9.3660**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0928	0.0490	0.5646	1.9800e-003	0.2891	1.5300e-003	0.2906	0.0767	1.4100e-003	0.0781		197.1355	197.1355	3.3700e-003		197.2198
Total	**0.0928**	**0.0490**	**0.5646**	**1.9800e-003**	**0.2891**	**1.5300e-003**	**0.2906**	**0.0767**	**1.4100e-003**	**0.0781**		**197.1355**	**197.1355**	**3.3700e-003**		**197.2198**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.4484	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Unmitigated	10.4484	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052

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	1.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.3357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2600e-003	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Total	**10.4484**	**4.2000e-004**	**0.0460**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0987**	**0.0987**	**2.6000e-004**		**0.1052**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.3357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2600e-003	4.2000e-004	0.0460	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0987	0.0987	2.6000e-004		0.1052
Total	**10.4484**	**4.2000e-004**	**0.0460**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0987**	**0.0987**	**2.6000e-004**		**0.1052**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 2 Building Construction- Building 3 & 4

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	436.00	1000sqft	10.01	436,000.00	0
Other Non-Asphalt Surfaces	14.88	1000sqft	16.39	14,882.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 2 Building Construction- Building 3 & 4 - Sacramento County, Annual

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan.

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Energy Use - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Water And Wastewater - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Solid Waste - This model run is being conducted for the construction of building 3 & 4 on the Project site. No operation information is included.

Construction Off-road Equipment Mitigation - Rule 403

Phase 2 Building Construction- Building 3 & 4 - Sacramento County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	PhaseEndDate	10/9/2023	11/3/2028
tblConstructionPhase	PhaseEndDate	7/3/2023	11/3/2028
tblConstructionPhase	PhaseEndDate	8/21/2023	11/3/2028
tblConstructionPhase	PhaseStartDate	8/22/2023	3/1/2027
tblConstructionPhase	PhaseStartDate	10/26/2021	3/1/2027
tblConstructionPhase	PhaseStartDate	7/4/2023	3/1/2027
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LotAcreage	0.34	16.39
tblSolidWaste	SolidWasteGenerationRate	540.64	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	100,825,000.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	1.3615	3.0962	4.1423	9.1600e-003	0.2431	0.1117	0.3547	0.0657	0.1044	0.1702	0.0000	818.3645	818.3645	0.1442	0.0000	821.9698
2028	1.3572	3.0844	4.1101	9.1000e-003	0.2431	0.1116	0.3546	0.0657	0.1043	0.1701	0.0000	813.3397	813.3397	0.1439	0.0000	816.9376
Maximum	**1.3615**	**3.0962**	**4.1423**	**9.1600e-003**	**0.2431**	**0.1117**	**0.3547**	**0.0657**	**0.1044**	**0.1702**	**0.0000**	**818.3645**	**818.3645**	**0.1442**	**0.0000**	**821.9698**

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					
2027	1.3615	3.0962	4.1423	9.1600e-003	0.2431	0.1117	0.3547	0.0657	0.1044	0.1702	0.0000	818.3639	818.3639	0.1442	0.0000	821.9692
2028	1.3572	3.0844	4.1100	9.1000e-003	0.2431	0.1116	0.3546	0.0657	0.1043	0.1701	0.0000	813.3391	813.3391	0.1439	0.0000	816.9370
Maximum	**1.3615**	**3.0962**	**4.1423**	**9.1600e-003**	**0.2431**	**0.1117**	**0.3547**	**0.0657**	**0.1044**	**0.1702**	**0.0000**	**818.3639**	**818.3639**	**0.1442**	**0.0000**	**821.9692**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
23	**12-15-2026**	**3-14-2027**	0.2030	0.2030
24	**3-15-2027**	**6-14-2027**	1.3316	1.3316
25	**6-15-2027**	**9-14-2027**	1.3311	1.3311
26	**9-15-2027**	**12-14-2027**	1.3188	1.3188
27	**12-15-2027**	**3-14-2028**	1.3152	1.3152
28	**3-15-2028**	**6-14-2028**	1.3268	1.3268
29	**6-15-2028**	**9-14-2028**	1.3263	1.3263
30	**9-15-2028**	**9-30-2028**	0.2307	0.2307
		Highest	1.3316	1.3316

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9066	5.0000e-005	5.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0112	0.0112	3.0000e-005	0.0000	0.0119
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9066**	**5.0000e-005**	**5.7500e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0112**	**0.0112**	**3.0000e-005**	**0.0000**	**0.0119**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9066	5.0000e-005	5.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0112	0.0112	3.0000e-005	0.0000	0.0119
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9066**	**5.0000e-005**	**5.7500e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0112**	**0.0112**	**3.0000e-005**	**0.0000**	**0.0119**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2027	11/3/2028	5	440	
2	Paving	Paving	3/1/2027	11/3/2028	5	440	
3	Architectural Coating	Architectural Coating	3/1/2027	11/3/2028	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 16.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 654,000; Non-Residential Outdoor: 218,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	189.00	74.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2027

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	0.1504	1.3717	1.7693	2.9700e-003		0.0580	0.0580		0.0546	0.0546	0.0000	255.1114	255.1114	0.0600	0.0000	256.6106
Total	**0.1504**	**1.3717**	**1.7693**	**2.9700e-003**		**0.0580**	**0.0580**		**0.0546**	**0.0546**	**0.0000**	**255.1114**	**255.1114**	**0.0600**	**0.0000**	**256.6106**

3.2 Building Construction - 2027

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	0.0160	0.6211	0.1470	1.8900e-003	0.0476	7.8000e-004	0.0483	0.0137	7.4000e-004	0.0145	0.0000	181.7785	181.7785	9.0900e-003	0.0000	182.0058
Worker	0.0502	0.0261	0.3307	1.1500e-003	0.1527	9.0000e-004	0.1536	0.0406	8.3000e-004	0.0414	0.0000	104.0101	104.0101	1.8700e-003	0.0000	104.0570
Total	**0.0661**	**0.6472**	**0.4777**	**3.0400e-003**	**0.2003**	**1.6800e-003**	**0.2019**	**0.0544**	**1.5700e-003**	**0.0559**	**0.0000**	**285.7886**	**285.7886**	**0.0110**	**0.0000**	**286.0628**

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	0.1504	1.3717	1.7693	2.9700e-003		0.0580	0.0580		0.0546	0.0546	0.0000	255.1111	255.1111	0.0600	0.0000	256.6103
Total	**0.1504**	**1.3717**	**1.7693**	**2.9700e-003**		**0.0580**	**0.0580**		**0.0546**	**0.0546**	**0.0000**	**255.1111**	**255.1111**	**0.0600**	**0.0000**	**256.6103**

3.2 Building Construction - 2027

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	0.0160	0.6211	0.1470	1.8900e-003	0.0476	7.8000e-004	0.0483	0.0137	7.4000e-004	0.0145	0.0000	181.7785	181.7785	9.0900e-003	0.0000	182.0058
Worker	0.0502	0.0261	0.3307	1.1500e-003	0.1527	9.0000e-004	0.1536	0.0406	8.3000e-004	0.0414	0.0000	104.0101	104.0101	1.8700e-003	0.0000	104.0570
Total	**0.0661**	**0.6472**	**0.4777**	**3.0400e-003**	**0.2003**	**1.6800e-003**	**0.2019**	**0.0544**	**1.5700e-003**	**0.0559**	**0.0000**	**285.7886**	**285.7886**	**0.0110**	**0.0000**	**286.0628**

3.2 Building Construction - 2028

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	0.1504	1.3717	1.7693	2.9700e-003		0.0580	0.0580		0.0546	0.0546	0.0000	255.1114	255.1114	0.0600	0.0000	256.6106
Total	**0.1504**	**1.3717**	**1.7693**	**2.9700e-003**		**0.0580**	**0.0580**		**0.0546**	**0.0546**	**0.0000**	**255.1114**	**255.1114**	**0.0600**	**0.0000**	**256.6106**

3.2 Building Construction - 2028

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	0.0155	0.6121	0.1416	1.8800e-003	0.0476	7.4000e-004	0.0483	0.0137	7.1000e-004	0.0145	0.0000	180.9837	180.9837	8.9900e-003	0.0000	181.2085
Worker	0.0472	0.0240	0.3097	1.1100e-003	0.1527	8.4000e-004	0.1535	0.0406	7.7000e-004	0.0414	0.0000	100.7066	100.7066	1.7200e-003	0.0000	100.7495
Total	**0.0627**	**0.6361**	**0.4513**	**2.9900e-003**	**0.2003**	**1.5800e-003**	**0.2018**	**0.0544**	**1.4800e-003**	**0.0558**	**0.0000**	**281.6903**	**281.6903**	**0.0107**	**0.0000**	**281.9580**

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	0.1504	1.3717	1.7693	2.9700e-003		0.0580	0.0580		0.0546	0.0546	0.0000	255.1111	255.1111	0.0600	0.0000	256.6103
Total	**0.1504**	**1.3717**	**1.7693**	**2.9700e-003**		**0.0580**	**0.0580**		**0.0546**	**0.0546**	**0.0000**	**255.1111**	**255.1111**	**0.0600**	**0.0000**	**256.6103**

3.2 Building Construction - 2028

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	0.0155	0.6121	0.1416	1.8800e-003	0.0476	7.4000e-004	0.0483	0.0137	7.1000e-004	0.0145	0.0000	180.9837	180.9837	8.9900e-003	0.0000	181.2085
Worker	0.0472	0.0240	0.3097	1.1100e-003	0.1527	8.4000e-004	0.1535	0.0406	7.7000e-004	0.0414	0.0000	100.7066	100.7066	1.7200e-003	0.0000	100.7495
Total	**0.0627**	**0.6361**	**0.4513**	**2.9900e-003**	**0.2003**	**1.5800e-003**	**0.2018**	**0.0544**	**1.4800e-003**	**0.0558**	**0.0000**	**281.6903**	**281.6903**	**0.0107**	**0.0000**	**281.9580**

3.3 Paving - 2027

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	0.1007	0.9440	1.6036	2.5100e-003		0.0460	0.0460		0.0424	0.0424	0.0000	220.2118	220.2118	0.0712	0.0000	221.9923
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1007**	**0.9440**	**1.6036**	**2.5100e-003**		**0.0460**	**0.0460**		**0.0424**	**0.0424**	**0.0000**	**220.2118**	**220.2118**	**0.0712**	**0.0000**	**221.9923**

3.3 Paving - 2027

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	3.9800e-003	2.0700e-003	0.0263	9.0000e-005	0.0121	7.0000e-005	0.0122	3.2200e-003	7.0000e-005	3.2900e-003	0.0000	8.2548	8.2548	1.5000e-004	0.0000	8.2585
Total	**3.9800e-003**	**2.0700e-003**	**0.0263**	**9.0000e-005**	**0.0121**	**7.0000e-005**	**0.0122**	**3.2200e-003**	**7.0000e-005**	**3.2900e-003**	**0.0000**	**8.2548**	**8.2548**	**1.5000e-004**	**0.0000**	**8.2585**

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	0.1007	0.9440	1.6036	2.5100e-003		0.0460	0.0460		0.0424	0.0424	0.0000	220.2116	220.2116	0.0712	0.0000	221.9921
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1007**	**0.9440**	**1.6036**	**2.5100e-003**		**0.0460**	**0.0460**		**0.0424**	**0.0424**	**0.0000**	**220.2116**	**220.2116**	**0.0712**	**0.0000**	**221.9921**

3.3 Paving - 2027

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	3.9800e-003	2.0700e-003	0.0263	9.0000e-005	0.0121	7.0000e-005	0.0122	3.2200e-003	7.0000e-005	3.2900e-003	0.0000	8.2548	8.2548	1.5000e-004	0.0000	8.2585
Total	**3.9800e-003**	**2.0700e-003**	**0.0263**	**9.0000e-005**	**0.0121**	**7.0000e-005**	**0.0122**	**3.2200e-003**	**7.0000e-005**	**3.2900e-003**	**0.0000**	**8.2548**	**8.2548**	**1.5000e-004**	**0.0000**	**8.2585**

3.3 Paving - 2028

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	0.1007	0.9440	1.6036	2.5100e-003		0.0460	0.0460		0.0424	0.0424	0.0000	220.2118	220.2118	0.0712	0.0000	221.9923
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1007**	**0.9440**	**1.6036**	**2.5100e-003**		**0.0460**	**0.0460**		**0.0424**	**0.0424**	**0.0000**	**220.2118**	**220.2118**	**0.0712**	**0.0000**	**221.9923**

3.3 Paving - 2028

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	3.7500e-003	1.9000e-003	0.0246	9.0000e-005	0.0121	7.0000e-005	0.0122	3.2200e-003	6.0000e-005	3.2800e-003	0.0000	7.9926	7.9926	1.4000e-004	0.0000	7.9960
Total	**3.7500e-003**	**1.9000e-003**	**0.0246**	**9.0000e-005**	**0.0121**	**7.0000e-005**	**0.0122**	**3.2200e-003**	**6.0000e-005**	**3.2800e-003**	**0.0000**	**7.9926**	**7.9926**	**1.4000e-004**	**0.0000**	**7.9960**

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	0.1007	0.9440	1.6036	2.5100e-003		0.0460	0.0460		0.0424	0.0424	0.0000	220.2116	220.2116	0.0712	0.0000	221.9921
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1007**	**0.9440**	**1.6036**	**2.5100e-003**		**0.0460**	**0.0460**		**0.0424**	**0.0424**	**0.0000**	**220.2116**	**220.2116**	**0.0712**	**0.0000**	**221.9921**

3.3 Paving - 2028

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	3.7500e-003	1.9000e-003	0.0246	9.0000e-005	0.0121	7.0000e-005	0.0122	3.2200e-003	6.0000e-005	3.2800e-003	0.0000	7.9926	7.9926	1.4000e-004	0.0000	7.9960
Total	**3.7500e-003**	**1.9000e-003**	**0.0246**	**9.0000e-005**	**0.0121**	**7.0000e-005**	**0.0122**	**3.2200e-003**	**6.0000e-005**	**3.2800e-003**	**0.0000**	**7.9926**	**7.9926**	**1.4000e-004**	**0.0000**	**7.9960**

3.4 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0188	0.1260	0.1990	3.3000e-004		5.6700e-003	5.6700e-003		5.6700e-003	5.6700e-003	0.0000	28.0858	28.0858	1.5300e-003	0.0000	28.1241
Total	**1.0303**	**0.1260**	**0.1990**	**3.3000e-004**		**5.6700e-003**	**5.6700e-003**		**5.6700e-003**	**5.6700e-003**	**0.0000**	**28.0858**	**28.0858**	**1.5300e-003**	**0.0000**	**28.1241**

3.4 Architectural Coating - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	5.2500e-003	0.0665	2.3000e-004	0.0307	1.8000e-004	0.0309	8.1700e-003	1.7000e-004	8.3300e-003	0.0000	20.9121	20.9121	3.8000e-004	0.0000	20.9215
Total	**0.0101**	**5.2500e-003**	**0.0665**	**2.3000e-004**	**0.0307**	**1.8000e-004**	**0.0309**	**8.1700e-003**	**1.7000e-004**	**8.3300e-003**	**0.0000**	**20.9121**	**20.9121**	**3.8000e-004**	**0.0000**	**20.9215**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0188	0.1260	0.1990	3.3000e-004		5.6700e-003	5.6700e-003		5.6700e-003	5.6700e-003	0.0000	28.0858	28.0858	1.5300e-003	0.0000	28.1241
Total	**1.0303**	**0.1260**	**0.1990**	**3.3000e-004**		**5.6700e-003**	**5.6700e-003**		**5.6700e-003**	**5.6700e-003**	**0.0000**	**28.0858**	**28.0858**	**1.5300e-003**	**0.0000**	**28.1241**

3.4 Architectural Coating - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	5.2500e-003	0.0665	2.3000e-004	0.0307	1.8000e-004	0.0309	8.1700e-003	1.7000e-004	8.3300e-003	0.0000	20.9121	20.9121	3.8000e-004	0.0000	20.9215
Total	**0.0101**	**5.2500e-003**	**0.0665**	**2.3000e-004**	**0.0307**	**1.8000e-004**	**0.0309**	**8.1700e-003**	**1.7000e-004**	**8.3300e-003**	**0.0000**	**20.9121**	**20.9121**	**3.8000e-004**	**0.0000**	**20.9215**

3.4 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0188	0.1260	0.1990	3.3000e-004		5.6700e-003	5.6700e-003		5.6700e-003	5.6700e-003	0.0000	28.0858	28.0858	1.5300e-003	0.0000	28.1241
Total	**1.0303**	**0.1260**	**0.1990**	**3.3000e-004**		**5.6700e-003**	**5.6700e-003**		**5.6700e-003**	**5.6700e-003**	**0.0000**	**28.0858**	**28.0858**	**1.5300e-003**	**0.0000**	**28.1241**

3.4 Architectural Coating - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4900e-003	4.8200e-003	0.0623	2.2000e-004	0.0307	1.7000e-004	0.0309	8.1700e-003	1.6000e-004	8.3200e-003	0.0000	20.2479	20.2479	3.5000e-004	0.0000	20.2565
Total	**9.4900e-003**	**4.8200e-003**	**0.0623**	**2.2000e-004**	**0.0307**	**1.7000e-004**	**0.0309**	**8.1700e-003**	**1.6000e-004**	**8.3200e-003**	**0.0000**	**20.2479**	**20.2479**	**3.5000e-004**	**0.0000**	**20.2565**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0188	0.1260	0.1990	3.3000e-004		5.6700e-003	5.6700e-003		5.6700e-003	5.6700e-003	0.0000	28.0858	28.0858	1.5300e-003	0.0000	28.1241
Total	**1.0303**	**0.1260**	**0.1990**	**3.3000e-004**		**5.6700e-003**	**5.6700e-003**		**5.6700e-003**	**5.6700e-003**	**0.0000**	**28.0858**	**28.0858**	**1.5300e-003**	**0.0000**	**28.1241**

3.4 Architectural Coating - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4900e-003	4.8200e-003	0.0623	2.2000e-004	0.0307	1.7000e-004	0.0309	8.1700e-003	1.6000e-004	8.3200e-003	0.0000	20.2479	20.2479	3.5000e-004	0.0000	20.2565
Total	**9.4900e-003**	**4.8200e-003**	**0.0623**	**2.2000e-004**	**0.0307**	**1.7000e-004**	**0.0309**	**8.1700e-003**	**1.6000e-004**	**8.3200e-003**	**0.0000**	**20.2479**	**20.2479**	**3.5000e-004**	**0.0000**	**20.2565**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9066	5.0000e-005	5.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0112	0.0112	3.0000e-005	0.0000	0.0119
Unmitigated	1.9066	5.0000e-005	5.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0112	0.0112	3.0000e-005	0.0000	0.0119

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	0.2023					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7038					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.3000e-004	5.0000e-005	5.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0112	0.0112	3.0000e-005	0.0000	0.0119
Total	**1.9066**	**5.0000e-005**	**5.7500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0112**	**0.0112**	**3.0000e-005**	**0.0000**	**0.0119**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2023					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7038					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.3000e-004	5.0000e-005	5.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0112	0.0112	3.0000e-005	0.0000	0.0119
Total	**1.9066**	**5.0000e-005**	**5.7500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0112**	**0.0112**	**3.0000e-005**	**0.0000**	**0.0119**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 3 Building Construction- Building 5 & 6

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	14.88	1000sqft	13.87	14,882.00	0
Industrial Park	546.00	1000sqft	12.53	546,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 3 Building Construction- Building 5 & 6 - Sacramento County, Summer

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan.

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Energy Use - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Water And Wastewater - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Solid Waste - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Construction Off-road Equipment Mitigation - Rule 403

Phase 3 Building Construction- Building 5 & 6 - Sacramento County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	PhaseEndDate	10/9/2023	11/6/2030
tblConstructionPhase	PhaseEndDate	7/3/2023	11/6/2030
tblConstructionPhase	PhaseEndDate	8/21/2023	11/6/2030
tblConstructionPhase	PhaseStartDate	8/22/2023	3/1/2029
tblConstructionPhase	PhaseStartDate	10/26/2021	3/1/2029
tblConstructionPhase	PhaseStartDate	7/4/2023	3/1/2029
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LandUseSquareFeet	14,880.00	14,882.00
tblLandUse	LotAcreage	0.34	13.87
tblSolidWaste	SolidWasteGenerationRate	677.04	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	126,262,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2029	14.8559	29.2235	38.9045	0.0912	2.8201	1.0166	3.8367	0.7605	0.9506	1.7111	0.0000	9,023.3892	9,023.3892	1.4650	0.0000	9,060.0147
2030	15.1707	22.8254	39.8960	0.0999	2.8201	0.5169	3.3370	0.7605	0.5158	1.2762	0.0000	9,761.1233	9,761.1233	0.3836	0.0000	9,770.7134
Maximum	**15.1707**	**29.2235**	**39.8960**	**0.0999**	**2.8201**	**1.0166**	**3.8367**	**0.7605**	**0.9506**	**1.7111**	**0.0000**	**9,761.1233**	**9,761.1233**	**1.4650**	**0.0000**	**9,770.7134**

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					
2029	14.8559	29.2235	38.9045	0.0912	2.8201	1.0166	3.8367	0.7605	0.9506	1.7111	0.0000	9,023.3892	9,023.3892	1.4650	0.0000	9,060.0147
2030	15.1707	22.8254	39.8960	0.0999	2.8201	0.5169	3.3370	0.7605	0.5158	1.2762	0.0000	9,761.1233	9,761.1233	0.3836	0.0000	9,770.7134
Maximum	**15.1707**	**29.2235**	**39.8960**	**0.0999**	**2.8201**	**1.0166**	**3.8367**	**0.7605**	**0.9506**	**1.7111**	**0.0000**	**9,761.1233**	**9,761.1233**	**1.4650**	**0.0000**	**9,770.7134**

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

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	13.0828	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**13.0828**	**5.2000e-004**	**0.0573**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**2.0000e-004**		**0.1228**	**0.1228**	**3.2000e-004**	**0.0000**	**0.1308**

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	13.0828	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**13.0828**	**5.2000e-004**	**0.0573**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**2.0000e-004**		**0.1228**	**0.1228**	**3.2000e-004**	**0.0000**	**0.1308**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2029	11/6/2030	5	440	
2	Paving	Paving	3/1/2029	11/6/2030	5	440	
3	Architectural Coating	Architectural Coating	3/1/2029	11/6/2030	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 13.87

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 819,000; Non-Residential Outdoor: 273,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase 3 Building Construction- Building 5 & 6 - Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	236.00	92.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	47.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2029

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1665	6.7407	1.4574	0.0213	0.5532	7.8100e-003	0.5610	0.1592	7.4600e-003	0.1666		2,269.7584	2,269.7584	0.1072		2,272.4379
Worker	0.5729	0.2265	3.9402	0.0136	1.7953	8.8700e-003	1.8041	0.4762	8.1600e-003	0.4844		1,353.4072	1,353.4072	0.0220		1,353.9582
Total	**0.7393**	**6.9672**	**5.3976**	**0.0349**	**2.3485**	**0.0167**	**2.3651**	**0.6354**	**0.0156**	**0.6510**		**3,623.1655**	**3,623.1655**	**0.1292**		**3,626.3961**

3.2 Building Construction - 2029

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1665	6.7407	1.4574	0.0213	0.5532	7.8100e-003	0.5610	0.1592	7.4600e-003	0.1666		2,269.7584	2,269.7584	0.1072		2,272.4379
Worker	0.5729	0.2265	3.9402	0.0136	1.7953	8.8700e-003	1.8041	0.4762	8.1600e-003	0.4844		1,353.4072	1,353.4072	0.0220		1,353.9582
Total	**0.7393**	**6.9672**	**5.3976**	**0.0349**	**2.3485**	**0.0167**	**2.3651**	**0.6354**	**0.0156**	**0.6510**		**3,623.1655**	**3,623.1655**	**0.1292**		**3,626.3961**

3.2 Building Construction - 2030

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.1619	6.6518	1.4185	0.0213	0.5532	7.4300e-003	0.5606	0.1592	7.1000e-003	0.1663		2,261.5436	2,261.5436	0.1060		2,264.1924
Worker	0.5320	0.2079	3.7010	0.0132	1.7953	8.2600e-003	1.8035	0.4762	7.6000e-003	0.4838		1,317.8526	1,317.8526	0.0202		1,318.3571
Total	**0.6939**	**6.8597**	**5.1195**	**0.0345**	**2.3484**	**0.0157**	**2.3641**	**0.6354**	**0.0147**	**0.6501**		**3,579.3962**	**3,579.3962**	**0.1261**		**3,582.5495**

3.2 Building Construction - 2030

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.1619	6.6518	1.4185	0.0213	0.5532	7.4300e-003	0.5606	0.1592	7.1000e-003	0.1663		2,261.5436	2,261.5436	0.1060		2,264.1924
Worker	0.5320	0.2079	3.7010	0.0132	1.7953	8.2600e-003	1.8035	0.4762	7.6000e-003	0.4838		1,317.8526	1,317.8526	0.0202		1,318.3571
Total	**0.6939**	**6.8597**	**5.1195**	**0.0345**	**2.3484**	**0.0157**	**2.3641**	**0.6354**	**0.0147**	**0.6501**		**3,579.3962**	**3,579.3962**	**0.1261**		**3,582.5495**

3.3 Paving - 2029

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0364	0.0144	0.2504	8.6000e-004	0.1141	5.6000e-004	0.1147	0.0303	5.2000e-004	0.0308		86.0216	86.0216	1.4000e-003		86.0567
Total	**0.0364**	**0.0144**	**0.2504**	**8.6000e-004**	**0.1141**	**5.6000e-004**	**0.1147**	**0.0303**	**5.2000e-004**	**0.0308**		**86.0216**	**86.0216**	**1.4000e-003**		**86.0567**

3.3 Paving - 2029

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0364	0.0144	0.2504	8.6000e-004	0.1141	5.6000e-004	0.1147	0.0303	5.2000e-004	0.0308		86.0216	86.0216	1.4000e-003		86.0567
Total	**0.0364**	**0.0144**	**0.2504**	**8.6000e-004**	**0.1141**	**5.6000e-004**	**0.1147**	**0.0303**	**5.2000e-004**	**0.0308**		**86.0216**	**86.0216**	**1.4000e-003**		**86.0567**

3.3 Paving - 2030

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306		2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**		**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0338	0.0132	0.2352	8.4000e-004	0.1141	5.2000e-004	0.1146	0.0303	4.8000e-004	0.0308		83.7618	83.7618	1.2800e-003		83.7939
Total	**0.0338**	**0.0132**	**0.2352**	**8.4000e-004**	**0.1141**	**5.2000e-004**	**0.1146**	**0.0303**	**4.8000e-004**	**0.0308**		**83.7618**	**83.7618**	**1.2800e-003**		**83.7939**

3.3 Paving - 2030

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306	0.0000	2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0338	0.0132	0.2352	8.4000e-004	0.1141	5.2000e-004	0.1146	0.0303	4.8000e-004	0.0308		83.7618	83.7618	1.2800e-003		83.7939
Total	**0.0338**	**0.0132**	**0.2352**	**8.4000e-004**	**0.1141**	**5.2000e-004**	**0.1146**	**0.0303**	**4.8000e-004**	**0.0308**		**83.7618**	**83.7618**	**1.2800e-003**		**83.7939**

3.4 Architectural Coating - 2029

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	11.5126					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**11.6835**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.1141	0.0451	0.7847	2.7000e-003	0.3575	1.7700e-003	0.3593	0.0948	1.6200e-003	0.0965		269.5345	269.5345	4.3900e-003		269.6442
Total	**0.1141**	**0.0451**	**0.7847**	**2.7000e-003**	**0.3575**	**1.7700e-003**	**0.3593**	**0.0948**	**1.6200e-003**	**0.0965**		**269.5345**	**269.5345**	**4.3900e-003**		**269.6442**

3.4 Architectural Coating - 2029

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	11.5126					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**11.6835**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.1141	0.0451	0.7847	2.7000e-003	0.3575	1.7700e-003	0.3593	0.0948	1.6200e-003	0.0965		269.5345	269.5345	4.3900e-003		269.6442
Total	**0.1141**	**0.0451**	**0.7847**	**2.7000e-003**	**0.3575**	**1.7700e-003**	**0.3593**	**0.0948**	**1.6200e-003**	**0.0965**		**269.5345**	**269.5345**	**4.3900e-003**		**269.6442**

3.4 Architectural Coating - 2030

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	11.5126					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**11.6434**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.1060	0.0414	0.7371	2.6300e-003	0.3575	1.6400e-003	0.3592	0.0948	1.5100e-003	0.0964		262.4537	262.4537	4.0200e-003		262.5542
Total	**0.1060**	**0.0414**	**0.7371**	**2.6300e-003**	**0.3575**	**1.6400e-003**	**0.3592**	**0.0948**	**1.5100e-003**	**0.0964**		**262.4537**	**262.4537**	**4.0200e-003**		**262.5542**

3.4 Architectural Coating - 2030

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	11.5126					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**11.6434**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.1060	0.0414	0.7371	2.6300e-003	0.3575	1.6400e-003	0.3592	0.0948	1.5100e-003	0.0964		262.4537	262.4537	4.0200e-003		262.5542
Total	**0.1060**	**0.0414**	**0.7371**	**2.6300e-003**	**0.3575**	**1.6400e-003**	**0.3592**	**0.0948**	**1.5100e-003**	**0.0964**		**262.4537**	**262.4537**	**4.0200e-003**		**262.5542**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.0828	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Unmitigated	13.0828	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308

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	1.3878					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.6897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-003	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Total	**13.0828**	**5.2000e-004**	**0.0573**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1228**	**0.1228**	**3.2000e-004**		**0.1308**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.3878					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.6897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-003	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Total	**13.0828**	**5.2000e-004**	**0.0573**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1228**	**0.1228**	**3.2000e-004**		**0.1308**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 3 Building Construction- Building 5 & 6

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	14.88	1000sqft	13.87	14,882.00	0
Industrial Park	546.00	1000sqft	12.53	546,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 3 Building Construction- Building 5 & 6 - Sacramento County, Winter

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan.

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Energy Use - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Water And Wastewater - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Solid Waste - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Construction Off-road Equipment Mitigation - Rule 403

Phase 3 Building Construction- Building 5 & 6 - Sacramento County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	PhaseEndDate	10/9/2023	11/6/2030
tblConstructionPhase	PhaseEndDate	7/3/2023	11/6/2030
tblConstructionPhase	PhaseEndDate	8/21/2023	11/6/2030
tblConstructionPhase	PhaseStartDate	8/22/2023	3/1/2029
tblConstructionPhase	PhaseStartDate	10/26/2021	3/1/2029
tblConstructionPhase	PhaseStartDate	7/4/2023	3/1/2029
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LandUseSquareFeet	14,880.00	14,882.00
tblLandUse	LotAcreage	0.34	13.87
tblSolidWaste	SolidWasteGenerationRate	677.04	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	126,262,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2029	14.8211	29.3473	38.2789	0.0886	2.8201	1.0170	3.8371	0.7605	0.9510	1.7115	0.0000	8,758.3371	8,758.3371	1.4698	0.0000	8,795.0824
2030	15.1397	22.9421	39.3006	0.0974	2.8201	0.5173	3.3374	0.7605	0.5161	1.2766	0.0000	9,501.7215	9,501.7215	0.3885	0.0000	9,511.4349
Maximum	**15.1397**	**29.3473**	**39.3006**	**0.0974**	**2.8201**	**1.0170**	**3.8371**	**0.7605**	**0.9510**	**1.7115**	**0.0000**	**9,501.7215**	**9,501.7215**	**1.4698**	**0.0000**	**9,511.4349**

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					
2029	14.8211	29.3473	38.2789	0.0886	2.8201	1.0170	3.8371	0.7605	0.9510	1.7115	0.0000	8,758.3371	8,758.3371	1.4698	0.0000	8,795.0824
2030	15.1397	22.9421	39.3006	0.0974	2.8201	0.5173	3.3374	0.7605	0.5161	1.2766	0.0000	9,501.7215	9,501.7215	0.3885	0.0000	9,511.4349
Maximum	**15.1397**	**29.3473**	**39.3006**	**0.0974**	**2.8201**	**1.0170**	**3.8371**	**0.7605**	**0.9510**	**1.7115**	**0.0000**	**9,501.7215**	**9,501.7215**	**1.4698**	**0.0000**	**9,511.4349**

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

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	13.0828	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**13.0828**	**5.2000e-004**	**0.0573**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**2.0000e-004**		**0.1228**	**0.1228**	**3.2000e-004**	**0.0000**	**0.1308**

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	13.0828	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**13.0828**	**5.2000e-004**	**0.0573**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**2.0000e-004**		**0.1228**	**0.1228**	**3.2000e-004**	**0.0000**	**0.1308**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2029	11/6/2030	5	440	
2	Paving	Paving	3/1/2029	11/6/2030	5	440	
3	Architectural Coating	Architectural Coating	3/1/2029	11/6/2030	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 13.87

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 819,000; Non-Residential Outdoor: 273,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase 3 Building Construction- Building 5 & 6 - Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	236.00	92.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	47.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2029

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1762	6.7986	1.6738	0.0208	0.5532	8.2400e-003	0.5615	0.1592	7.8800e-003	0.1670		2,212.7004	2,212.7004	0.1157		2,215.5933
Worker	0.5376	0.2787	3.2734	0.0119	1.7953	8.8700e-003	1.8041	0.4762	8.1600e-003	0.4844		1,188.6870	1,188.6870	0.0191		1,189.1640
Total	**0.7138**	**7.0773**	**4.9472**	**0.0327**	**2.3485**	**0.0171**	**2.3656**	**0.6354**	**0.0160**	**0.6514**		**3,401.3874**	**3,401.3874**	**0.1348**		**3,404.7572**

3.2 Building Construction - 2029

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.1762	6.7986	1.6738	0.0208	0.5532	8.2400e-003	0.5615	0.1592	7.8800e-003	0.1670		2,212.7004	2,212.7004	0.1157		2,215.5933
Worker	0.5376	0.2787	3.2734	0.0119	1.7953	8.8700e-003	1.8041	0.4762	8.1600e-003	0.4844		1,188.6870	1,188.6870	0.0191		1,189.1640
Total	**0.7138**	**7.0773**	**4.9472**	**0.0327**	**2.3485**	**0.0171**	**2.3656**	**0.6354**	**0.0160**	**0.6514**		**3,401.3874**	**3,401.3874**	**0.1348**		**3,404.7572**

3.2 Building Construction - 2030

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.1713	6.7081	1.6273	0.0207	0.5532	7.8000e-003	0.5610	0.1592	7.4600e-003	0.1666		2,204.8830	2,204.8830	0.1144		2,207.7421
Worker	0.5000	0.2557	3.0641	0.0116	1.7953	8.2600e-003	1.8035	0.4762	7.6000e-003	0.4838		1,157.2925	1,157.2925	0.0174		1,157.7281
Total	**0.6713**	**6.9638**	**4.6914**	**0.0323**	**2.3484**	**0.0161**	**2.3645**	**0.6354**	**0.0151**	**0.6504**		**3,362.1755**	**3,362.1755**	**0.1318**		**3,365.4702**

3.2 Building Construction - 2030

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.1713	6.7081	1.6273	0.0207	0.5532	7.8000e-003	0.5610	0.1592	7.4600e-003	0.1666		2,204.8830	2,204.8830	0.1144		2,207.7421
Worker	0.5000	0.2557	3.0641	0.0116	1.7953	8.2600e-003	1.8035	0.4762	7.6000e-003	0.4838		1,157.2925	1,157.2925	0.0174		1,157.7281
Total	**0.6713**	**6.9638**	**4.6914**	**0.0323**	**2.3484**	**0.0161**	**2.3645**	**0.6354**	**0.0151**	**0.6504**		**3,362.1755**	**3,362.1755**	**0.1318**		**3,365.4702**

3.3 Paving - 2029

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0342	0.0177	0.2081	7.6000e-004	0.1141	5.6000e-004	0.1147	0.0303	5.2000e-004	0.0308		75.5521	75.5521	1.2100e-003		75.5825
Total	**0.0342**	**0.0177**	**0.2081**	**7.6000e-004**	**0.1141**	**5.6000e-004**	**0.1147**	**0.0303**	**5.2000e-004**	**0.0308**		**75.5521**	**75.5521**	**1.2100e-003**		**75.5825**

3.3 Paving - 2029

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0342	0.0177	0.2081	7.6000e-004	0.1141	5.6000e-004	0.1147	0.0303	5.2000e-004	0.0308		75.5521	75.5521	1.2100e-003		75.5825
Total	**0.0342**	**0.0177**	**0.2081**	**7.6000e-004**	**0.1141**	**5.6000e-004**	**0.1147**	**0.0303**	**5.2000e-004**	**0.0308**		**75.5521**	**75.5521**	**1.2100e-003**		**75.5825**

3.3 Paving - 2030

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306		2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**		**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0318	0.0163	0.1948	7.4000e-004	0.1141	5.2000e-004	0.1146	0.0303	4.8000e-004	0.0308		73.5567	73.5567	1.1100e-003		73.5844
Total	**0.0318**	**0.0163**	**0.1948**	**7.4000e-004**	**0.1141**	**5.2000e-004**	**0.1146**	**0.0303**	**4.8000e-004**	**0.0308**		**73.5567**	**73.5567**	**1.1100e-003**		**73.5844**

3.3 Paving - 2030

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306	0.0000	2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0318	0.0163	0.1948	7.4000e-004	0.1141	5.2000e-004	0.1146	0.0303	4.8000e-004	0.0308		73.5567	73.5567	1.1100e-003		73.5844
Total	**0.0318**	**0.0163**	**0.1948**	**7.4000e-004**	**0.1141**	**5.2000e-004**	**0.1146**	**0.0303**	**4.8000e-004**	**0.0308**		**73.5567**	**73.5567**	**1.1100e-003**		**73.5844**

3.4 Architectural Coating - 2029

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	11.5126					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**11.6835**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.1071	0.0555	0.6519	2.3700e-003	0.3575	1.7700e-003	0.3593	0.0948	1.6200e-003	0.0965		236.7300	236.7300	3.8000e-003		236.8250
Total	**0.1071**	**0.0555**	**0.6519**	**2.3700e-003**	**0.3575**	**1.7700e-003**	**0.3593**	**0.0948**	**1.6200e-003**	**0.0965**		**236.7300**	**236.7300**	**3.8000e-003**		**236.8250**

3.4 Architectural Coating - 2029

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	11.5126					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**11.6835**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.1071	0.0555	0.6519	2.3700e-003	0.3575	1.7700e-003	0.3593	0.0948	1.6200e-003	0.0965		236.7300	236.7300	3.8000e-003		236.8250
Total	**0.1071**	**0.0555**	**0.6519**	**2.3700e-003**	**0.3575**	**1.7700e-003**	**0.3593**	**0.0948**	**1.6200e-003**	**0.0965**		**236.7300**	**236.7300**	**3.8000e-003**		**236.8250**

3.4 Architectural Coating - 2030

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	11.5126					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**11.6434**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0996	0.0509	0.6102	2.3100e-003	0.3575	1.6400e-003	0.3592	0.0948	1.5100e-003	0.0964		230.4777	230.4777	3.4700e-003		230.5645
Total	**0.0996**	**0.0509**	**0.6102**	**2.3100e-003**	**0.3575**	**1.6400e-003**	**0.3592**	**0.0948**	**1.5100e-003**	**0.0964**		**230.4777**	**230.4777**	**3.4700e-003**		**230.5645**

3.4 Architectural Coating - 2030

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	11.5126					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**11.6434**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0996	0.0509	0.6102	2.3100e-003	0.3575	1.6400e-003	0.3592	0.0948	1.5100e-003	0.0964		230.4777	230.4777	3.4700e-003		230.5645
Total	**0.0996**	**0.0509**	**0.6102**	**2.3100e-003**	**0.3575**	**1.6400e-003**	**0.3592**	**0.0948**	**1.5100e-003**	**0.0964**		**230.4777**	**230.4777**	**3.4700e-003**		**230.5645**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.0828	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Unmitigated	13.0828	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308

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	1.3878					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.6897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-003	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Total	**13.0828**	**5.2000e-004**	**0.0573**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1228**	**0.1228**	**3.2000e-004**		**0.1308**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.3878					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.6897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-003	5.2000e-004	0.0573	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1228	0.1228	3.2000e-004		0.1308
Total	**13.0828**	**5.2000e-004**	**0.0573**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1228**	**0.1228**	**3.2000e-004**		**0.1308**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 3 Building Construction- Building 5 & 6

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	14.88	1000sqft	13.87	14,882.00	0
Industrial Park	546.00	1000sqft	12.53	546,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 3 Building Construction- Building 5 & 6 - Sacramento County, Annual

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan.

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Energy Use - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Water And Wastewater - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Solid Waste - This model run is being conducted for the construction of building 5 & 6 on the Project site. No operation information is included

Construction Off-road Equipment Mitigation - Rule 403

Phase 3 Building Construction- Building 5 & 6 - Sacramento County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	PhaseEndDate	10/9/2023	11/6/2030
tblConstructionPhase	PhaseEndDate	7/3/2023	11/6/2030
tblConstructionPhase	PhaseEndDate	8/21/2023	11/6/2030
tblConstructionPhase	PhaseStartDate	8/22/2023	3/1/2029
tblConstructionPhase	PhaseStartDate	10/26/2021	3/1/2029
tblConstructionPhase	PhaseStartDate	7/4/2023	3/1/2029
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LandUseSquareFeet	14,880.00	14,882.00
tblLandUse	LotAcreage	0.34	13.87
tblSolidWaste	SolidWasteGenerationRate	677.04	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	126,262,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	1.6095	3.1972	4.1607	9.7400e-003	0.2972	0.1108	0.4080	0.0804	0.1036	0.1840	0.0000	873.6707	873.6707	0.1449	0.0000	877.2937
2030	1.6747	2.5451	4.3514	0.0109	0.3026	0.0574	0.3600	0.0819	0.0573	0.1391	0.0000	964.4233	964.4233	0.0387	0.0000	965.3908
Maximum	**1.6747**	**3.1972**	**4.3514**	**0.0109**	**0.3026**	**0.1108**	**0.4080**	**0.0819**	**0.1036**	**0.1840**	**0.0000**	**964.4233**	**964.4233**	**0.1449**	**0.0000**	**965.3908**

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					
2029	1.6095	3.1972	4.1607	9.7400e-003	0.2972	0.1108	0.4080	0.0804	0.1036	0.1840	0.0000	873.6701	873.6701	0.1449	0.0000	877.2931
2030	1.6747	2.5451	4.3514	0.0109	0.3026	0.0574	0.3600	0.0819	0.0573	0.1391	0.0000	964.4226	964.4226	0.0387	0.0000	965.3901
Maximum	**1.6747**	**3.1972**	**4.3514**	**0.0109**	**0.3026**	**0.1108**	**0.4080**	**0.0819**	**0.1036**	**0.1840**	**0.0000**	**964.4226**	**964.4226**	**0.1449**	**0.0000**	**965.3901**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
31	12-15-2028	3-14-2029	0.2208	0.2208
32	3-15-2029	6-14-2029	1.4489	1.4489
33	6-15-2029	9-14-2029	1.4483	1.4483
34	9-15-2029	12-14-2029	1.4350	1.4350
35	12-15-2029	3-14-2030	1.2610	1.2610
36	3-15-2030	6-14-2030	1.2490	1.2490
37	6-15-2030	9-14-2030	1.2484	1.2484
38	9-15-2030	9-30-2030	0.2171	0.2171
		Highest	1.4489	1.4489

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	2.3873	7.0000e-005	7.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0139	0.0139	4.0000e-005	0.0000	0.0148
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.3873**	**7.0000e-005**	**7.1600e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0139**	**0.0139**	**4.0000e-005**	**0.0000**	**0.0148**

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	2.3873	7.0000e-005	7.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0139	0.0139	4.0000e-005	0.0000	0.0148
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.3873**	**7.0000e-005**	**7.1600e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0139**	**0.0139**	**4.0000e-005**	**0.0000**	**0.0148**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2029	11/6/2030	5	440	
2	Paving	Paving	3/1/2029	11/6/2030	5	440	
3	Architectural Coating	Architectural Coating	3/1/2029	11/6/2030	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 13.87

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 819,000; Non-Residential Outdoor: 273,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	236.00	92.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	47.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2029

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	0.1491	1.3592	1.7532	2.9400e-003		0.0575	0.0575		0.0541	0.0541	0.0000	252.7922	252.7922	0.0594	0.0000	254.2778
Total	**0.1491**	**1.3592**	**1.7532**	**2.9400e-003**		**0.0575**	**0.0575**		**0.0541**	**0.0541**	**0.0000**	**252.7922**	**252.7922**	**0.0594**	**0.0000**	**254.2778**

3.2 Building Construction - 2029

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	0.0185	0.7435	0.1688	2.3000e-003	0.0586	8.7000e-004	0.0595	0.0169	8.3000e-004	0.0178	0.0000	222.0700	222.0700	0.0110	0.0000	222.3439
Worker	0.0544	0.0272	0.3583	1.3400e-003	0.1889	9.7000e-004	0.1899	0.0503	8.9000e-004	0.0511	0.0000	120.9842	120.9842	1.9400e-003	0.0000	121.0326
Total	**0.0729**	**0.7706**	**0.5271**	**3.6400e-003**	**0.2475**	**1.8400e-003**	**0.2494**	**0.0672**	**1.7200e-003**	**0.0689**	**0.0000**	**343.0541**	**343.0541**	**0.0129**	**0.0000**	**343.3765**

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	0.1491	1.3592	1.7532	2.9400e-003		0.0575	0.0575		0.0541	0.0541	0.0000	252.7919	252.7919	0.0594	0.0000	254.2775
Total	**0.1491**	**1.3592**	**1.7532**	**2.9400e-003**		**0.0575**	**0.0575**		**0.0541**	**0.0541**	**0.0000**	**252.7919**	**252.7919**	**0.0594**	**0.0000**	**254.2775**

3.2 Building Construction - 2029

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	0.0185	0.7435	0.1688	2.3000e-003	0.0586	8.7000e-004	0.0595	0.0169	8.3000e-004	0.0178	0.0000	222.0700	222.0700	0.0110	0.0000	222.3439
Worker	0.0544	0.0272	0.3583	1.3400e-003	0.1889	9.7000e-004	0.1899	0.0503	8.9000e-004	0.0511	0.0000	120.9842	120.9842	1.9400e-003	0.0000	121.0326
Total	**0.0729**	**0.7706**	**0.5271**	**3.6400e-003**	**0.2475**	**1.8400e-003**	**0.2494**	**0.0672**	**1.7200e-003**	**0.0689**	**0.0000**	**343.0541**	**343.0541**	**0.0129**	**0.0000**	**343.3765**

3.2 Building Construction - 2030

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	0.1453	0.8807	1.7934	3.4400e-003		0.0164	0.0164		0.0164	0.0164	0.0000	291.7757	291.7757	0.0117	0.0000	292.0684
Total	**0.1453**	**0.8807**	**1.7934**	**3.4400e-003**		**0.0164**	**0.0164**		**0.0164**	**0.0164**	**0.0000**	**291.7757**	**291.7757**	**0.0117**	**0.0000**	**292.0684**

3.2 Building Construction - 2030

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	0.0183	0.7470	0.1673	2.3400e-003	0.0597	8.4000e-004	0.0605	0.0172	8.0000e-004	0.0180	0.0000	225.3343	225.3343	0.0110	0.0000	225.6100
Worker	0.0515	0.0254	0.3420	1.3300e-003	0.1924	9.2000e-004	0.1933	0.0512	8.4000e-004	0.0520	0.0000	119.9542	119.9542	1.8000e-003	0.0000	119.9993
Total	**0.0698**	**0.7723**	**0.5093**	**3.6700e-003**	**0.2521**	**1.7600e-003**	**0.2538**	**0.0684**	**1.6400e-003**	**0.0701**	**0.0000**	**345.2884**	**345.2884**	**0.0128**	**0.0000**	**345.6093**

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	0.1453	0.8807	1.7934	3.4400e-003		0.0164	0.0164		0.0164	0.0164	0.0000	291.7754	291.7754	0.0117	0.0000	292.0680
Total	**0.1453**	**0.8807**	**1.7934**	**3.4400e-003**		**0.0164**	**0.0164**		**0.0164**	**0.0164**	**0.0000**	**291.7754**	**291.7754**	**0.0117**	**0.0000**	**292.0680**

3.2 Building Construction - 2030

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	0.0183	0.7470	0.1673	2.3400e-003	0.0597	8.4000e-004	0.0605	0.0172	8.0000e-004	0.0180	0.0000	225.3343	225.3343	0.0110	0.0000	225.6100
Worker	0.0515	0.0254	0.3420	1.3300e-003	0.1924	9.2000e-004	0.1933	0.0512	8.4000e-004	0.0520	0.0000	119.9542	119.9542	1.8000e-003	0.0000	119.9993
Total	**0.0698**	**0.7723**	**0.5093**	**3.6700e-003**	**0.2521**	**1.7600e-003**	**0.2538**	**0.0684**	**1.6400e-003**	**0.0701**	**0.0000**	**345.2884**	**345.2884**	**0.0128**	**0.0000**	**345.6093**

3.3 Paving - 2029

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	0.0998	0.9354	1.5890	2.4900e-003		0.0456	0.0456		0.0420	0.0420	0.0000	218.2099	218.2099	0.0706	0.0000	219.9742
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**0.9354**	**1.5890**	**2.4900e-003**		**0.0456**	**0.0456**		**0.0420**	**0.0420**	**0.0000**	**218.2099**	**218.2099**	**0.0706**	**0.0000**	**219.9742**

3.3 Paving - 2029

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	3.4600e-003	1.7300e-003	0.0228	8.0000e-005	0.0120	6.0000e-005	0.0121	3.1900e-003	6.0000e-005	3.2500e-003	0.0000	7.6897	7.6897	1.2000e-004	0.0000	7.6928
Total	**3.4600e-003**	**1.7300e-003**	**0.0228**	**8.0000e-005**	**0.0120**	**6.0000e-005**	**0.0121**	**3.1900e-003**	**6.0000e-005**	**3.2500e-003**	**0.0000**	**7.6897**	**7.6897**	**1.2000e-004**	**0.0000**	**7.6928**

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	0.0998	0.9354	1.5890	2.4900e-003		0.0456	0.0456		0.0420	0.0420	0.0000	218.2096	218.2096	0.0706	0.0000	219.9740
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**0.9354**	**1.5890**	**2.4900e-003**		**0.0456**	**0.0456**		**0.0420**	**0.0420**	**0.0000**	**218.2096**	**218.2096**	**0.0706**	**0.0000**	**219.9740**

3.3 Paving - 2029

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	3.4600e-003	1.7300e-003	0.0228	8.0000e-005	0.0120	6.0000e-005	0.0121	3.1900e-003	6.0000e-005	3.2500e-003	0.0000	7.6897	7.6897	1.2000e-004	0.0000	7.6928
Total	**3.4600e-003**	**1.7300e-003**	**0.0228**	**8.0000e-005**	**0.0120**	**6.0000e-005**	**0.0121**	**3.1900e-003**	**6.0000e-005**	**3.2500e-003**	**0.0000**	**7.6897**	**7.6897**	**1.2000e-004**	**0.0000**	**7.6928**

3.3 Paving - 2030

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	0.1537	0.7903	1.7593	3.1100e-003		0.0367	0.0367		0.0367	0.0367	0.0000	267.5046	267.5046	0.0125	0.0000	267.8181
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1537**	**0.7903**	**1.7593**	**3.1100e-003**		**0.0367**	**0.0367**		**0.0367**	**0.0367**	**0.0000**	**267.5046**	**267.5046**	**0.0125**	**0.0000**	**267.8181**

3.3 Paving - 2030

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	3.2700e-003	1.6100e-003	0.0217	8.0000e-005	0.0122	6.0000e-005	0.0123	3.2500e-003	5.0000e-005	3.3100e-003	0.0000	7.6242	7.6242	1.1000e-004	0.0000	7.6271
Total	**3.2700e-003**	**1.6100e-003**	**0.0217**	**8.0000e-005**	**0.0122**	**6.0000e-005**	**0.0123**	**3.2500e-003**	**5.0000e-005**	**3.3100e-003**	**0.0000**	**7.6242**	**7.6242**	**1.1000e-004**	**0.0000**	**7.6271**

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	0.1537	0.7903	1.7593	3.1100e-003		0.0367	0.0367		0.0367	0.0367	0.0000	267.5043	267.5043	0.0125	0.0000	267.8178
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1537**	**0.7903**	**1.7593**	**3.1100e-003**		**0.0367**	**0.0367**		**0.0367**	**0.0367**	**0.0000**	**267.5043**	**267.5043**	**0.0125**	**0.0000**	**267.8178**

3.3 Paving - 2030

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	3.2700e-003	1.6100e-003	0.0217	8.0000e-005	0.0122	6.0000e-005	0.0123	3.2500e-003	5.0000e-005	3.3100e-003	0.0000	7.6242	7.6242	1.1000e-004	0.0000	7.6271
Total	**3.2700e-003**	**1.6100e-003**	**0.0217**	**8.0000e-005**	**0.0122**	**6.0000e-005**	**0.0123**	**3.2500e-003**	**5.0000e-005**	**3.3100e-003**	**0.0000**	**7.6242**	**7.6242**	**1.1000e-004**	**0.0000**	**7.6271**

3.4 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2549					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1249	0.1972	3.2000e-004		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	27.8305	27.8305	1.5200e-003	0.0000	27.8684
Total	**1.2735**	**0.1249**	**0.1972**	**3.2000e-004**		**5.6100e-003**	**5.6100e-003**		**5.6100e-003**	**5.6100e-003**	**0.0000**	**27.8305**	**27.8305**	**1.5200e-003**	**0.0000**	**27.8684**

3.4 Architectural Coating - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0108	5.4100e-003	0.0714	2.7000e-004	0.0376	1.9000e-004	0.0378	0.0100	1.8000e-004	0.0102	0.0000	24.0943	24.0943	3.9000e-004	0.0000	24.1040
Total	**0.0108**	**5.4100e-003**	**0.0714**	**2.7000e-004**	**0.0376**	**1.9000e-004**	**0.0378**	**0.0100**	**1.8000e-004**	**0.0102**	**0.0000**	**24.0943**	**24.0943**	**3.9000e-004**	**0.0000**	**24.1040**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2549					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1249	0.1972	3.2000e-004		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	27.8304	27.8304	1.5200e-003	0.0000	27.8684
Total	**1.2735**	**0.1249**	**0.1972**	**3.2000e-004**		**5.6100e-003**	**5.6100e-003**		**5.6100e-003**	**5.6100e-003**	**0.0000**	**27.8304**	**27.8304**	**1.5200e-003**	**0.0000**	**27.8684**

3.4 Architectural Coating - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0108	5.4100e-003	0.0714	2.7000e-004	0.0376	1.9000e-004	0.0378	0.0100	1.8000e-004	0.0102	0.0000	24.0943	24.0943	3.9000e-004	0.0000	24.1040
Total	**0.0108**	**5.4100e-003**	**0.0714**	**2.7000e-004**	**0.0376**	**1.9000e-004**	**0.0378**	**0.0100**	**1.8000e-004**	**0.0102**	**0.0000**	**24.0943**	**24.0943**	**3.9000e-004**	**0.0000**	**24.1040**

3.4 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2779					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0145	0.0951	0.1996	3.3000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	28.3411	28.3411	1.1500e-003	0.0000	28.3698
Total	**1.2924**	**0.0951**	**0.1996**	**3.3000e-004**		**2.2500e-003**	**2.2500e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**28.3411**	**28.3411**	**1.1500e-003**	**0.0000**	**28.3698**

3.4 Architectural Coating - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0103	5.0500e-003	0.0681	2.6000e-004	0.0383	1.8000e-004	0.0385	0.0102	1.7000e-004	0.0104	0.0000	23.8892	23.8892	3.6000e-004	0.0000	23.8982
Total	**0.0103**	**5.0500e-003**	**0.0681**	**2.6000e-004**	**0.0383**	**1.8000e-004**	**0.0385**	**0.0102**	**1.7000e-004**	**0.0104**	**0.0000**	**23.8892**	**23.8892**	**3.6000e-004**	**0.0000**	**23.8982**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2779					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0145	0.0951	0.1996	3.3000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	28.3411	28.3411	1.1500e-003	0.0000	28.3698
Total	**1.2924**	**0.0951**	**0.1996**	**3.3000e-004**		**2.2500e-003**	**2.2500e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**28.3411**	**28.3411**	**1.1500e-003**	**0.0000**	**28.3698**

3.4 Architectural Coating - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0103	5.0500e-003	0.0681	2.6000e-004	0.0383	1.8000e-004	0.0385	0.0102	1.7000e-004	0.0104	0.0000	23.8892	23.8892	3.6000e-004	0.0000	23.8982
Total	**0.0103**	**5.0500e-003**	**0.0681**	**2.6000e-004**	**0.0383**	**1.8000e-004**	**0.0385**	**0.0102**	**1.7000e-004**	**0.0104**	**0.0000**	**23.8892**	**23.8892**	**3.6000e-004**	**0.0000**	**23.8982**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	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	2.3873	7.0000e-005	7.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0139	0.0139	4.0000e-005	0.0000	0.0148
Unmitigated	2.3873	7.0000e-005	7.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0139	0.0139	4.0000e-005	0.0000	0.0148

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	0.2533					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1334					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.6000e-004	7.0000e-005	7.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0139	0.0139	4.0000e-005	0.0000	0.0148
Total	**2.3873**	**7.0000e-005**	**7.1600e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0139**	**0.0139**	**4.0000e-005**	**0.0000**	**0.0148**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2533					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1334					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.6000e-004	7.0000e-005	7.1600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0139	0.0139	4.0000e-005	0.0000	0.0148
Total	**2.3873**	**7.0000e-005**	**7.1600e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0139**	**0.0139**	**4.0000e-005**	**0.0000**	**0.0148**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 4 Building Construction- Building 7 & 8

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	130.00	1000sqft	2.98	130,000.00	0
Other Non-Asphalt Surfaces	14.88	1000sqft	23.42	14,882.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 4 Building Construction- Building 7 & 8 - Sacramento County, Summer

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Energy Use - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Water And Wastewater - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Solid Waste - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Construction Off-road Equipment Mitigation - Rule 403

Phase 4 Building Construction- Building 7 & 8 - Sacramento County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	PhaseEndDate	10/9/2023	11/5/2032
tblConstructionPhase	PhaseEndDate	7/3/2023	11/5/2032
tblConstructionPhase	PhaseEndDate	8/21/2023	11/5/2032
tblConstructionPhase	PhaseStartDate	8/22/2023	3/1/2031
tblConstructionPhase	PhaseStartDate	10/26/2021	3/1/2031
tblConstructionPhase	PhaseStartDate	7/4/2023	3/1/2031
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LotAcreage	0.34	23.42
tblSolidWaste	SolidWasteGenerationRate	161.20	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	30,062,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2031	5.7962	17.6963	35.4612	0.0723	0.8137	0.5038	1.3175	0.2191	0.5035	0.7226	0.0000	6,903.4447	6,903.4447	0.2864	0.0000	6,910.6050
2032	5.7810	17.6710	35.3799	0.0722	0.8137	0.5035	1.3172	0.2191	0.5032	0.7223	0.0000	6,891.8488	6,891.8488	0.2856	0.0000	6,898.9888
Maximum	**5.7962**	**17.6963**	**35.4612**	**0.0723**	**0.8137**	**0.5038**	**1.3175**	**0.2191**	**0.5035**	**0.7226**	**0.0000**	**6,903.4447**	**6,903.4447**	**0.2864**	**0.0000**	**6,910.6050**

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					
2031	5.7962	17.6963	35.4612	0.0723	0.8137	0.5038	1.3175	0.2191	0.5035	0.7226	0.0000	6,903.4447	6,903.4447	0.2864	0.0000	6,910.6050
2032	5.7810	17.6710	35.3799	0.0722	0.8137	0.5035	1.3172	0.2191	0.5032	0.7223	0.0000	6,891.8488	6,891.8488	0.2856	0.0000	6,898.9888
Maximum	**5.7962**	**17.6963**	**35.4612**	**0.0723**	**0.8137**	**0.5038**	**1.3175**	**0.2191**	**0.5035**	**0.7226**	**0.0000**	**6,903.4447**	**6,903.4447**	**0.2864**	**0.0000**	**6,910.6050**

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

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	3.1199	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.1199**	**1.3000e-004**	**0.0148**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**	**0.0000**	**0.0338**

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	3.1199	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.1199**	**1.3000e-004**	**0.0148**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**	**0.0000**	**0.0338**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2031	11/5/2032	5	440	
2	Paving	Paving	3/1/2031	11/5/2032	5	440	
3	Architectural Coating	Architectural Coating	3/1/2031	11/5/2032	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 23.42

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 195,000; Non-Residential Outdoor: 65,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase 4 Building Construction- Building 7 & 8 - Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	61.00	24.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2031

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.0412	1.7142	0.3618	5.5300e-003	0.1443	1.8500e-003	0.1462	0.0415	1.7700e-003	0.0433		588.1485	588.1485	0.0274		588.8326
Worker	0.1264	0.0492	0.8978	3.3300e-003	0.4640	1.9900e-003	0.4660	0.1231	1.8300e-003	0.1249		332.5780	332.5780	4.7700e-003		332.6972
Total	**0.1676**	**1.7634**	**1.2596**	**8.8600e-003**	**0.6083**	**3.8400e-003**	**0.6122**	**0.1646**	**3.6000e-003**	**0.1682**		**920.7265**	**920.7265**	**0.0321**		**921.5297**

3.2 Building Construction - 2031

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.0412	1.7142	0.3618	5.5300e-003	0.1443	1.8500e-003	0.1462	0.0415	1.7700e-003	0.0433		588.1485	588.1485	0.0274		588.8326
Worker	0.1264	0.0492	0.8978	3.3300e-003	0.4640	1.9900e-003	0.4660	0.1231	1.8300e-003	0.1249		332.5780	332.5780	4.7700e-003		332.6972
Total	**0.1676**	**1.7634**	**1.2596**	**8.8600e-003**	**0.6083**	**3.8400e-003**	**0.6122**	**0.1646**	**3.6000e-003**	**0.1682**		**920.7265**	**920.7265**	**0.0321**		**921.5297**

3.2 Building Construction - 2032

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.0404	1.6946	0.3552	5.5100e-003	0.1443	1.7800e-003	0.1461	0.0415	1.7000e-003	0.0432		586.6652	586.6652	0.0271		587.3432
Worker	0.1164	0.0453	0.8460	3.2600e-003	0.4640	1.8500e-003	0.4659	0.1231	1.7000e-003	0.1248		325.5681	325.5681	4.3800e-003		325.6775
Total	**0.1568**	**1.7399**	**1.2012**	**8.7700e-003**	**0.6083**	**3.6300e-003**	**0.6120**	**0.1646**	**3.4000e-003**	**0.1680**		**912.2333**	**912.2333**	**0.0315**		**913.0207**

3.2 Building Construction - 2032

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.0404	1.6946	0.3552	5.5100e-003	0.1443	1.7800e-003	0.1461	0.0415	1.7000e-003	0.0432		586.6652	586.6652	0.0271		587.3432
Worker	0.1164	0.0453	0.8460	3.2600e-003	0.4640	1.8500e-003	0.4659	0.1231	1.7000e-003	0.1248		325.5681	325.5681	4.3800e-003		325.6775
Total	**0.1568**	**1.7399**	**1.2012**	**8.7700e-003**	**0.6083**	**3.6300e-003**	**0.6120**	**0.1646**	**3.4000e-003**	**0.1680**		**912.2333**	**912.2333**	**0.0315**		**913.0207**

3.3 Paving - 2031

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306		2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**		**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0311	0.0121	0.2208	8.2000e-004	0.1141	4.9000e-004	0.1146	0.0303	4.5000e-004	0.0307		81.7815	81.7815	1.1700e-003		81.8108
Total	**0.0311**	**0.0121**	**0.2208**	**8.2000e-004**	**0.1141**	**4.9000e-004**	**0.1146**	**0.0303**	**4.5000e-004**	**0.0307**		**81.7815**	**81.7815**	**1.1700e-003**		**81.8108**

3.3 Paving - 2031

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306	0.0000	2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0311	0.0121	0.2208	8.2000e-004	0.1141	4.9000e-004	0.1146	0.0303	4.5000e-004	0.0307		81.7815	81.7815	1.1700e-003		81.8108
Total	**0.0311**	**0.0121**	**0.2208**	**8.2000e-004**	**0.1141**	**4.9000e-004**	**0.1146**	**0.0303**	**4.5000e-004**	**0.0307**		**81.7815**	**81.7815**	**1.1700e-003**		**81.8108**

3.3 Paving - 2032

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306		2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**		**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0286	0.0111	0.2080	8.0000e-004	0.1141	4.5000e-004	0.1146	0.0303	4.2000e-004	0.0307		80.0577	80.0577	1.0800e-003		80.0846
Total	**0.0286**	**0.0111**	**0.2080**	**8.0000e-004**	**0.1141**	**4.5000e-004**	**0.1146**	**0.0303**	**4.2000e-004**	**0.0307**		**80.0577**	**80.0577**	**1.0800e-003**		**80.0846**

3.3 Paving - 2032

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306	0.0000	2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0286	0.0111	0.2080	8.0000e-004	0.1141	4.5000e-004	0.1146	0.0303	4.2000e-004	0.0307		80.0577	80.0577	1.0800e-003		80.0846
Total	**0.0286**	**0.0111**	**0.2080**	**8.0000e-004**	**0.1141**	**4.5000e-004**	**0.1146**	**0.0303**	**4.2000e-004**	**0.0307**		**80.0577**	**80.0577**	**1.0800e-003**		**80.0846**

3.4 Architectural Coating - 2031

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	2.7483					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**2.8790**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0249	9.6800e-003	0.1766	6.6000e-004	0.0913	3.9000e-004	0.0917	0.0242	3.6000e-004	0.0246		65.4252	65.4252	9.4000e-004		65.4486
Total	**0.0249**	**9.6800e-003**	**0.1766**	**6.6000e-004**	**0.0913**	**3.9000e-004**	**0.0917**	**0.0242**	**3.6000e-004**	**0.0246**		**65.4252**	**65.4252**	**9.4000e-004**		**65.4486**

3.4 Architectural Coating - 2031

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	2.7483					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**2.8790**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0249	9.6800e-003	0.1766	6.6000e-004	0.0913	3.9000e-004	0.0917	0.0242	3.6000e-004	0.0246		65.4252	65.4252	9.4000e-004		65.4486
Total	**0.0249**	**9.6800e-003**	**0.1766**	**6.6000e-004**	**0.0913**	**3.9000e-004**	**0.0917**	**0.0242**	**3.6000e-004**	**0.0246**		**65.4252**	**65.4252**	**9.4000e-004**		**65.4486**

3.4 Architectural Coating - 2032

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	2.7483					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**2.8790**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0229	8.9100e-003	0.1664	6.4000e-004	0.0913	3.6000e-004	0.0917	0.0242	3.3000e-004	0.0246		64.0462	64.0462	8.6000e-004		64.0677
Total	**0.0229**	**8.9100e-003**	**0.1664**	**6.4000e-004**	**0.0913**	**3.6000e-004**	**0.0917**	**0.0242**	**3.3000e-004**	**0.0246**		**64.0462**	**64.0462**	**8.6000e-004**		**64.0677**

3.4 Architectural Coating - 2032

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	2.7483					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**2.8790**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0229	8.9100e-003	0.1664	6.4000e-004	0.0913	3.6000e-004	0.0917	0.0242	3.3000e-004	0.0246		64.0462	64.0462	8.6000e-004		64.0677
Total	**0.0229**	**8.9100e-003**	**0.1664**	**6.4000e-004**	**0.0913**	**3.6000e-004**	**0.0917**	**0.0242**	**3.3000e-004**	**0.0246**		**64.0462**	**64.0462**	**8.6000e-004**		**64.0677**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.1199	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Unmitigated	3.1199	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338

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	0.3313					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7873					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3700e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Total	**3.1199**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**		**0.0338**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3313					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7873					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3700e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Total	**3.1199**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**		**0.0338**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 4 Building Construction- Building 7 & 8

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	130.00	1000sqft	2.98	130,000.00	0
Other Non-Asphalt Surfaces	14.88	1000sqft	23.42	14,882.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 4 Building Construction- Building 7 & 8 - Sacramento County, Winter

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Energy Use - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Water And Wastewater - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Solid Waste - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Construction Off-road Equipment Mitigation - Rule 403

Phase 4 Building Construction- Building 7 & 8 - Sacramento County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	PhaseEndDate	10/9/2023	11/5/2032
tblConstructionPhase	PhaseEndDate	7/3/2023	11/5/2032
tblConstructionPhase	PhaseEndDate	8/21/2023	11/5/2032
tblConstructionPhase	PhaseStartDate	8/22/2023	3/1/2031
tblConstructionPhase	PhaseStartDate	10/26/2021	3/1/2031
tblConstructionPhase	PhaseStartDate	7/4/2023	3/1/2031
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LotAcreage	0.34	23.42
tblSolidWaste	SolidWasteGenerationRate	161.20	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	30,062,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2031	5.7878	17.7269	35.2867	0.0716	0.8137	0.5039	1.3176	0.2191	0.5036	0.7226	0.0000	6,830.2206	6,830.2206	0.2876	0.0000	6,837.4111
2032	5.7736	17.7000	35.2130	0.0715	0.8137	0.5036	1.3173	0.2191	0.5033	0.7224	0.0000	6,819.8525	6,819.8525	0.2868	0.0000	6,827.0238
Maximum	**5.7878**	**17.7269**	**35.2867**	**0.0716**	**0.8137**	**0.5039**	**1.3176**	**0.2191**	**0.5036**	**0.7226**	**0.0000**	**6,830.2206**	**6,830.2206**	**0.2876**	**0.0000**	**6,837.4111**

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					
2031	5.7878	17.7269	35.2867	0.0716	0.8137	0.5039	1.3176	0.2191	0.5036	0.7226	0.0000	6,830.2205	6,830.2205	0.2876	0.0000	6,837.4110
2032	5.7736	17.7000	35.2130	0.0715	0.8137	0.5036	1.3173	0.2191	0.5033	0.7224	0.0000	6,819.8525	6,819.8525	0.2868	0.0000	6,827.0238
Maximum	**5.7878**	**17.7269**	**35.2867**	**0.0716**	**0.8137**	**0.5039**	**1.3176**	**0.2191**	**0.5036**	**0.7226**	**0.0000**	**6,830.2205**	**6,830.2205**	**0.2876**	**0.0000**	**6,837.4110**

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

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	3.1199	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.1199**	**1.3000e-004**	**0.0148**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**	**0.0000**	**0.0338**

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	3.1199	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.1199**	**1.3000e-004**	**0.0148**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**	**0.0000**	**0.0338**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2031	11/5/2032	5	440	
2	Paving	Paving	3/1/2031	11/5/2032	5	440	
3	Architectural Coating	Architectural Coating	3/1/2031	11/5/2032	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 23.42

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 195,000; Non-Residential Outdoor: 65,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase 4 Building Construction- Building 7 & 8 - Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	61.00	24.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2031

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.0436	1.7286	0.4145	5.3900e-003	0.1443	1.9300e-003	0.1462	0.0415	1.8500e-003	0.0434		573.4488	573.4488	0.0295		574.1871
Worker	0.1189	0.0605	0.7403	2.9300e-003	0.4640	1.9900e-003	0.4660	0.1231	1.8300e-003	0.1249		292.0099	292.0099	4.1000e-003		292.1125
Total	**0.1625**	**1.7890**	**1.1548**	**8.3200e-003**	**0.6083**	**3.9200e-003**	**0.6123**	**0.1646**	**3.6800e-003**	**0.1683**		**865.4587**	**865.4587**	**0.0336**		**866.2995**

3.2 Building Construction - 2031

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.0436	1.7286	0.4145	5.3900e-003	0.1443	1.9300e-003	0.1462	0.0415	1.8500e-003	0.0434		573.4488	573.4488	0.0295		574.1871
Worker	0.1189	0.0605	0.7403	2.9300e-003	0.4640	1.9900e-003	0.4660	0.1231	1.8300e-003	0.1249		292.0099	292.0099	4.1000e-003		292.1125
Total	**0.1625**	**1.7890**	**1.1548**	**8.3200e-003**	**0.6083**	**3.9200e-003**	**0.6123**	**0.1646**	**3.6800e-003**	**0.1683**		**865.4587**	**865.4587**	**0.0336**		**866.2995**

3.2 Building Construction - 2032

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.0427	1.7087	0.4066	5.3800e-003	0.1443	1.8500e-003	0.1462	0.0415	1.7700e-003	0.0433		572.0259	572.0259	0.0293		572.7574
Worker	0.1097	0.0556	0.6947	2.8600e-003	0.4640	1.8500e-003	0.4659	0.1231	1.7000e-003	0.1248		285.8093	285.8093	3.7500e-003		285.9032
Total	**0.1524**	**1.7643**	**1.1013**	**8.2400e-003**	**0.6083**	**3.7000e-003**	**0.6120**	**0.1646**	**3.4700e-003**	**0.1681**		**857.8352**	**857.8352**	**0.0330**		**858.6606**

3.2 Building Construction - 2032

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	0.0427	1.7087	0.4066	5.3800e-003	0.1443	1.8500e-003	0.1462	0.0415	1.7700e-003	0.0433		572.0259	572.0259	0.0293		572.7574
Worker	0.1097	0.0556	0.6947	2.8600e-003	0.4640	1.8500e-003	0.4659	0.1231	1.7000e-003	0.1248		285.8093	285.8093	3.7500e-003		285.9032
Total	**0.1524**	**1.7643**	**1.1013**	**8.2400e-003**	**0.6083**	**3.7000e-003**	**0.6120**	**0.1646**	**3.4700e-003**	**0.1681**		**857.8352**	**857.8352**	**0.0330**		**858.6606**

3.3 Paving - 2031

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306		2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**		**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0292	0.0149	0.1820	7.2000e-004	0.1141	4.9000e-004	0.1146	0.0303	4.5000e-004	0.0307		71.8057	71.8057	1.0100e-003		71.8309
Total	**0.0292**	**0.0149**	**0.1820**	**7.2000e-004**	**0.1141**	**4.9000e-004**	**0.1146**	**0.0303**	**4.5000e-004**	**0.0307**		**71.8057**	**71.8057**	**1.0100e-003**		**71.8309**

3.3 Paving - 2031

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306	0.0000	2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0292	0.0149	0.1820	7.2000e-004	0.1141	4.9000e-004	0.1146	0.0303	4.5000e-004	0.0307		71.8057	71.8057	1.0100e-003		71.8309
Total	**0.0292**	**0.0149**	**0.1820**	**7.2000e-004**	**0.1141**	**4.9000e-004**	**0.1146**	**0.0303**	**4.5000e-004**	**0.0307**		**71.8057**	**71.8057**	**1.0100e-003**		**71.8309**

3.3 Paving - 2032

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306		2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**		**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0270	0.0137	0.1708	7.0000e-004	0.1141	4.5000e-004	0.1146	0.0303	4.2000e-004	0.0307		70.2810	70.2810	9.2000e-004		70.3041
Total	**0.0270**	**0.0137**	**0.1708**	**7.0000e-004**	**0.1141**	**4.5000e-004**	**0.1146**	**0.0303**	**4.2000e-004**	**0.0307**		**70.2810**	**70.2810**	**9.2000e-004**		**70.3041**

3.3 Paving - 2032

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	1.3845	7.1202	15.8495	0.0281		0.3306	0.3306		0.3306	0.3306	0.0000	2,656.5168	2,656.5168	0.1245		2,659.6302
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3845**	**7.1202**	**15.8495**	**0.0281**		**0.3306**	**0.3306**		**0.3306**	**0.3306**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1245**		**2,659.6302**

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	0.0270	0.0137	0.1708	7.0000e-004	0.1141	4.5000e-004	0.1146	0.0303	4.2000e-004	0.0307		70.2810	70.2810	9.2000e-004		70.3041
Total	**0.0270**	**0.0137**	**0.1708**	**7.0000e-004**	**0.1141**	**4.5000e-004**	**0.1146**	**0.0303**	**4.2000e-004**	**0.0307**		**70.2810**	**70.2810**	**9.2000e-004**		**70.3041**

3.4 Architectural Coating - 2031

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	2.7483					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**2.8790**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0234	0.0119	0.1456	5.8000e-004	0.0913	3.9000e-004	0.0917	0.0242	3.6000e-004	0.0246		57.4446	57.4446	8.1000e-004		57.4648
Total	**0.0234**	**0.0119**	**0.1456**	**5.8000e-004**	**0.0913**	**3.9000e-004**	**0.0917**	**0.0242**	**3.6000e-004**	**0.0246**		**57.4446**	**57.4446**	**8.1000e-004**		**57.4648**

3.4 Architectural Coating - 2031

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	2.7483					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**2.8790**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0234	0.0119	0.1456	5.8000e-004	0.0913	3.9000e-004	0.0917	0.0242	3.6000e-004	0.0246		57.4446	57.4446	8.1000e-004		57.4648
Total	**0.0234**	**0.0119**	**0.1456**	**5.8000e-004**	**0.0913**	**3.9000e-004**	**0.0917**	**0.0242**	**3.6000e-004**	**0.0246**		**57.4446**	**57.4446**	**8.1000e-004**		**57.4648**

3.4 Architectural Coating - 2032

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	2.7483					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**2.8790**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0216	0.0109	0.1367	5.6000e-004	0.0913	3.6000e-004	0.0917	0.0242	3.3000e-004	0.0246		56.2248	56.2248	7.4000e-004		56.2433
Total	**0.0216**	**0.0109**	**0.1367**	**5.6000e-004**	**0.0913**	**3.6000e-004**	**0.0917**	**0.0242**	**3.3000e-004**	**0.0246**		**56.2248**	**56.2248**	**7.4000e-004**		**56.2433**

3.4 Architectural Coating - 2032

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	2.7483					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**2.8790**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

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	0.0216	0.0109	0.1367	5.6000e-004	0.0913	3.6000e-004	0.0917	0.0242	3.3000e-004	0.0246		56.2248	56.2248	7.4000e-004		56.2433
Total	**0.0216**	**0.0109**	**0.1367**	**5.6000e-004**	**0.0913**	**3.6000e-004**	**0.0917**	**0.0242**	**3.3000e-004**	**0.0246**		**56.2248**	**56.2248**	**7.4000e-004**		**56.2433**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.1199	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Unmitigated	3.1199	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338

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	0.3313					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7873					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3700e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Total	**3.1199**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**		**0.0338**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3313					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7873					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3700e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Total	**3.1199**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**		**0.0338**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 4 Building Construction- Building 7 & 8

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	130.00	1000sqft	2.98	130,000.00	0
Other Non-Asphalt Surfaces	14.88	1000sqft	23.42	14,882.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 4 Building Construction- Building 7 & 8 - Sacramento County, Annual

Project Characteristics -

Land Use - Lot acreage updated to reflect ¼ of the Project site that is being paved. Parking/asphalt surface estimated from site plan

Construction Phase - Construction timing updated to matching information in the PD (2 buildings constructed per year). Building construction, paving and painting are assumed to occur simultaneously.

Vehicle Trips - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Energy Use - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Water And Wastewater - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Solid Waste - This model run is being conducted for the construction of building 7 & 8 on the Project site. No operation information is included

Construction Off-road Equipment Mitigation - Rule 403

Phase 4 Building Construction- Building 7 & 8 - Sacramento County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	NumDays	35.00	440.00
tblConstructionPhase	PhaseEndDate	10/9/2023	11/5/2032
tblConstructionPhase	PhaseEndDate	7/3/2023	11/5/2032
tblConstructionPhase	PhaseEndDate	8/21/2023	11/5/2032
tblConstructionPhase	PhaseStartDate	8/22/2023	3/1/2031
tblConstructionPhase	PhaseStartDate	10/26/2021	3/1/2031
tblConstructionPhase	PhaseStartDate	7/4/2023	3/1/2031
tblEnergyUse	LightingElect	3.71	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24E	4.98	0.00
tblEnergyUse	T24NG	12.42	0.00
tblLandUse	LotAcreage	0.34	23.42
tblSolidWaste	SolidWasteGenerationRate	161.20	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblWater	IndoorWaterUseRate	30,062,500.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2031	0.6293	1.9318	3.8438	7.8300e-003	0.0857	0.0549	0.1407	0.0232	0.0549	0.0780	0.0000	677.4597	677.4597	0.0283	0.0000	678.1681
2032	0.6394	1.9643	3.9064	7.9600e-003	0.0873	0.0559	0.1432	0.0236	0.0559	0.0794	0.0000	688.8178	688.8178	0.0288	0.0000	689.5372
Maximum	**0.6394**	**1.9643**	**3.9064**	**7.9600e-003**	**0.0873**	**0.0559**	**0.1432**	**0.0236**	**0.0559**	**0.0794**	**0.0000**	**688.8178**	**688.8178**	**0.0288**	**0.0000**	**689.5372**

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					
2031	0.6293	1.9318	3.8438	7.8300e-003	0.0857	0.0549	0.1407	0.0232	0.0549	0.0780	0.0000	677.4590	677.4590	0.0283	0.0000	678.1674
2032	0.6394	1.9643	3.9063	7.9600e-003	0.0873	0.0559	0.1432	0.0236	0.0559	0.0794	0.0000	688.8171	688.8171	0.0288	0.0000	689.5365
Maximum	**0.6394**	**1.9643**	**3.9063**	**7.9600e-003**	**0.0873**	**0.0559**	**0.1432**	**0.0236**	**0.0559**	**0.0794**	**0.0000**	**688.8171**	**688.8171**	**0.0288**	**0.0000**	**689.5365**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
39	**12-15-2030**	**3-14-2031**	0.1176	0.1176
40	**3-15-2031**	**6-14-2031**	0.7720	0.7720
41	**6-15-2031**	**9-14-2031**	0.7719	0.7719
42	**9-15-2031**	**12-14-2031**	0.7641	0.7641
43	**12-15-2031**	**3-14-2032**	0.7631	0.7631
44	**3-15-2032**	**6-14-2032**	0.7707	0.7707
45	**6-15-2032**	**9-14-2032**	0.7706	0.7706
46	**9-15-2032**	**9-30-2032**	0.1340	0.1340
		Highest	0.7720	0.7720

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	0.5693	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6000e-003	3.6000e-003	1.0000e-005	0.0000	3.8300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.5693**	**2.0000e-005**	**1.8500e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6000e-003**	**3.6000e-003**	**1.0000e-005**	**0.0000**	**3.8300e-003**

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	0.5693	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6000e-003	3.6000e-003	1.0000e-005	0.0000	3.8300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.5693**	**2.0000e-005**	**1.8500e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6000e-003**	**3.6000e-003**	**1.0000e-005**	**0.0000**	**3.8300e-003**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2031	11/5/2032	5	440	
2	Paving	Paving	3/1/2031	11/5/2032	5	440	
3	Architectural Coating	Architectural Coating	3/1/2031	11/5/2032	5	440	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 23.42

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 195,000; Non-Residential Outdoor: 65,000; Striped Parking Area: 893 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	61.00	24.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2031

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	0.1427	0.8649	1.7611	3.3700e-003		0.0162	0.0162		0.0162	0.0162	0.0000	286.5185	286.5185	0.0115	0.0000	286.8059
Total	**0.1427**	**0.8649**	**1.7611**	**3.3700e-003**		**0.0162**	**0.0162**		**0.0162**	**0.0162**	**0.0000**	**286.5185**	**286.5185**	**0.0115**	**0.0000**	**286.8059**

3.2 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5800e-003	0.1890	0.0419	6.0000e-004	0.0153	2.1000e-004	0.0155	4.4200e-003	2.0000e-004	4.6100e-003	0.0000	57.5472	57.5472	2.8000e-003	0.0000	57.6171
Worker	0.0120	5.8900e-003	0.0813	3.3000e-004	0.0488	2.2000e-004	0.0491	0.0130	2.0000e-004	0.0132	0.0000	29.7228	29.7228	4.2000e-004	0.0000	29.7333
Total	**0.0166**	**0.1949**	**0.1231**	**9.3000e-004**	**0.0641**	**4.3000e-004**	**0.0645**	**0.0174**	**4.0000e-004**	**0.0178**	**0.0000**	**87.2700**	**87.2700**	**3.2200e-003**	**0.0000**	**87.3504**

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	0.1427	0.8649	1.7611	3.3700e-003		0.0162	0.0162		0.0162	0.0162	0.0000	286.5182	286.5182	0.0115	0.0000	286.8055
Total	**0.1427**	**0.8649**	**1.7611**	**3.3700e-003**		**0.0162**	**0.0162**		**0.0162**	**0.0162**	**0.0000**	**286.5182**	**286.5182**	**0.0115**	**0.0000**	**286.8055**

3.2 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5800e-003	0.1890	0.0419	6.0000e-004	0.0153	2.1000e-004	0.0155	4.4200e-003	2.0000e-004	4.6100e-003	0.0000	57.5472	57.5472	2.8000e-003	0.0000	57.6171
Worker	0.0120	5.8900e-003	0.0813	3.3000e-004	0.0488	2.2000e-004	0.0491	0.0130	2.0000e-004	0.0132	0.0000	29.7228	29.7228	4.2000e-004	0.0000	29.7333
Total	**0.0166**	**0.1949**	**0.1231**	**9.3000e-004**	**0.0641**	**4.3000e-004**	**0.0645**	**0.0174**	**4.0000e-004**	**0.0178**	**0.0000**	**87.2700**	**87.2700**	**3.2200e-003**	**0.0000**	**87.3504**

3.2 Building Construction - 2032

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	0.1453	0.8807	1.7934	3.4400e-003		0.0164	0.0164		0.0164	0.0164	0.0000	291.7757	291.7757	0.0117	0.0000	292.0684
Total	**0.1453**	**0.8807**	**1.7934**	**3.4400e-003**		**0.0164**	**0.0164**		**0.0164**	**0.0164**	**0.0000**	**291.7757**	**291.7757**	**0.0117**	**0.0000**	**292.0684**

3.2 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5700e-003	0.1903	0.0418	6.1000e-004	0.0156	2.0000e-004	0.0158	4.5000e-003	1.9000e-004	4.6900e-003	0.0000	58.4563	58.4563	2.8200e-003	0.0000	58.5269
Worker	0.0113	5.5200e-003	0.0778	3.3000e-004	0.0497	2.1000e-004	0.0499	0.0132	1.9000e-004	0.0134	0.0000	29.6266	29.6266	3.9000e-004	0.0000	29.6363
Total	**0.0158**	**0.1958**	**0.1196**	**9.4000e-004**	**0.0653**	**4.1000e-004**	**0.0657**	**0.0177**	**3.8000e-004**	**0.0181**	**0.0000**	**88.0829**	**88.0829**	**3.2100e-003**	**0.0000**	**88.1632**

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	0.1453	0.8807	1.7934	3.4400e-003		0.0164	0.0164		0.0164	0.0164	0.0000	291.7754	291.7754	0.0117	0.0000	292.0680
Total	**0.1453**	**0.8807**	**1.7934**	**3.4400e-003**		**0.0164**	**0.0164**		**0.0164**	**0.0164**	**0.0000**	**291.7754**	**291.7754**	**0.0117**	**0.0000**	**292.0680**

3.2 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5700e-003	0.1903	0.0418	6.1000e-004	0.0156	2.0000e-004	0.0158	4.5000e-003	1.9000e-004	4.6900e-003	0.0000	58.4563	58.4563	2.8200e-003	0.0000	58.5269
Worker	0.0113	5.5200e-003	0.0778	3.3000e-004	0.0497	2.1000e-004	0.0499	0.0132	1.9000e-004	0.0134	0.0000	29.6266	29.6266	3.9000e-004	0.0000	29.6363
Total	**0.0158**	**0.1958**	**0.1196**	**9.4000e-004**	**0.0653**	**4.1000e-004**	**0.0657**	**0.0177**	**3.8000e-004**	**0.0181**	**0.0000**	**88.0829**	**88.0829**	**3.2100e-003**	**0.0000**	**88.1632**

3.3 Paving - 2031

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	0.1509	0.7761	1.7276	3.0600e-003		0.0360	0.0360		0.0360	0.0360	0.0000	262.6847	262.6847	0.0123	0.0000	262.9926
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1509**	**0.7761**	**1.7276**	**3.0600e-003**		**0.0360**	**0.0360**		**0.0360**	**0.0360**	**0.0000**	**262.6847**	**262.6847**	**0.0123**	**0.0000**	**262.9926**

3.3 Paving - 2031

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	2.9500e-003	1.4500e-003	0.0200	8.0000e-005	0.0120	5.0000e-005	0.0121	3.1900e-003	5.0000e-005	3.2400e-003	0.0000	7.3089	7.3089	1.0000e-004	0.0000	7.3115
Total	**2.9500e-003**	**1.4500e-003**	**0.0200**	**8.0000e-005**	**0.0120**	**5.0000e-005**	**0.0121**	**3.1900e-003**	**5.0000e-005**	**3.2400e-003**	**0.0000**	**7.3089**	**7.3089**	**1.0000e-004**	**0.0000**	**7.3115**

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	0.1509	0.7761	1.7276	3.0600e-003		0.0360	0.0360		0.0360	0.0360	0.0000	262.6844	262.6844	0.0123	0.0000	262.9923
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1509**	**0.7761**	**1.7276**	**3.0600e-003**		**0.0360**	**0.0360**		**0.0360**	**0.0360**	**0.0000**	**262.6844**	**262.6844**	**0.0123**	**0.0000**	**262.9923**

3.3 Paving - 2031

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	2.9500e-003	1.4500e-003	0.0200	8.0000e-005	0.0120	5.0000e-005	0.0121	3.1900e-003	5.0000e-005	3.2400e-003	0.0000	7.3089	7.3089	1.0000e-004	0.0000	7.3115
Total	**2.9500e-003**	**1.4500e-003**	**0.0200**	**8.0000e-005**	**0.0120**	**5.0000e-005**	**0.0121**	**3.1900e-003**	**5.0000e-005**	**3.2400e-003**	**0.0000**	**7.3089**	**7.3089**	**1.0000e-004**	**0.0000**	**7.3115**

3.3 Paving - 2032

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	0.1537	0.7903	1.7593	3.1100e-003		0.0367	0.0367		0.0367	0.0367	0.0000	267.5046	267.5046	0.0125	0.0000	267.8181
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1537**	**0.7903**	**1.7593**	**3.1100e-003**		**0.0367**	**0.0367**		**0.0367**	**0.0367**	**0.0000**	**267.5046**	**267.5046**	**0.0125**	**0.0000**	**267.8181**

3.3 Paving - 2032

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	2.7700e-003	1.3600e-003	0.0191	8.0000e-005	0.0122	5.0000e-005	0.0123	3.2500e-003	5.0000e-005	3.3000e-003	0.0000	7.2852	7.2852	1.0000e-004	0.0000	7.2876
Total	**2.7700e-003**	**1.3600e-003**	**0.0191**	**8.0000e-005**	**0.0122**	**5.0000e-005**	**0.0123**	**3.2500e-003**	**5.0000e-005**	**3.3000e-003**	**0.0000**	**7.2852**	**7.2852**	**1.0000e-004**	**0.0000**	**7.2876**

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	0.1537	0.7903	1.7593	3.1100e-003		0.0367	0.0367		0.0367	0.0367	0.0000	267.5043	267.5043	0.0125	0.0000	267.8178
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1537**	**0.7903**	**1.7593**	**3.1100e-003**		**0.0367**	**0.0367**		**0.0367**	**0.0367**	**0.0000**	**267.5043**	**267.5043**	**0.0125**	**0.0000**	**267.8178**

3.3 Paving - 2032

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	2.7700e-003	1.3600e-003	0.0191	8.0000e-005	0.0122	5.0000e-005	0.0123	3.2500e-003	5.0000e-005	3.3000e-003	0.0000	7.2852	7.2852	1.0000e-004	0.0000	7.2876
Total	**2.7700e-003**	**1.3600e-003**	**0.0191**	**8.0000e-005**	**0.0122**	**5.0000e-005**	**0.0123**	**3.2500e-003**	**5.0000e-005**	**3.3000e-003**	**0.0000**	**7.2852**	**7.2852**	**1.0000e-004**	**0.0000**	**7.2876**

3.4 Architectural Coating - 2031

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	0.2996					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0143	0.0933	0.1960	3.2000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003	0.0000	27.8305	27.8305	1.1300e-003	0.0000	27.8586
Total	**0.3138**	**0.0933**	**0.1960**	**3.2000e-004**		**2.2100e-003**	**2.2100e-003**		**2.2100e-003**	**2.2100e-003**	**0.0000**	**27.8305**	**27.8305**	**1.1300e-003**	**0.0000**	**27.8586**

3.4 Architectural Coating - 2031

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	2.3600e-003	1.1600e-003	0.0160	6.0000e-005	9.6100e-003	4.0000e-005	9.6500e-003	2.5600e-003	4.0000e-005	2.5900e-003	0.0000	5.8471	5.8471	8.0000e-005	0.0000	5.8492
Total	**2.3600e-003**	**1.1600e-003**	**0.0160**	**6.0000e-005**	**9.6100e-003**	**4.0000e-005**	**9.6500e-003**	**2.5600e-003**	**4.0000e-005**	**2.5900e-003**	**0.0000**	**5.8471**	**5.8471**	**8.0000e-005**	**0.0000**	**5.8492**

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	0.2996					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0143	0.0933	0.1960	3.2000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003	0.0000	27.8304	27.8304	1.1300e-003	0.0000	27.8586
Total	**0.3138**	**0.0933**	**0.1960**	**3.2000e-004**		**2.2100e-003**	**2.2100e-003**		**2.2100e-003**	**2.2100e-003**	**0.0000**	**27.8304**	**27.8304**	**1.1300e-003**	**0.0000**	**27.8586**

3.4 Architectural Coating - 2031

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	2.3600e-003	1.1600e-003	0.0160	6.0000e-005	9.6100e-003	4.0000e-005	9.6500e-003	2.5600e-003	4.0000e-005	2.5900e-003	0.0000	5.8471	5.8471	8.0000e-005	0.0000	5.8492
Total	**2.3600e-003**	**1.1600e-003**	**0.0160**	**6.0000e-005**	**9.6100e-003**	**4.0000e-005**	**9.6500e-003**	**2.5600e-003**	**4.0000e-005**	**2.5900e-003**	**0.0000**	**5.8471**	**5.8471**	**8.0000e-005**	**0.0000**	**5.8492**

3.4 Architectural Coating - 2032

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	0.3051					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0145	0.0951	0.1996	3.3000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	28.3411	28.3411	1.1500e-003	0.0000	28.3698
Total	**0.3196**	**0.0951**	**0.1996**	**3.3000e-004**		**2.2500e-003**	**2.2500e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**28.3411**	**28.3411**	**1.1500e-003**	**0.0000**	**28.3698**

3.4 Architectural Coating - 2032

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	2.2200e-003	1.0900e-003	0.0153	6.0000e-005	9.7800e-003	4.0000e-005	9.8200e-003	2.6000e-003	4.0000e-005	2.6400e-003	0.0000	5.8282	5.8282	8.0000e-005	0.0000	5.8301
Total	**2.2200e-003**	**1.0900e-003**	**0.0153**	**6.0000e-005**	**9.7800e-003**	**4.0000e-005**	**9.8200e-003**	**2.6000e-003**	**4.0000e-005**	**2.6400e-003**	**0.0000**	**5.8282**	**5.8282**	**8.0000e-005**	**0.0000**	**5.8301**

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	0.3051					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0145	0.0951	0.1996	3.3000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	28.3411	28.3411	1.1500e-003	0.0000	28.3698
Total	**0.3196**	**0.0951**	**0.1996**	**3.3000e-004**		**2.2500e-003**	**2.2500e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**28.3411**	**28.3411**	**1.1500e-003**	**0.0000**	**28.3698**

3.4 Architectural Coating - 2032

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	2.2200e-003	1.0900e-003	0.0153	6.0000e-005	9.7800e-003	4.0000e-005	9.8200e-003	2.6000e-003	4.0000e-005	2.6400e-003	0.0000	5.8282	5.8282	8.0000e-005	0.0000	5.8301
Total	**2.2200e-003**	**1.0900e-003**	**0.0153**	**6.0000e-005**	**9.7800e-003**	**4.0000e-005**	**9.8200e-003**	**2.6000e-003**	**4.0000e-005**	**2.6400e-003**	**0.0000**	**5.8282**	**5.8282**	**8.0000e-005**	**0.0000**	**5.8301**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817
Other Non-Asphalt Surfaces	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	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	0.5693	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6000e-003	3.6000e-003	1.0000e-005	0.0000	3.8300e-003
Unmitigated	0.5693	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6000e-003	3.6000e-003	1.0000e-005	0.0000	3.8300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0605					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5087					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6000e-003	3.6000e-003	1.0000e-005	0.0000	3.8300e-003
Total	**0.5693**	**2.0000e-005**	**1.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6000e-003**	**3.6000e-003**	**1.0000e-005**	**0.0000**	**3.8300e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0605					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5087					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6000e-003	3.6000e-003	1.0000e-005	0.0000	3.8300e-003
Total	**0.5693**	**2.0000e-005**	**1.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6000e-003**	**3.6000e-003**	**1.0000e-005**	**0.0000**	**3.8300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Operations (unmitigated no BMP 1)

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,486.00	1000sqft	21.79	1,486,000.00	0
Other Asphalt Surfaces	59.53	1000sqft	21.79	59,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2040
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	373	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Research Park- Operations (unmitigated no BMP 1) - Sacramento County, Summer

Project Characteristics - O2 intensity factor per SMAQMD GHG threshold for Sac County

Land Use - Lot acreage updated to reflect that of the Project (105.5 total acres - 61.9 with no proposed development.) Parking SF calculated from the site plan.

Construction Phase - Model run for operations only. No construction phases.

Off-road Equipment - Model run for operations only. No construction phases.

Trips and VMT - Model run for operations only. No construction phases.

Architectural Coating - Model run for operations only. No construction phases.

Fleet Mix - Fleet mix updated to match information provided by Fehr & Peers for the Project (2021)

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - Titel 24- 30% less than 2016

Water Mitigation -

Vehicle Trips - Trips updated to match information provided by Fehr & Peers for the Project (2021)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	0.00
tblConstructionPhase	PhaseEndDate	4/22/2025	2/4/2025
tblFleetMix	HHD	0.03	0.22
tblFleetMix	HHD	0.03	0.22
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDT1	0.03	0.26
tblFleetMix	LDT1	0.03	0.26
tblFleetMix	LDT2	0.21	0.26
tblFleetMix	LDT2	0.21	0.26

tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblLandUse	LotAcreage	34.11	21.79
tblLandUse	LotAcreage	1.37	21.79
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	590.31	373
tblTripsAndVMT	WorkerTripNumber	130.00	0.00
tblVehicleTrips	ST_TR	2.49	1.40
tblVehicleTrips	SU_TR	0.73	1.40
tblVehicleTrips	WD_TR	6.83	1.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Research Park- Operations (unmitigated no BMP 1) - Sacramento 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Energy	0.5752	5.2287	4.3921	0.0314		0.3974	0.3974		0.3974	0.3974		6,274.4883	6,274.4883	0.1203	0.1150	6,311.7745
Mobile	1.7450	41.7667	21.2223	0.1921	11.1191	0.0608	11.1799	2.9699	0.0573	3.0272		20,247.7293	20,247.7293	0.9938		20,272.5749
Total	**37.9345**	**46.9969**	**25.7712**	**0.2235**	**11.1191**	**0.4588**	**11.5778**	**2.9699**	**0.4553**	**3.4252**		**26,522.5558**	**26,522.5558**	**1.1150**	**0.1150**	**26,584.7094**

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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Energy	0.4116	3.7415	3.1429	0.0225		0.2844	0.2844		0.2844	0.2844		4,489.8514	4,489.8514	0.0861	0.0823	4,516.5324
Mobile	1.7450	41.7667	21.2223	0.1921	11.1191	0.0608	11.1799	2.9699	0.0573	3.0272		20,247.7293	20,247.7293	0.9938		20,272.5749
Total	**37.7709**	**45.5097**	**24.5220**	**0.2146**	**11.1191**	**0.3457**	**11.4648**	**2.9699**	**0.3423**	**3.3122**		**24,737.9189**	**24,737.9189**	**1.0808**	**0.0823**	**24,789.4673**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.43**	**3.16**	**4.85**	**3.99**	**0.00**	**24.64**	**0.98**	**0.00**	**24.82**	**3.30**	**0.00**	**6.73**	**6.73**	**3.07**	**28.44**	**6.75**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	2/5/2025	2/4/2025	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 21.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,229,000; Non-Residential Outdoor: 743,000; Striped Parking Area: 3,572 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2025

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

Unmitigated Construction Off-Site

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

3.2 Architectural Coating - 2025

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7450	41.7667	21.2223	0.1921	11.1191	0.0608	11.1799	2.9699	0.0573	3.0272		20,247.7293	20,247.7293	0.9938		20,272.5749
Unmitigated	1.7450	41.7667	21.2223	0.1921	11.1191	0.0608	11.1799	2.9699	0.0573	3.0272		20,247.7293	20,247.7293	0.9938		20,272.5749

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	2,080.40	2,080.40	2080.40	5,167,154	5,167,154
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	2,080.40	2,080.40	2,080.40	5,167,154	5,167,154

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	0.4116	3.7415	3.1429	0.0225		0.2844	0.2844		0.2844	0.2844		4,489.8514	4,489.8514	0.0861	0.0823	4,516.5324
NaturalGas Unmitigated	0.5752	5.2287	4.3921	0.0314		0.3974	0.3974		0.3974	0.3974		6,274.4883	6,274.4883	0.1203	0.1150	6,311.7745

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					
Industrial Park	53333.2	0.5752	5.2287	4.3921	0.0314		0.3974	0.3974		0.3974	0.3974		6,274.4883	6,274.4883	0.1203	0.1150	6,311.7745
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.5752**	**5.2287**	**4.3921**	**0.0314**		**0.3974**	**0.3974**		**0.3974**	**0.3974**		**6,274.4883**	**6,274.4883**	**0.1203**	**0.1150**	**6,311.7745**

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					
Industrial Park	38.1637	0.4116	3.7415	3.1429	0.0225		0.2844	0.2844		0.2844	0.2844		4,489.8514	4,489.8514	0.0861	0.0823	4,516.5324
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.4116**	**3.7415**	**3.1429**	**0.0225**		**0.2844**	**0.2844**		**0.2844**	**0.2844**		**4,489.8514**	**4,489.8514**	**0.0861**	**0.0823**	**4,516.5324**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Unmitigated	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600

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	3.7786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8215					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Total	**35.6144**	**1.4100e-003**	**0.1568**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**0.3382**	**0.3382**	**8.7000e-004**		**0.3600**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8215					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Total	**35.6144**	**1.4100e-003**	**0.1568**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**0.3382**	**0.3382**	**8.7000e-004**		**0.3600**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Operations (unmitigated no BMP 1)

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,486.00	1000sqft	21.79	1,486,000.00	0
Other Asphalt Surfaces	59.53	1000sqft	21.79	59,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2040
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	373	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Research Park- Operations (unmitigated no BMP 1) - Sacramento County, Winter

Project Characteristics - O2 intensity factor per SMAQMD GHG threshold for Sac County

Land Use - Lot acreage updated to reflect that of the Project (105.5 total acres - 61.9 with no proposed development.) Parking SF calculated from the site plan.

Construction Phase - Model run for operations only. No construction phases.

Off-road Equipment - Model run for operations only. No construction phases.

Trips and VMT - Model run for operations only. No construction phases.

Architectural Coating - Model run for operations only. No construction phases.

Fleet Mix - Fleet mix updated to match information provided by Fehr & Peers for the Project (2021)

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - Titel 24- 30% less than 2016

Water Mitigation -

Vehicle Trips - Trips updated to match information provided by Fehr & Peers for the Project (2021)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	0.00
tblConstructionPhase	PhaseEndDate	4/22/2025	2/4/2025
tblFleetMix	HHD	0.03	0.22
tblFleetMix	HHD	0.03	0.22
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDT1	0.03	0.26
tblFleetMix	LDT1	0.03	0.26
tblFleetMix	LDT2	0.21	0.26
tblFleetMix	LDT2	0.21	0.26

tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblLandUse	LotAcreage	34.11	21.79
tblLandUse	LotAcreage	1.37	21.79
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	590.31	373
tblTripsAndVMT	WorkerTripNumber	130.00	0.00
tblVehicleTrips	ST_TR	2.49	1.40
tblVehicleTrips	SU_TR	0.73	1.40
tblVehicleTrips	WD_TR	6.83	1.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Research Park- Operations (unmitigated no BMP 1) - Sacramento County, Winter

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

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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Energy	0.5752	5.2287	4.3921	0.0314		0.3974	0.3974		0.3974	0.3974		6,274.4883	6,274.4883	0.1203	0.1150	6,311.7745
Mobile	1.4759	41.8266	20.2373	0.1803	11.1191	0.0619	11.1809	2.9699	0.0584	3.0283		19,030.4102	19,030.4102	1.0562		19,056.8147
Total	**37.6654**	**47.0568**	**24.7862**	**0.2117**	**11.1191**	**0.4598**	**11.5789**	**2.9699**	**0.4563**	**3.4262**		**25,305.2368**	**25,305.2368**	**1.1773**	**0.1150**	**25,368.9492**

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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Energy	0.4116	3.7415	3.1429	0.0225		0.2844	0.2844		0.2844	0.2844		4,489.8514	4,489.8514	0.0861	0.0823	4,516.5324
Mobile	1.4759	41.8266	20.2373	0.1803	11.1191	0.0619	11.1809	2.9699	0.0584	3.0283		19,030.4102	19,030.4102	1.0562		19,056.8147
Total	**37.5019**	**45.5696**	**23.5370**	**0.2027**	**11.1191**	**0.3468**	**11.4659**	**2.9699**	**0.3433**	**3.3132**		**23,520.5999**	**23,520.5999**	**1.1431**	**0.0823**	**23,573.7071**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.43**	**3.16**	**5.04**	**4.21**	**0.00**	**24.58**	**0.98**	**0.00**	**24.77**	**3.30**	**0.00**	**7.05**	**7.05**	**2.90**	**28.44**	**7.08**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	2/5/2025	2/4/2025	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 21.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,229,000; Non-Residential Outdoor: 743,000; Striped Parking Area: 3,572 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2025

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

Unmitigated Construction Off-Site

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

3.2 Architectural Coating - 2025

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4759	41.8266	20.2373	0.1803	11.1191	0.0619	11.1809	2.9699	0.0584	3.0283		19,030.4102	19,030.4102	1.0562		19,056.8147
Unmitigated	1.4759	41.8266	20.2373	0.1803	11.1191	0.0619	11.1809	2.9699	0.0584	3.0283		19,030.4102	19,030.4102	1.0562		19,056.8147

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	2,080.40	2,080.40	2080.40	5,167,154	5,167,154
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	2,080.40	2,080.40	2,080.40	5,167,154	5,167,154

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	0.4116	3.7415	3.1429	0.0225		0.2844	0.2844		0.2844	0.2844		4,489.8514	4,489.8514	0.0861	0.0823	4,516.5324
NaturalGas Unmitigated	0.5752	5.2287	4.3921	0.0314		0.3974	0.3974		0.3974	0.3974		6,274.4883	6,274.4883	0.1203	0.1150	6,311.7745

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					
Industrial Park	53333.2	0.5752	5.2287	4.3921	0.0314		0.3974	0.3974		0.3974	0.3974		6,274.4883	6,274.4883	0.1203	0.1150	6,311.7745
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.5752**	**5.2287**	**4.3921**	**0.0314**		**0.3974**	**0.3974**		**0.3974**	**0.3974**		**6,274.4883**	**6,274.4883**	**0.1203**	**0.1150**	**6,311.7745**

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					
Industrial Park	38.1637	0.4116	3.7415	3.1429	0.0225		0.2844	0.2844		0.2844	0.2844		4,489.8514	4,489.8514	0.0861	0.0823	4,516.5324
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.4116**	**3.7415**	**3.1429**	**0.0225**		**0.2844**	**0.2844**		**0.2844**	**0.2844**		**4,489.8514**	**4,489.8514**	**0.0861**	**0.0823**	**4,516.5324**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Unmitigated	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600

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	3.7786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8215					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Total	**35.6144**	**1.4100e-003**	**0.1568**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**0.3382**	**0.3382**	**8.7000e-004**		**0.3600**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8215					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Total	**35.6144**	**1.4100e-003**	**0.1568**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**0.3382**	**0.3382**	**8.7000e-004**		**0.3600**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Operations (unmitigated no BMP 1)

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,486.00	1000sqft	21.79	1,486,000.00	0
Other Asphalt Surfaces	59.53	1000sqft	21.79	59,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2040
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	373	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Research Park- Operations (unmitigated no BMP 1) - Sacramento County, Annual

Project Characteristics - O2 intensity factor per SMAQMD GHG threshold for Sac County

Land Use - Lot acreage updated to reflect that of the Project (105.5 total acres - 61.9 with no proposed development.) Parking SF calculated from the site plan.

Construction Phase - Model run for operations only. No construction phases.

Off-road Equipment - Model run for operations only. No construction phases.

Trips and VMT - Model run for operations only. No construction phases.

Architectural Coating - Model run for operations only. No construction phases.

Fleet Mix - Fleet mix updated to match information provided by Fehr & Peers for the Project (2021)

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - Titel 24- 30% less than 2016

Water Mitigation -

Vehicle Trips - Trips updated to match information provided by Fehr & Peers for the Project (2021)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	0.00
tblConstructionPhase	PhaseEndDate	4/22/2025	2/4/2025
tblFleetMix	HHD	0.03	0.22
tblFleetMix	HHD	0.03	0.22
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDT1	0.03	0.26
tblFleetMix	LDT1	0.03	0.26
tblFleetMix	LDT2	0.21	0.26
tblFleetMix	LDT2	0.21	0.26

tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblLandUse	LotAcreage	34.11	21.79
tblLandUse	LotAcreage	1.37	21.79
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	590.31	373
tblTripsAndVMT	WorkerTripNumber	130.00	0.00
tblVehicleTrips	ST_TR	2.49	1.40
tblVehicleTrips	SU_TR	0.73	1.40
tblVehicleTrips	WD_TR	6.83	1.40

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Research Park- Operations (unmitigated no BMP 1) - Sacramento County, Annual

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

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.4988	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Energy	0.1050	0.9543	0.8016	5.7300e-003		0.0725	0.0725		0.0725	0.0725	0.0000	4,669.2629	4,669.2629	0.3022	0.0774	4,699.8953
Mobile	0.2769	7.6444	3.5691	0.0336	1.9558	0.0111	1.9670	0.5239	0.0105	0.5344	0.0000	3,213.0685	3,213.0685	0.1677	0.0000	3,217.2619
Waste						0.0000	0.0000		0.0000	0.0000	374.0393	0.0000	374.0393	22.1051	0.0000	926.6665
Water						0.0000	0.0000		0.0000	0.0000	121.5795	289.6884	411.2679	0.4410	0.2691	502.4711
Total	**6.8806**	**8.5988**	**4.3903**	**0.0393**	**1.9558**	**0.0837**	**2.0396**	**0.5239**	**0.0831**	**0.6070**	**495.6188**	**8,172.0582**	**8,667.6769**	**23.0161**	**0.3465**	**9,346.3357**

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	6.4988	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Energy	0.0751	0.6828	0.5736	4.1000e-003		0.0519	0.0519		0.0519	0.0519	0.0000	3,998.1803	3,998.1803	0.2673	0.0660	4,024.5263
Mobile	0.2769	7.6444	3.5691	0.0336	1.9558	0.0111	1.9670	0.5239	0.0105	0.5344	0.0000	3,213.0685	3,213.0685	0.1677	0.0000	3,217.2619
Waste						0.0000	0.0000		0.0000	0.0000	374.0393	0.0000	374.0393	22.1051	0.0000	926.6665
Water						0.0000	0.0000		0.0000	0.0000	97.2636	231.7507	329.0143	0.3528	0.2152	401.9769
Total	**6.8508**	**8.3274**	**4.1623**	**0.0377**	**1.9558**	**0.0631**	**2.0189**	**0.5239**	**0.0625**	**0.5863**	**471.3029**	**7,443.0379**	**7,914.3408**	**22.8930**	**0.2812**	**8,570.4724**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.43**	**3.16**	**5.19**	**4.15**	**0.00**	**24.63**	**1.01**	**0.00**	**24.82**	**3.40**	**4.91**	**8.92**	**8.69**	**0.53**	**18.84**	**8.30**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	2/5/2025	2/4/2025	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 21.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,229,000; Non-Residential Outdoor: 743,000; Striped Parking Area: 3,572 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2025

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

Unmitigated Construction Off-Site

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

3.2 Architectural Coating - 2025

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2769	7.6444	3.5691	0.0336	1.9558	0.0111	1.9670	0.5239	0.0105	0.5344	0.0000	3,213.0685	3,213.0685	0.1677	0.0000	3,217.2619
Unmitigated	0.2769	7.6444	3.5691	0.0336	1.9558	0.0111	1.9670	0.5239	0.0105	0.5344	0.0000	3,213.0685	3,213.0685	0.1677	0.0000	3,217.2619

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	2,080.40	2,080.40	2080.40	5,167,154	5,167,154
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	2,080.40	2,080.40	2,080.40	5,167,154	5,167,154

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	3,254.8351	3,254.8351	0.2531	0.0524	3,276.7637
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,630.4510	3,630.4510	0.2823	0.0584	3,654.9103
NaturalGas Mitigated	0.0751	0.6828	0.5736	4.1000e-003		0.0519	0.0519		0.0519	0.0519	0.0000	743.3453	743.3453	0.0143	0.0136	747.7626
NaturalGas Unmitigated	0.1050	0.9543	0.8016	5.7300e-003		0.0725	0.0725		0.0725	0.0725	0.0000	1,038.8119	1,038.8119	0.0199	0.0190	1,044.9851

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					
Industrial Park	1.94666e+007	0.1050	0.9543	0.8016	5.7300e-003		0.0725	0.0725		0.0725	0.0725	0.0000	1,038.8119	1,038.8119	0.0199	0.0190	1,044.9851
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1050**	**0.9543**	**0.8016**	**5.7300e-003**		**0.0725**	**0.0725**		**0.0725**	**0.0725**	**0.0000**	**1,038.8119**	**1,038.8119**	**0.0199**	**0.0190**	**1,044.9851**

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					
Industrial Park	1.39298e+007	0.0751	0.6828	0.5736	4.1000e-003		0.0519	0.0519		0.0519	0.0519	0.0000	743.3453	743.3453	0.0143	0.0136	747.7626
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0751**	**0.6828**	**0.5736**	**4.1000e-003**		**0.0519**	**0.0519**		**0.0519**	**0.0519**	**0.0000**	**743.3453**	**743.3453**	**0.0143**	**0.0136**	**747.7626**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	2.14578e+007	3,630.4510	0.2823	0.0584	3,654.9103
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**3,630.4510**	**0.2823**	**0.0584**	**3,654.9103**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.92378e+007	3,254.8351	0.2531	0.0524	3,276.7637
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**3,254.8351**	**0.2531**	**0.0524**	**3,276.7637**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.4988	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Unmitigated	6.4988	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408

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	0.6896					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8074					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7900e-003	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Total	**6.4988**	**1.8000e-004**	**0.0196**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0384**	**0.0384**	**1.0000e-004**	**0.0000**	**0.0408**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.6896					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8074					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7900e-003	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Total	**6.4988**	**1.8000e-004**	**0.0196**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0384**	**0.0384**	**1.0000e-004**	**0.0000**	**0.0408**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	329.0143	0.3528	0.2152	401.9769
Unmitigated	411.2679	0.4410	0.2691	502.4711

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	343.637 / 0	411.2679	0.4410	0.2691	502.4711
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**411.2679**	**0.4410**	**0.2691**	**502.4711**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	274.91 / 0	329.0143	0.3528	0.2152	401.9769
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**329.0143**	**0.3528**	**0.2152**	**401.9769**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	374.0393	22.1051	0.0000	926.6665
Unmitigated	374.0393	22.1051	0.0000	926.6665

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1842.64	374.0393	22.1051	0.0000	926.6665
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**374.0393**	**22.1051**	**0.0000**	**926.6665**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1842.64	374.0393	22.1051	0.0000	926.6665
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**374.0393**	**22.1051**	**0.0000**	**926.6665**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Mitigated (BMP 1 imposed)

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,486.00	1000sqft	21.79	1,486,000.00	0
Other Asphalt Surfaces	59.53	1000sqft	21.79	59,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2040
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	373	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Research Park- Mitigated (BMP 1 imposed) - Sacramento County, Summer

Project Characteristics - O2 intensity factor per SMAQMD GHG threshold for Sac County

Land Use - Lot acreage updated to reflect that of the Project (105.5 total acres - 61.9 with no proposed development.) Parking SF calculated from the site plan.

Construction Phase - Model run for operations only. No construction phases.

Off-road Equipment - Model run for operations only. No construction phases.

Trips and VMT - Model run for operations only. No construction phases.

Architectural Coating - Model run for operations only. No construction phases.

Vehicle Trips - Trips updated to match information provided by Fehr & Peers for the Project (2021)

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - Titel 24- 30% less than 2016

Water Mitigation -

Fleet Mix - Fleet mix updated to match information provided by Fehr & Peers for the Project (2021)

Energy Use - BPM 1 imposed- no natural gas for the Project.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24NG	12.42	0.00
tblFleetMix	HHD	0.03	0.22
tblFleetMix	HHD	0.03	0.22
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDT1	0.03	0.26
tblFleetMix	LDT1	0.03	0.26

tblFleetMix	LDT2	0.21	0.26
tblFleetMix	LDT2	0.21	0.26
tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblLandUse	LotAcreage	34.11	21.79
tblLandUse	LotAcreage	1.37	21.79
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	590.31	373
tblTripsAndVMT	WorkerTripNumber	130.00	0.00
tblVehicleTrips	ST_TR	2.49	1.40
tblVehicleTrips	SU_TR	0.73	1.40

tblVehicleTrips	WD_TR	6.83	1.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Research Park- Mitigated (BMP 1 imposed) - Sacramento 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.7450	41.7667	21.2223	0.1921	11.1191	0.0608	11.1799	2.9699	0.0573	3.0272		20,247.7293	20,247.7293	0.9938		20,272.5749
Total	**37.3594**	**41.7681**	**21.3791**	**0.1921**	**11.1191**	**0.0614**	**11.1804**	**2.9699**	**0.0579**	**3.0278**		**20,248.0675**	**20,248.0675**	**0.9947**	**0.0000**	**20,272.9349**

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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.7450	41.7667	21.2223	0.1921	11.1191	0.0608	11.1799	2.9699	0.0573	3.0272		20,247.7293	20,247.7293	0.9938		20,272.5749
Total	**37.3594**	**41.7681**	**21.3791**	**0.1921**	**11.1191**	**0.0614**	**11.1804**	**2.9699**	**0.0579**	**3.0278**		**20,248.0675**	**20,248.0675**	**0.9947**	**0.0000**	**20,272.9349**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	2/5/2025	2/4/2025	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 21.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,229,000; Non-Residential Outdoor: 743,000; Striped Parking Area: 3,572 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2025

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

Unmitigated Construction Off-Site

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

3.2 Architectural Coating - 2025

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7450	41.7667	21.2223	0.1921	11.1191	0.0608	11.1799	2.9699	0.0573	3.0272		20,247.7293	20,247.7293	0.9938		20,272.5749
Unmitigated	1.7450	41.7667	21.2223	0.1921	11.1191	0.0608	11.1799	2.9699	0.0573	3.0272		20,247.7293	20,247.7293	0.9938		20,272.5749

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	2,080.40	2,080.40	2080.40	5,167,154	5,167,154
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	2,080.40	2,080.40	2,080.40	5,167,154	5,167,154

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Unmitigated	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600

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	3.7786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8215					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Total	**35.6144**	**1.4100e-003**	**0.1568**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**0.3382**	**0.3382**	**8.7000e-004**		**0.3600**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8215					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Total	**35.6144**	**1.4100e-003**	**0.1568**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**0.3382**	**0.3382**	**8.7000e-004**		**0.3600**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Mitigated (BMP 1 imposed)

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,486.00	1000sqft	21.79	1,486,000.00	0
Other Asphalt Surfaces	59.53	1000sqft	21.79	59,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2040
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	373	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Research Park- Mitigated (BMP 1 imposed) - Sacramento County, Winter

Project Characteristics - O2 intensity factor per SMAQMD GHG threshold for Sac County

Land Use - Lot acreage updated to reflect that of the Project (105.5 total acres - 61.9 with no proposed development.) Parking SF calculated from the site plan.

Construction Phase - Model run for operations only. No construction phases.

Off-road Equipment - Model run for operations only. No construction phases.

Trips and VMT - Model run for operations only. No construction phases.

Architectural Coating - Model run for operations only. No construction phases.

Vehicle Trips - Trips updated to match information provided by Fehr & Peers for the Project (2021)

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - Titel 24- 30% less than 2016

Water Mitigation -

Fleet Mix - Fleet mix updated to match information provided by Fehr & Peers for the Project (2021)

Energy Use - BPM 1 imposed- no natural gas for the Project.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24NG	12.42	0.00
tblFleetMix	HHD	0.03	0.22
tblFleetMix	HHD	0.03	0.22
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDT1	0.03	0.26
tblFleetMix	LDT1	0.03	0.26

tblFleetMix	LDT2	0.21	0.26
tblFleetMix	LDT2	0.21	0.26
tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblLandUse	LotAcreage	34.11	21.79
tblLandUse	LotAcreage	1.37	21.79
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	590.31	373
tblTripsAndVMT	WorkerTripNumber	130.00	0.00
tblVehicleTrips	ST_TR	2.49	1.40
tblVehicleTrips	SU_TR	0.73	1.40

tblVehicleTrips	WD_TR	6.83	1.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Research Park- Mitigated (BMP 1 imposed) - Sacramento County, Winter

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

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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.4759	41.8266	20.2373	0.1803	11.1191	0.0619	11.1809	2.9699	0.0584	3.0283		19,030.4102	19,030.4102	1.0562		19,056.8147
Total	**37.0903**	**41.8280**	**20.3941**	**0.1803**	**11.1191**	**0.0624**	**11.1815**	**2.9699**	**0.0589**	**3.0288**		**19,030.7484**	**19,030.7484**	**1.0571**	**0.0000**	**19,057.1748**

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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.4759	41.8266	20.2373	0.1803	11.1191	0.0619	11.1809	2.9699	0.0584	3.0283		19,030.4102	19,030.4102	1.0562		19,056.8147
Total	**37.0903**	**41.8280**	**20.3941**	**0.1803**	**11.1191**	**0.0624**	**11.1815**	**2.9699**	**0.0589**	**3.0288**		**19,030.7484**	**19,030.7484**	**1.0571**	**0.0000**	**19,057.1748**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	2/5/2025	2/4/2025	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 21.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,229,000; Non-Residential Outdoor: 743,000; Striped Parking Area: 3,572 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2025

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

Unmitigated Construction Off-Site

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

3.2 Architectural Coating - 2025

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4759	41.8266	20.2373	0.1803	11.1191	0.0619	11.1809	2.9699	0.0584	3.0283		19,030.4102	19,030.4102	1.0562		19,056.8147
Unmitigated	1.4759	41.8266	20.2373	0.1803	11.1191	0.0619	11.1809	2.9699	0.0584	3.0283		19,030.4102	19,030.4102	1.0562		19,056.8147

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	2,080.40	2,080.40	2080.40	5,167,154	5,167,154
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	2,080.40	2,080.40	2,080.40	5,167,154	5,167,154

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	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	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Unmitigated	35.6144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600

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	3.7786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8215					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Total	**35.6144**	**1.4100e-003**	**0.1568**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**0.3382**	**0.3382**	**8.7000e-004**		**0.3600**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	31.8215					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0144	1.4100e-003	0.1568	1.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		0.3382	0.3382	8.7000e-004		0.3600
Total	**35.6144**	**1.4100e-003**	**0.1568**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**0.3382**	**0.3382**	**8.7000e-004**		**0.3600**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Research Park- Mitigated (BMP 1 imposed)

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,486.00	1000sqft	21.79	1,486,000.00	0
Other Asphalt Surfaces	59.53	1000sqft	21.79	59,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2040
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	373	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Research Park- Mitigated (BMP 1 imposed) - Sacramento County, Annual

Project Characteristics - O2 intensity factor per SMAQMD GHG threshold for Sac County

Land Use - Lot acreage updated to reflect that of the Project (105.5 total acres - 61.9 with no proposed development.) Parking SF calculated from the site plan.

Construction Phase - Model run for operations only. No construction phases.

Off-road Equipment - Model run for operations only. No construction phases.

Trips and VMT - Model run for operations only. No construction phases.

Architectural Coating - Model run for operations only. No construction phases.

Vehicle Trips - Trips updated to match information provided by Fehr & Peers for the Project (2021)

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - Titel 24- 30% less than 2016

Water Mitigation -

Fleet Mix - Fleet mix updated to match information provided by Fehr & Peers for the Project (2021)

Energy Use - BPM 1 imposed- no natural gas for the Project.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	0.00
tblEnergyUse	NT24NG	0.68	0.00
tblEnergyUse	T24NG	12.42	0.00
tblFleetMix	HHD	0.03	0.22
tblFleetMix	HHD	0.03	0.22
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDA	0.58	0.26
tblFleetMix	LDT1	0.03	0.26
tblFleetMix	LDT1	0.03	0.26

tblFleetMix	LDT2	0.21	0.26
tblFleetMix	LDT2	0.21	0.26
tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD1	9.8700e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	LHD2	4.2900e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MCY	5.3700e-003	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MH	5.4700e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	OBUS	1.8530e-003	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	SBUS	5.8900e-004	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblFleetMix	UBUS	1.2750e-003	0.00
tblLandUse	LotAcreage	34.11	21.79
tblLandUse	LotAcreage	1.37	21.79
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	590.31	373
tblTripsAndVMT	WorkerTripNumber	130.00	0.00
tblVehicleTrips	ST_TR	2.49	1.40
tblVehicleTrips	SU_TR	0.73	1.40

tblVehicleTrips	WD_TR	6.83	1.40

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.4988	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3,630.4510	3,630.4510	0.2823	0.0584	3,654.9103
Mobile	0.2769	7.6444	3.5691	0.0336	1.9558	0.0111	1.9670	0.5239	0.0105	0.5344	0.0000	3,213.0685	3,213.0685	0.1677	0.0000	3,217.2619
Waste						0.0000	0.0000		0.0000	0.0000	374.0393	0.0000	374.0393	22.1051	0.0000	926.6665
Water						0.0000	0.0000		0.0000	0.0000	121.5795	289.6884	411.2679	0.4410	0.2691	502.4711
Total	**6.7757**	**7.6446**	**3.5887**	**0.0336**	**1.9558**	**0.0112**	**1.9670**	**0.5239**	**0.0106**	**0.5344**	**495.6188**	**7,133.2463**	**7,628.8650**	**22.9962**	**0.3275**	**8,301.3506**

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	6.4988	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3,254.8351	3,254.8351	0.2531	0.0524	3,276.7637
Mobile	0.2769	7.6444	3.5691	0.0336	1.9558	0.0111	1.9670	0.5239	0.0105	0.5344	0.0000	3,213.0685	3,213.0685	0.1677	0.0000	3,217.2619
Waste						0.0000	0.0000		0.0000	0.0000	374.0393	0.0000	374.0393	22.1051	0.0000	926.6665
Water						0.0000	0.0000		0.0000	0.0000	97.2636	231.7507	329.0143	0.3528	0.2152	401.9769
Total	**6.7757**	**7.6446**	**3.5887**	**0.0336**	**1.9558**	**0.0112**	**1.9670**	**0.5239**	**0.0106**	**0.5344**	**471.3029**	**6,699.6927**	**7,170.9955**	**22.8788**	**0.2676**	**7,822.7099**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.91**	**6.08**	**6.00**	**0.51**	**18.28**	**5.77**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	2/5/2025	2/4/2025	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 21.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,229,000; Non-Residential Outdoor: 743,000; Striped Parking Area: 3,572 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2025

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

Unmitigated Construction Off-Site

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

3.2 Architectural Coating - 2025

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2769	7.6444	3.5691	0.0336	1.9558	0.0111	1.9670	0.5239	0.0105	0.5344	0.0000	3,213.0685	3,213.0685	0.1677	0.0000	3,217.2619
Unmitigated	0.2769	7.6444	3.5691	0.0336	1.9558	0.0111	1.9670	0.5239	0.0105	0.5344	0.0000	3,213.0685	3,213.0685	0.1677	0.0000	3,217.2619

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	2,080.40	2,080.40	2080.40	5,167,154	5,167,154
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	2,080.40	2,080.40	2,080.40	5,167,154	5,167,154

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	10.00	5.00	6.50	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.260000	0.260000	0.260000	0.000000	0.000000	0.000000	0.000000	0.220000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	3,254.8351	3,254.8351	0.2531	0.0524	3,276.7637
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,630.4510	3,630.4510	0.2823	0.0584	3,654.9103
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	2.14578e+007	3,630.4510	0.2823	0.0584	3,654.9103
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**3,630.4510**	**0.2823**	**0.0584**	**3,654.9103**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.92378e+007	3,254.8351	0.2531	0.0524	3,276.7637
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**3,254.8351**	**0.2531**	**0.0524**	**3,276.7637**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.4988	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Unmitigated	6.4988	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408

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	0.6896					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8074					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7900e-003	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Total	**6.4988**	**1.8000e-004**	**0.0196**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0384**	**0.0384**	**1.0000e-004**	**0.0000**	**0.0408**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.6896					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8074					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7900e-003	1.8000e-004	0.0196	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0384	0.0384	1.0000e-004	0.0000	0.0408
Total	**6.4988**	**1.8000e-004**	**0.0196**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0384**	**0.0384**	**1.0000e-004**	**0.0000**	**0.0408**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	329.0143	0.3528	0.2152	401.9769
Unmitigated	411.2679	0.4410	0.2691	502.4711

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	343.637 / 0	411.2679	0.4410	0.2691	502.4711
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**411.2679**	**0.4410**	**0.2691**	**502.4711**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	274.91 / 0	329.0143	0.3528	0.2152	401.9769
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**329.0143**	**0.3528**	**0.2152**	**401.9769**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	374.0393	22.1051	0.0000	926.6665
Unmitigated	374.0393	22.1051	0.0000	926.6665

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1842.64	374.0393	22.1051	0.0000	926.6665
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**374.0393**	**22.1051**	**0.0000**	**926.6665**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1842.64	374.0393	22.1051	0.0000	926.6665
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**374.0393**	**22.1051**	**0.0000**	**926.6665**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

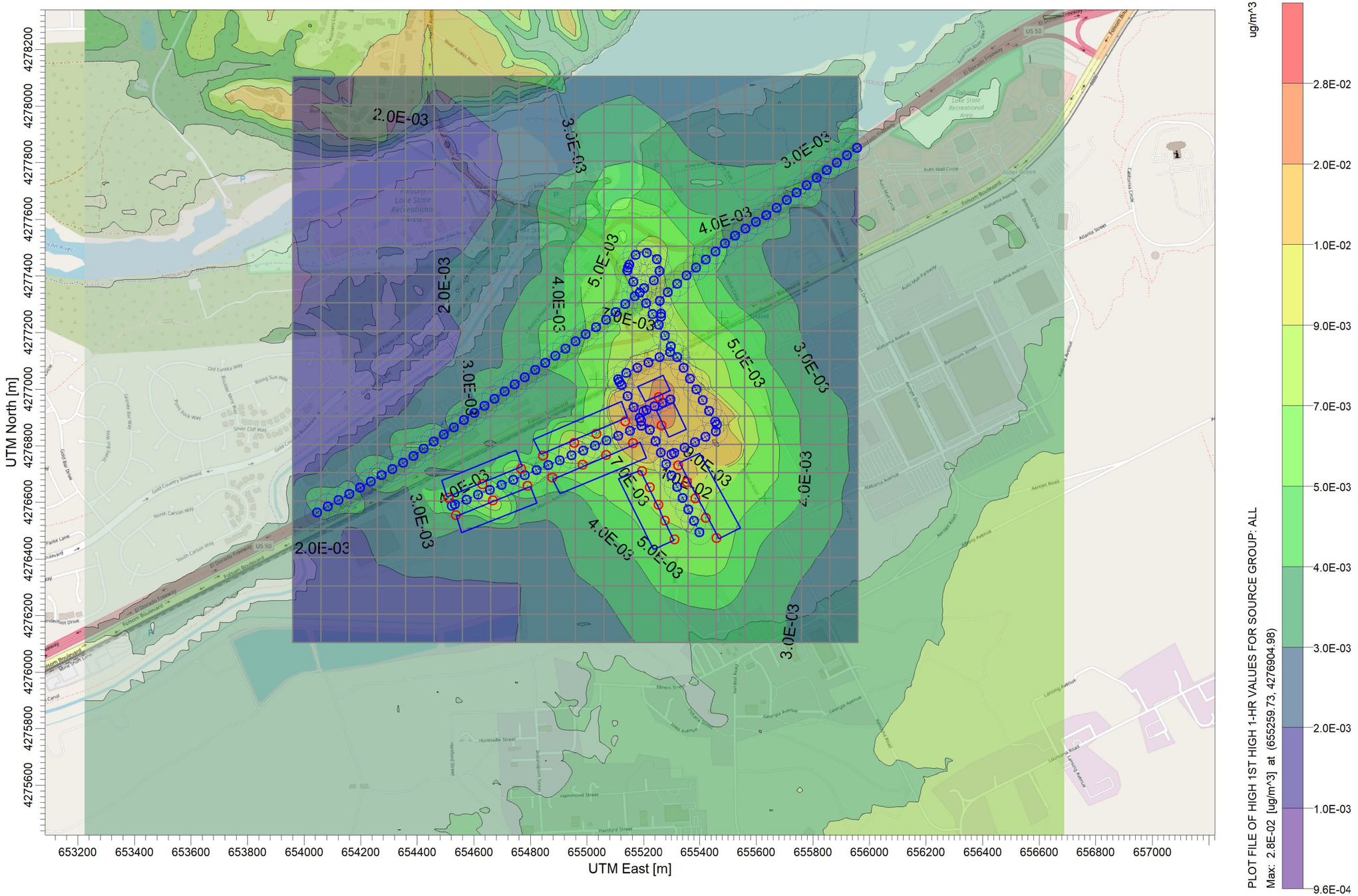
11.0 Vegetation

ATTACHMENT B

Operational Health Risk Assessment- Diesel Particulate Matter

PROJECT TITLE:

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COMMENTS:

SOURCES:

34

RECEPTORS:

448

OUTPUT TYPE:

Concentration

MAX:

2.8E-02 ug/m^3

COMPANY NAME:

MODELER:

DATE:

6/23/2021

SCALE: 1:14,029

0 0.4 km

PROJECT NO.:

Control Pathway

Dispersion Options

Titles

C:\Users\smyers\Desktop\Easton Place Research Park West\Easton Place

Dispersion Options

☑ Regulatory Default ☐ Non-Default Options

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

☑ Concentration
☐ Total Deposition (Dry & Wet)
☐ Dry Deposition
☐ Wet Deposition

Plume Depletion

☐ Dry Removal
☐ Wet Removal

Output Warnings

☐ No Output Warnings
☐ Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

PM10

Averaging Time Options

Hours

1	2	3	4	6	8	12	24
☑	☐	☐	☐	☐	☐	☐	☑

☐ Month ☐ Period ☑ Annual

Exponential Decay

Half life of 4 hrs will be used

Terrain Height Options

☐ Flat ☑ Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

☐ Yes ☑ No

Default Height = 0.00 m

Control Pathway

Optional Files

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

Detailed Error Listing File

Filename: Easton Place Research Park West.err

Control Pathway

Dispersion Options

Titles

C:\Users\smyers\Desktop\Easton Place Research Park West\Easton Place

Dispersion Options

☑ Regulatory Default ☐ Non-Default Options

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

☑ Concentration
☐ Total Deposition (Dry & Wet)
☐ Dry Deposition
☐ Wet Deposition

Plume Depletion

☐ Dry Removal
☐ Wet Removal

Output Warnings

☐ No Output Warnings
☐ Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

PM10

Averaging Time Options

Hours

1	2	3	4	6	8	12	24
☑	☐	☐	☐	☐	☐	☐	☑

☐ Month ☐ Period ☑ Annual

Exponential Decay

Half life of 4 hrs will be used

Terrain Height Options

☐ Flat ☑ Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

☐ Yes ☑ No

Default Height = 0.00 m

Control Pathway

Optional Files

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

Detailed Error Listing File

Filename: Easton Place Research Park West.err

Source Pathway - Source Inputs

Source Pathway - Source Inputs

Area Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Length of X Side [m]	Length of Y Side [m]	Orientation Angle from North [deg]	Initial Vertical Dim. [m]
AREA	AREA1	655254.35	4276972.19	44.91	3.68	3.32E-8	3.05	2.74	0.00	
AREA	AREA2	655263.08	4276872.51	44.99	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA3	655324.38	4276731.03	44.49	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA4	655354.88	4276671.66	44.91	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA5	655384.85	4276614.36	44.67	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA6	655421.11	4276545.49	45.12	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA7	655458.97	4276474.52	45.07	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA8	655194.92	4276710.63	44.94	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA9	655222.31	4276654.13	44.92	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA10	655253.13	4276592.49	44.91	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA11	655276.98	4276536.16	44.91	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA12	655310.38	4276469.98	45.09	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA13	654844.37	4276765.50	44.27	3.68	3.32E-8	2.74	3.05	0.00	

Source Pathway - Source Inputs

AERMOD

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Length of X Side [m]	Length of Y Side [m]	Orientation Angle from North [deg]	Initial Vertical Dim. [m]
AREA	AREA14	654953.95	4276810.87	44.73	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA15	655134.59	4276886.21	44.97	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA16	655032.72	4276842.55	44.83	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA17	654877.76	4276688.44	43.89	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA18	654983.92	4276733.82	44.80	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA19	655066.96	4276768.06	44.59	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA20	655161.99	4276809.16	44.82	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA21	654510.28	4276616.70	42.64	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA22	654630.28	4276664.34	43.03	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA23	654766.37	4276719.39	43.87	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA24	654536.87	4276555.47	42.75	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA25	654667.40	4276608.04	42.97	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA26	654789.26	4276658.15	43.70	3.68	3.32E-8	2.74	3.05	0.00	

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE1 (Internal circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00003		654522.28	4276588.37	42.64	0.00
			655211.15	4276878.69	45.02	0.00
			655401.41	4276489.96	45.39	0.00
			655406.34	4276486.68	45.27	0.00

Source Type: LINE VOLUME

Source: SLINE2 (Internal circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00003		655191.47	4276888.53	45.05	0.00
			655116.02	4277024.66	44.07	0.00

Source Type: LINE VOLUME

Source: SLINE3 (Internal circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00003		655299.72	4276770.43	44.40	0.00
			655467.02	4276855.72	45.85	0.00

Source Type: LINE VOLUME

Source: SLINE4 (Internal circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00003		655199.22	4276922.76	45.05	0.00
			655307.07	4276968.98	45.40	0.00

Source Pathway - Source Inputs

Source Type: LINE VOLUME

Source: SLINE5 (Off Site- Nimbus Road & Hazle Avenue)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00001		655460.87	4276875.28	45.91	0.00
			655136.03	4277428.17	45.33	0.00

Source Type: LINE VOLUME

Source: SLINE6 (50 West)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00004		655145.11	4277429.83	45.05	0.00
			655158.47	4277467.24	43.07	0.00
			655198.54	4277488.61	42.03	0.00
			655241.29	4277467.24	41.63	0.00
			655254.65	4277448.54	41.44	0.00
			655257.32	4277400.45	42.08	0.00
			655222.59	4277373.73	41.91	0.00
			655067.64	4277245.50	42.87	0.00
			654359.67	4276745.91	43.41	0.00
			654036.42	4276558.91	42.20	0.00

Source Type: LINE VOLUME

Source: SLINE7 (50 East)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00002		655262.66	4277256.18	45.91	0.00
			655257.32	4277314.96	43.45	0.00
			655345.48	4277395.10	42.32	0.00
			655511.12	4277534.03	42.33	0.00
			655642.02	4277619.52	42.18	0.00
			655965.28	4277859.96	41.83	0.00

Source Pathway - Source Inputs

Source Type: LINE VOLUME

Source: SLINE8 (Folsom Blvd.)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	5.44E-6		655115.07	4277025.41	44.08	0.00
			655106.33	4277042.16	44.71	0.00
			655305.09	4277136.80	44.99	0.00

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000131	654532.64	4276592.74	42.53	0.00	9.52E-7	22.50		20.82	2.37
	L0000132	654573.89	4276610.13	42.14	0.00	9.52E-7	22.50		20.82	2.37
	L0000133	654615.14	4276627.51	42.51	0.00	9.52E-7	22.50		20.82	2.37
	L0000134	654656.38	4276644.89	42.48	0.00	9.52E-7	22.50		20.82	2.37
	L0000135	654697.63	4276662.27	43.17	0.00	9.52E-7	22.50		20.82	2.37
	L0000136	654738.88	4276679.66	43.93	0.00	9.52E-7	22.50		20.82	2.37
	L0000137	654780.12	4276697.04	44.09	0.00	9.52E-7	22.50		20.82	2.37
	L0000138	654821.37	4276714.42	44.30	0.00	9.52E-7	22.50		20.82	2.37
	L0000139	654862.62	4276731.80	44.69	0.00	9.52E-7	22.50		20.82	2.37
	L0000140	654903.86	4276749.19	44.23	0.00	9.52E-7	22.50		20.82	2.37
	L0000141	654945.11	4276766.57	44.84	0.00	9.52E-7	22.50		20.82	2.37
	L0000142	654986.36	4276783.95	44.81	0.00	9.52E-7	22.50		20.82	2.37
	L0000143	655027.60	4276801.33	44.68	0.00	9.52E-7	22.50		20.82	2.37
	L0000144	655068.85	4276818.72	44.79	0.00	9.52E-7	22.50		20.82	2.37
	L0000145	655110.10	4276836.10	44.86	0.00	9.52E-7	22.50		20.82	2.37
	L0000146	655151.34	4276853.48	44.81	0.00	9.52E-7	22.50		20.82	2.37
	L0000147	655192.59	4276870.86	44.62	0.00	9.52E-7	22.50		20.82	2.37
	L0000148	655221.97	4276856.58	45.19	0.00	9.52E-7	22.50		20.82	2.37
	L0000149	655241.65	4276816.38	45.25	0.00	9.52E-7	22.50		20.82	2.37
	L0000150	655261.33	4276776.17	44.81	0.00	9.52E-7	22.50		20.82	2.37
	L0000151	655281.01	4276735.97	44.94	0.00	9.52E-7	22.50		20.82	2.37
	L0000152	655300.68	4276695.77	44.51	0.00	9.52E-7	22.50		20.82	2.37
	L0000153	655320.36	4276655.57	44.09	0.00	9.52E-7	22.50		20.82	2.37
	L0000154	655340.04	4276615.36	44.46	0.00	9.52E-7	22.50		20.82	2.37

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000155	655359.71	4276575.16	44.97	0.00	9.52E-7	22.50		20.82	2.37
	L0000156	655379.39	4276534.96	45.06	0.00	9.52E-7	22.50		20.82	2.37
	L0000157	655399.07	4276494.76	45.62	0.00	9.52E-7	22.50		20.82	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE2	L0000158	655186.02	4276898.37	45.06	0.00	6.43E-6	22.50		20.64	233.02
	L0000159	655164.50	4276937.19	44.67	0.00	6.43E-6	22.50		20.64	233.02
	L0000160	655142.99	4276976.00	45.38	0.00	6.43E-6	22.50		20.64	233.02
	L0000161	655121.48	4277014.82	44.59	0.00	6.43E-6	22.50		20.64	233.02

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE3	L0000162	655309.75	4276775.54	44.58	0.00	5.14E-6	22.50		19.22	2.37
	L0000163	655346.56	4276794.31	44.74	0.00	5.14E-6	22.50		19.22	2.37
	L0000164	655383.37	4276813.08	44.37	0.00	5.14E-6	22.50		19.22	2.37
	L0000165	655420.19	4276831.85	44.57	0.00	5.14E-6	22.50		19.22	2.37
	L0000166	655457.00	4276850.61	45.04	0.00	5.14E-6	22.50		19.22	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0000167	655209.56	4276927.19	45.01	0.00	6.43E-6	22.50		14.70	2.37
	L0000168	655238.62	4276939.64	45.03	0.00	6.43E-6	22.50		14.70	2.37
	L0000169	655267.67	4276952.10	45.08	0.00	6.43E-6	22.50		14.70	2.37
	L0000170	655296.73	4276964.55	45.33	0.00	6.43E-6	22.50		14.70	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE5	L0000171	655455.17	4276884.98	45.91	0.00	9.87E-7	22.50		20.56	2.37
	L0000172	655432.78	4276923.08	45.95	0.00	9.87E-7	22.50		20.56	2.37
	L0000173	655410.39	4276961.19	45.88	0.00	9.87E-7	22.50		20.56	2.37
	L0000174	655388.00	4276999.30	45.92	0.00	9.87E-7	22.50		20.56	2.37
	L0000175	655365.62	4277037.40	45.73	0.00	9.87E-7	22.50		20.56	2.37
	L0000176	655343.23	4277075.51	45.63	0.00	9.87E-7	22.50		20.56	2.37
	L0000177	655320.84	4277113.61	45.47	0.00	9.87E-7	22.50		20.56	2.37
	L0000178	655298.45	4277151.72	44.61	0.00	9.87E-7	22.50		20.56	2.37
	L0000179	655276.06	4277189.83	44.62	0.00	9.87E-7	22.50		20.56	2.37
	L0000180	655253.67	4277227.93	45.72	0.00	9.87E-7	22.50		20.56	2.37
	L0000181	655231.28	4277266.04	48.18	0.00	9.87E-7	22.50		20.56	2.37
	L0000182	655208.89	4277304.15	42.62	0.00	9.87E-7	22.50		20.56	2.37
	L0000183	655186.50	4277342.25	42.41	0.00	9.87E-7	22.50		20.56	2.37
	L0000184	655164.12	4277380.36	48.16	0.00	9.87E-7	22.50		20.56	2.37
	L0000185	655141.73	4277418.47	45.77	0.00	9.87E-7	22.50		20.56	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE6	L0000186	655148.90	4277440.43	44.22	0.00	1.04E-6	22.50		20.40	2.37
	L0000187	655172.05	4277474.48	42.21	0.00	1.04E-6	22.50		20.40	2.37
	L0000188	655210.91	4277482.43	41.30	0.00	1.04E-6	22.50		20.40	2.37
	L0000189	655247.04	4277459.19	41.40	0.00	1.04E-6	22.50		20.40	2.37
	L0000190	655256.35	4277417.82	41.73	0.00	1.04E-6	22.50		20.40	2.37
	L0000191	655236.35	4277384.32	41.59	0.00	1.04E-6	22.50		20.40	2.37
	L0000192	655202.18	4277356.84	42.26	0.00	1.04E-6	22.50		20.40	2.37
	L0000193	655168.39	4277328.88	42.54	0.00	1.04E-6	22.50		20.40	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE6	L0000194	655134.61	4277300.92	42.75	0.00	1.04E-6	22.50		20.40	2.37
	L0000195	655100.83	4277272.96	42.78	0.00	1.04E-6	22.50		20.40	2.37
	L0000196	655067.00	4277245.05	42.92	0.00	1.04E-6	22.50		20.40	2.37
	L0000197	655031.17	4277219.76	42.92	0.00	1.04E-6	22.50		20.40	2.37
	L0000198	654995.34	4277194.48	43.05	0.00	1.04E-6	22.50		20.40	2.37
	L0000199	654959.51	4277169.20	43.00	0.00	1.04E-6	22.50		20.40	2.37
	L0000200	654923.68	4277143.91	43.10	0.00	1.04E-6	22.50		20.40	2.37
	L0000201	654887.85	4277118.63	43.21	0.00	1.04E-6	22.50		20.40	2.37
	L0000202	654852.02	4277093.34	43.23	0.00	1.04E-6	22.50		20.40	2.37
	L0000203	654816.19	4277068.06	43.33	0.00	1.04E-6	22.50		20.40	2.37
	L0000204	654780.36	4277042.77	43.29	0.00	1.04E-6	22.50		20.40	2.37
	L0000205	654744.52	4277017.49	43.37	0.00	1.04E-6	22.50		20.40	2.37
	L0000206	654708.69	4276992.20	43.39	0.00	1.04E-6	22.50		20.40	2.37
	L0000207	654672.86	4276966.92	43.44	0.00	1.04E-6	22.50		20.40	2.37
	L0000208	654637.03	4276941.63	43.44	0.00	1.04E-6	22.50		20.40	2.37
	L0000209	654601.20	4276916.35	43.44	0.00	1.04E-6	22.50		20.40	2.37
	L0000210	654565.37	4276891.07	43.56	0.00	1.04E-6	22.50		20.40	2.37
	L0000211	654529.54	4276865.78	43.51	0.00	1.04E-6	22.50		20.40	2.37
	L0000212	654493.71	4276840.50	43.50	0.00	1.04E-6	22.50		20.40	2.37
	L0000213	654457.88	4276815.21	43.46	0.00	1.04E-6	22.50		20.40	2.37
	L0000214	654422.04	4276789.93	43.60	0.00	1.04E-6	22.50		20.40	2.37
	L0000215	654386.21	4276764.64	43.53	0.00	1.04E-6	22.50		20.40	2.37
	L0000216	654349.83	4276740.22	43.31	0.00	1.04E-6	22.50		20.40	2.37
	L0000217	654311.87	4276718.26	43.16	0.00	1.04E-6	22.50		20.40	2.37
	L0000218	654273.91	4276696.30	43.03	0.00	1.04E-6	22.50		20.40	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE6	L0000219	654235.95	4276674.34	42.58	0.00	1.04E-6	22.50		20.40	2.37
	L0000220	654197.99	4276652.38	42.35	0.00	1.04E-6	22.50		20.40	2.37
	L0000221	654160.03	4276630.42	42.18	0.00	1.04E-6	22.50		20.40	2.37
	L0000222	654122.07	4276608.46	42.15	0.00	1.04E-6	22.50		20.40	2.37
	L0000223	654084.11	4276586.50	42.12	0.00	1.04E-6	22.50		20.40	2.37
	L0000224	654046.15	4276564.54	42.10	0.00	1.04E-6	22.50		20.40	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE7	L0000225	655261.64	4277267.39	45.82	0.00	8.82E-7	22.50		20.62	2.37
	L0000226	655257.63	4277311.54	43.83	0.00	8.82E-7	22.50		20.62	2.37
	L0000227	655287.59	4277342.47	42.14	0.00	8.82E-7	22.50		20.62	2.37
	L0000228	655320.39	4277372.30	42.12	0.00	8.82E-7	22.50		20.62	2.37
	L0000229	655353.47	4277401.81	42.24	0.00	8.82E-7	22.50		20.62	2.37
	L0000230	655387.44	4277430.30	42.23	0.00	8.82E-7	22.50		20.62	2.37
	L0000231	655421.41	4277458.79	42.21	0.00	8.82E-7	22.50		20.62	2.37
	L0000232	655455.38	4277487.28	42.32	0.00	8.82E-7	22.50		20.62	2.37
	L0000233	655489.36	4277515.77	42.29	0.00	8.82E-7	22.50		20.62	2.37
	L0000234	655524.46	4277542.74	42.32	0.00	8.82E-7	22.50		20.62	2.37
	L0000235	655561.58	4277566.98	42.34	0.00	8.82E-7	22.50		20.62	2.37
	L0000236	655598.70	4277591.22	42.35	0.00	8.82E-7	22.50		20.62	2.37
	L0000237	655635.82	4277615.47	42.33	0.00	8.82E-7	22.50		20.62	2.37
	L0000238	655671.66	4277641.56	42.48	0.00	8.82E-7	22.50		20.62	2.37
	L0000239	655707.23	4277668.02	42.47	0.00	8.82E-7	22.50		20.62	2.37
	L0000240	655742.81	4277694.48	42.60	0.00	8.82E-7	22.50		20.62	2.37
	L0000241	655778.38	4277720.94	42.70	0.00	8.82E-7	22.50		20.62	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE7	L0000242	655813.96	4277747.40	42.65	0.00	8.82E-7	22.50		20.62	2.37
	L0000243	655849.53	4277773.86	42.68	0.00	8.82E-7	22.50		20.62	2.37
	L0000244	655885.11	4277800.32	42.61	0.00	8.82E-7	22.50		20.62	2.37
	L0000245	655920.68	4277826.78	42.22	0.00	8.82E-7	22.50		20.62	2.37
	L0000246	655956.26	4277853.24	42.04	0.00	8.82E-7	22.50		20.62	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE8	L0000247	655109.87	4277035.39	44.84	0.00	9.07E-7	22.50		20.14	2.37
	L0000248	655138.54	4277057.49	44.70	0.00	9.07E-7	22.50		20.14	2.37
	L0000249	655177.63	4277076.11	44.57	0.00	9.07E-7	22.50		20.14	2.37
	L0000250	655216.73	4277094.73	44.41	0.00	9.07E-7	22.50		20.14	2.37
	L0000251	655255.83	4277113.35	44.42	0.00	9.07E-7	22.50		20.14	2.37
	L0000252	655294.93	4277131.97	44.76	0.00	9.07E-7	22.50		20.14	2.37

Source Pathway - Source Inputs

Source Pathway - Source Inputs

Area Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Length of X Side [m]	Length of Y Side [m]	Orientation Angle from North [deg]	Initial Vertical Dim. [m]
AREA	AREA1	655254.35	4276972.19	44.91	3.68	3.32E-8	3.05	2.74	0.00	
AREA	AREA2	655263.08	4276872.51	44.99	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA3	655324.38	4276731.03	44.49	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA4	655354.88	4276671.66	44.91	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA5	655384.85	4276614.36	44.67	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA6	655421.11	4276545.49	45.12	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA7	655458.97	4276474.52	45.07	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA8	655194.92	4276710.63	44.94	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA9	655222.31	4276654.13	44.92	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA10	655253.13	4276592.49	44.91	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA11	655276.98	4276536.16	44.91	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA12	655310.38	4276469.98	45.09	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA13	654844.37	4276765.50	44.27	3.68	3.32E-8	2.74	3.05	0.00	

Source Pathway - Source Inputs

AERMOD

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Length of X Side [m]	Length of Y Side [m]	Orientation Angle from North [deg]	Initial Vertical Dim. [m]
AREA	AREA14	654953.95	4276810.87	44.73	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA15	655134.59	4276886.21	44.97	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA16	655032.72	4276842.55	44.83	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA17	654877.76	4276688.44	43.89	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA18	654983.92	4276733.82	44.80	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA19	655066.96	4276768.06	44.59	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA20	655161.99	4276809.16	44.82	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA21	654510.28	4276616.70	42.64	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA22	654630.28	4276664.34	43.03	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA23	654766.37	4276719.39	43.87	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA24	654536.87	4276555.47	42.75	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA25	654667.40	4276608.04	42.97	3.68	3.32E-8	2.74	3.05	0.00	
AREA	AREA26	654789.26	4276658.15	43.70	3.68	3.32E-8	2.74	3.05	0.00	

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE1 (Internal circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00003		654522.28	4276588.37	42.64	0.00
			655211.15	4276878.69	45.02	0.00
			655401.41	4276489.96	45.39	0.00
			655406.34	4276486.68	45.27	0.00

Source Type: LINE VOLUME

Source: SLINE2 (Internal circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00003		655191.47	4276888.53	45.05	0.00
			655116.02	4277024.66	44.07	0.00

Source Type: LINE VOLUME

Source: SLINE3 (Internal circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00003		655299.72	4276770.43	44.40	0.00
			655467.02	4276855.72	45.85	0.00

Source Type: LINE VOLUME

Source: SLINE4 (Internal circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00003		655199.22	4276922.76	45.05	0.00
			655307.07	4276968.98	45.40	0.00

Source Pathway - Source Inputs

Source Type: LINE VOLUME

Source: SLINE5 (Off Site- Nimbus Road & Hazle Avenue)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00001		655460.87	4276875.28	45.91	0.00
			655136.03	4277428.17	45.33	0.00

Source Type: LINE VOLUME

Source: SLINE6 (50 West)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00004		655145.11	4277429.83	45.05	0.00
			655158.47	4277467.24	43.07	0.00
			655198.54	4277488.61	42.03	0.00
			655241.29	4277467.24	41.63	0.00
			655254.65	4277448.54	41.44	0.00
			655257.32	4277400.45	42.08	0.00
			655222.59	4277373.73	41.91	0.00
			655067.64	4277245.50	42.87	0.00
			654359.67	4276745.91	43.41	0.00
			654036.42	4276558.91	42.20	0.00

Source Type: LINE VOLUME

Source: SLINE7 (50 East)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	0.00002		655262.66	4277256.18	45.91	0.00
			655257.32	4277314.96	43.45	0.00
			655345.48	4277395.10	42.32	0.00
			655511.12	4277534.03	42.33	0.00
			655642.02	4277619.52	42.18	0.00
			655965.28	4277859.96	41.83	0.00

Source Pathway - Source Inputs

Source Type: LINE VOLUME

Source: SLINE8 (Folsom Blvd.)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.50	5.44E-6		655115.07	4277025.41	44.08	0.00
			655106.33	4277042.16	44.71	0.00
			655305.09	4277136.80	44.99	0.00

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000131	654532.64	4276592.74	42.53	0.00	9.52E-7	22.50		20.82	2.37
	L0000132	654573.89	4276610.13	42.14	0.00	9.52E-7	22.50		20.82	2.37
	L0000133	654615.14	4276627.51	42.51	0.00	9.52E-7	22.50		20.82	2.37
	L0000134	654656.38	4276644.89	42.48	0.00	9.52E-7	22.50		20.82	2.37
	L0000135	654697.63	4276662.27	43.17	0.00	9.52E-7	22.50		20.82	2.37
	L0000136	654738.88	4276679.66	43.93	0.00	9.52E-7	22.50		20.82	2.37
	L0000137	654780.12	4276697.04	44.09	0.00	9.52E-7	22.50		20.82	2.37
	L0000138	654821.37	4276714.42	44.30	0.00	9.52E-7	22.50		20.82	2.37
	L0000139	654862.62	4276731.80	44.69	0.00	9.52E-7	22.50		20.82	2.37
	L0000140	654903.86	4276749.19	44.23	0.00	9.52E-7	22.50		20.82	2.37
	L0000141	654945.11	4276766.57	44.84	0.00	9.52E-7	22.50		20.82	2.37
	L0000142	654986.36	4276783.95	44.81	0.00	9.52E-7	22.50		20.82	2.37
	L0000143	655027.60	4276801.33	44.68	0.00	9.52E-7	22.50		20.82	2.37
	L0000144	655068.85	4276818.72	44.79	0.00	9.52E-7	22.50		20.82	2.37
	L0000145	655110.10	4276836.10	44.86	0.00	9.52E-7	22.50		20.82	2.37
	L0000146	655151.34	4276853.48	44.81	0.00	9.52E-7	22.50		20.82	2.37
	L0000147	655192.59	4276870.86	44.62	0.00	9.52E-7	22.50		20.82	2.37
	L0000148	655221.97	4276856.58	45.19	0.00	9.52E-7	22.50		20.82	2.37
	L0000149	655241.65	4276816.38	45.25	0.00	9.52E-7	22.50		20.82	2.37
	L0000150	655261.33	4276776.17	44.81	0.00	9.52E-7	22.50		20.82	2.37
	L0000151	655281.01	4276735.97	44.94	0.00	9.52E-7	22.50		20.82	2.37
	L0000152	655300.68	4276695.77	44.51	0.00	9.52E-7	22.50		20.82	2.37
	L0000153	655320.36	4276655.57	44.09	0.00	9.52E-7	22.50		20.82	2.37
	L0000154	655340.04	4276615.36	44.46	0.00	9.52E-7	22.50		20.82	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000155	655359.71	4276575.16	44.97	0.00	9.52E-7	22.50		20.82	2.37
	L0000156	655379.39	4276534.96	45.06	0.00	9.52E-7	22.50		20.82	2.37
	L0000157	655399.07	4276494.76	45.62	0.00	9.52E-7	22.50		20.82	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE2	L0000158	655186.02	4276898.37	45.06	0.00	6.43E-6	22.50		20.64	233.02
	L0000159	655164.50	4276937.19	44.67	0.00	6.43E-6	22.50		20.64	233.02
	L0000160	655142.99	4276976.00	45.38	0.00	6.43E-6	22.50		20.64	233.02
	L0000161	655121.48	4277014.82	44.59	0.00	6.43E-6	22.50		20.64	233.02

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE3	L0000162	655309.75	4276775.54	44.58	0.00	5.14E-6	22.50		19.22	2.37
	L0000163	655346.56	4276794.31	44.74	0.00	5.14E-6	22.50		19.22	2.37
	L0000164	655383.37	4276813.08	44.37	0.00	5.14E-6	22.50		19.22	2.37
	L0000165	655420.19	4276831.85	44.57	0.00	5.14E-6	22.50		19.22	2.37
	L0000166	655457.00	4276850.61	45.04	0.00	5.14E-6	22.50		19.22	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0000167	655209.56	4276927.19	45.01	0.00	6.43E-6	22.50		14.70	2.37
	L0000168	655238.62	4276939.64	45.03	0.00	6.43E-6	22.50		14.70	2.37
	L0000169	655267.67	4276952.10	45.08	0.00	6.43E-6	22.50		14.70	2.37
	L0000170	655296.73	4276964.55	45.33	0.00	6.43E-6	22.50		14.70	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE5	L0000171	655455.17	4276884.98	45.91	0.00	9.87E-7	22.50		20.56	2.37
	L0000172	655432.78	4276923.08	45.95	0.00	9.87E-7	22.50		20.56	2.37
	L0000173	655410.39	4276961.19	45.88	0.00	9.87E-7	22.50		20.56	2.37
	L0000174	655388.00	4276999.30	45.92	0.00	9.87E-7	22.50		20.56	2.37
	L0000175	655365.62	4277037.40	45.73	0.00	9.87E-7	22.50		20.56	2.37
	L0000176	655343.23	4277075.51	45.63	0.00	9.87E-7	22.50		20.56	2.37
	L0000177	655320.84	4277113.61	45.47	0.00	9.87E-7	22.50		20.56	2.37
	L0000178	655298.45	4277151.72	44.61	0.00	9.87E-7	22.50		20.56	2.37
	L0000179	655276.06	4277189.83	44.62	0.00	9.87E-7	22.50		20.56	2.37
	L0000180	655253.67	4277227.93	45.72	0.00	9.87E-7	22.50		20.56	2.37
	L0000181	655231.28	4277266.04	48.18	0.00	9.87E-7	22.50		20.56	2.37
	L0000182	655208.89	4277304.15	42.62	0.00	9.87E-7	22.50		20.56	2.37
	L0000183	655186.50	4277342.25	42.41	0.00	9.87E-7	22.50		20.56	2.37
	L0000184	655164.12	4277380.36	48.16	0.00	9.87E-7	22.50		20.56	2.37
	L0000185	655141.73	4277418.47	45.77	0.00	9.87E-7	22.50		20.56	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE6	L0000186	655148.90	4277440.43	44.22	0.00	1.04E-6	22.50		20.40	2.37
	L0000187	655172.05	4277474.48	42.21	0.00	1.04E-6	22.50		20.40	2.37
	L0000188	655210.91	4277482.43	41.30	0.00	1.04E-6	22.50		20.40	2.37
	L0000189	655247.04	4277459.19	41.40	0.00	1.04E-6	22.50		20.40	2.37
	L0000190	655256.35	4277417.82	41.73	0.00	1.04E-6	22.50		20.40	2.37
	L0000191	655236.35	4277384.32	41.59	0.00	1.04E-6	22.50		20.40	2.37
	L0000192	655202.18	4277356.84	42.26	0.00	1.04E-6	22.50		20.40	2.37
	L0000193	655168.39	4277328.88	42.54	0.00	1.04E-6	22.50		20.40	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE6	L0000194	655134.61	4277300.92	42.75	0.00	1.04E-6	22.50		20.40	2.37
	L0000195	655100.83	4277272.96	42.78	0.00	1.04E-6	22.50		20.40	2.37
	L0000196	655067.00	4277245.05	42.92	0.00	1.04E-6	22.50		20.40	2.37
	L0000197	655031.17	4277219.76	42.92	0.00	1.04E-6	22.50		20.40	2.37
	L0000198	654995.34	4277194.48	43.05	0.00	1.04E-6	22.50		20.40	2.37
	L0000199	654959.51	4277169.20	43.00	0.00	1.04E-6	22.50		20.40	2.37
	L0000200	654923.68	4277143.91	43.10	0.00	1.04E-6	22.50		20.40	2.37
	L0000201	654887.85	4277118.63	43.21	0.00	1.04E-6	22.50		20.40	2.37
	L0000202	654852.02	4277093.34	43.23	0.00	1.04E-6	22.50		20.40	2.37
	L0000203	654816.19	4277068.06	43.33	0.00	1.04E-6	22.50		20.40	2.37
	L0000204	654780.36	4277042.77	43.29	0.00	1.04E-6	22.50		20.40	2.37
	L0000205	654744.52	4277017.49	43.37	0.00	1.04E-6	22.50		20.40	2.37
	L0000206	654708.69	4276992.20	43.39	0.00	1.04E-6	22.50		20.40	2.37
	L0000207	654672.86	4276966.92	43.44	0.00	1.04E-6	22.50		20.40	2.37
	L0000208	654637.03	4276941.63	43.44	0.00	1.04E-6	22.50		20.40	2.37
	L0000209	654601.20	4276916.35	43.44	0.00	1.04E-6	22.50		20.40	2.37
	L0000210	654565.37	4276891.07	43.56	0.00	1.04E-6	22.50		20.40	2.37
	L0000211	654529.54	4276865.78	43.51	0.00	1.04E-6	22.50		20.40	2.37
	L0000212	654493.71	4276840.50	43.50	0.00	1.04E-6	22.50		20.40	2.37
	L0000213	654457.88	4276815.21	43.46	0.00	1.04E-6	22.50		20.40	2.37
	L0000214	654422.04	4276789.93	43.60	0.00	1.04E-6	22.50		20.40	2.37
	L0000215	654386.21	4276764.64	43.53	0.00	1.04E-6	22.50		20.40	2.37
	L0000216	654349.83	4276740.22	43.31	0.00	1.04E-6	22.50		20.40	2.37
	L0000217	654311.87	4276718.26	43.16	0.00	1.04E-6	22.50		20.40	2.37
	L0000218	654273.91	4276696.30	43.03	0.00	1.04E-6	22.50		20.40	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE6	L0000219	654235.95	4276674.34	42.58	0.00	1.04E-6	22.50		20.40	2.37
	L0000220	654197.99	4276652.38	42.35	0.00	1.04E-6	22.50		20.40	2.37
	L0000221	654160.03	4276630.42	42.18	0.00	1.04E-6	22.50		20.40	2.37
	L0000222	654122.07	4276608.46	42.15	0.00	1.04E-6	22.50		20.40	2.37
	L0000223	654084.11	4276586.50	42.12	0.00	1.04E-6	22.50		20.40	2.37
	L0000224	654046.15	4276564.54	42.10	0.00	1.04E-6	22.50		20.40	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE7	L0000225	655261.64	4277267.39	45.82	0.00	8.82E-7	22.50		20.62	2.37
	L0000226	655257.63	4277311.54	43.83	0.00	8.82E-7	22.50		20.62	2.37
	L0000227	655287.59	4277342.47	42.14	0.00	8.82E-7	22.50		20.62	2.37
	L0000228	655320.39	4277372.30	42.12	0.00	8.82E-7	22.50		20.62	2.37
	L0000229	655353.47	4277401.81	42.24	0.00	8.82E-7	22.50		20.62	2.37
	L0000230	655387.44	4277430.30	42.23	0.00	8.82E-7	22.50		20.62	2.37
	L0000231	655421.41	4277458.79	42.21	0.00	8.82E-7	22.50		20.62	2.37
	L0000232	655455.38	4277487.28	42.32	0.00	8.82E-7	22.50		20.62	2.37
	L0000233	655489.36	4277515.77	42.29	0.00	8.82E-7	22.50		20.62	2.37
	L0000234	655524.46	4277542.74	42.32	0.00	8.82E-7	22.50		20.62	2.37
	L0000235	655561.58	4277566.98	42.34	0.00	8.82E-7	22.50		20.62	2.37
	L0000236	655598.70	4277591.22	42.35	0.00	8.82E-7	22.50		20.62	2.37
	L0000237	655635.82	4277615.47	42.33	0.00	8.82E-7	22.50		20.62	2.37
	L0000238	655671.66	4277641.56	42.48	0.00	8.82E-7	22.50		20.62	2.37
	L0000239	655707.23	4277668.02	42.47	0.00	8.82E-7	22.50		20.62	2.37
	L0000240	655742.81	4277694.48	42.60	0.00	8.82E-7	22.50		20.62	2.37
	L0000241	655778.38	4277720.94	42.70	0.00	8.82E-7	22.50		20.62	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE7	L0000242	655813.96	4277747.40	42.65	0.00	8.82E-7	22.50		20.62	2.37
	L0000243	655849.53	4277773.86	42.68	0.00	8.82E-7	22.50		20.62	2.37
	L0000244	655885.11	4277800.32	42.61	0.00	8.82E-7	22.50		20.62	2.37
	L0000245	655920.68	4277826.78	42.22	0.00	8.82E-7	22.50		20.62	2.37
	L0000246	655956.26	4277853.24	42.04	0.00	8.82E-7	22.50		20.62	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE8	L0000247	655109.87	4277035.39	44.84	0.00	9.07E-7	22.50		20.14	2.37
	L0000248	655138.54	4277057.49	44.70	0.00	9.07E-7	22.50		20.14	2.37
	L0000249	655177.63	4277076.11	44.57	0.00	9.07E-7	22.50		20.14	2.37
	L0000250	655216.73	4277094.73	44.41	0.00	9.07E-7	22.50		20.14	2.37
	L0000251	655255.83	4277113.35	44.42	0.00	9.07E-7	22.50		20.14	2.37
	L0000252	655294.93	4277131.97	44.76	0.00	9.07E-7	22.50		20.14	2.37

Source Pathway

Building Downwash Information

Source ID:

Emission Rate Units for Output

For Concentration

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

Source Pathway

Building Downwash Information

Source ID:

Emission Rate Units for Output

For Concentration

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

Receptor Pathway

Receptor Networks

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

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	653959.73	4276104.98	21	21	100.00	100.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	655033.41	4277035.85		43.12	
2	655477.32	4277252.61		45.29	
3	655342.20	4277110.88		45.53	
4	655407.74	4276997.93		45.46	
5	655484.43	4276873.82		45.58	
6	655559.73	4276735.77		45.62	
7	655630.85	4276614.46		45.68	

Plant Boundary Receptors

Receptor Pathway

Receptor Networks

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

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	653959.73	4276104.98	21	21	100.00	100.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	655033.41	4277035.85		43.12	
2	655477.32	4277252.61		45.29	
3	655342.20	4277110.88		45.53	
4	655407.74	4276997.93		45.46	
5	655484.43	4276873.82		45.58	
6	655559.73	4276735.77		45.62	
7	655630.85	4276614.46		45.68	

Plant Boundary Receptors

Receptor Pathway

Terrain Elevations and Flagpole Heights for Network Grids

Uniform Cartesian Grid

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	653959.73	4276104.98	42.00	Option not Selected
	654059.73	4276104.98	42.00	
	654159.73	4276104.98	42.00	
	654259.73	4276104.98	42.00	
	654359.73	4276104.98	42.10	
	654459.73	4276104.98	42.10	
	654559.73	4276104.98	42.30	
	654659.73	4276104.98	46.70	
	654759.73	4276104.98	46.90	
	654859.73	4276104.98	44.80	
	654959.73	4276104.98	48.50	
	655059.73	4276104.98	48.30	
	655159.73	4276104.98	49.00	
	655259.73	4276104.98	46.30	
	655359.73	4276104.98	48.80	
	655459.73	4276104.98	51.40	
	655559.73	4276104.98	51.30	
	655659.73	4276104.98	51.40	
	655759.73	4276104.98	51.90	
	655859.73	4276104.98	52.10	
	655959.73	4276104.98	53.10	
	653959.73	4276204.98	41.70	
	654059.73	4276204.98	42.00	
	654159.73	4276204.98	42.10	
	654259.73	4276204.98	42.20	
	654359.73	4276204.98	42.60	
	654459.73	4276204.98	42.70	
	654559.73	4276204.98	43.10	
	654659.73	4276204.98	42.50	
	654759.73	4276204.98	43.00	
	654859.73	4276204.98	44.20	
	654959.73	4276204.98	47.00	
	655059.73	4276204.98	47.70	
	655159.73	4276204.98	45.80	
	655259.73	4276204.98	46.30	
	655359.73	4276204.98	46.70	
	655459.73	4276204.98	46.30	
	655559.73	4276204.98	47.10	
	655659.73	4276204.98	49.40	
	655759.73	4276204.98	49.50	
	655859.73	4276204.98	51.60	
	655959.73	4276204.98	53.10	
	653959.73	4276304.98	35.20	
	654059.73	4276304.98	41.90	
	654159.73	4276304.98	41.90	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654259.73	4276304.98	42.10	Option not Selected
	654359.73	4276304.98	42.40	
	654459.73	4276304.98	42.50	
	654559.73	4276304.98	42.90	
	654659.73	4276304.98	43.30	
	654759.73	4276304.98	43.70	
	654859.73	4276304.98	44.30	
	654959.73	4276304.98	45.50	
	655059.73	4276304.98	45.20	
	655159.73	4276304.98	44.60	
	655259.73	4276304.98	45.70	
	655359.73	4276304.98	45.20	
	655459.73	4276304.98	45.70	
	655559.73	4276304.98	48.10	
	655659.73	4276304.98	47.60	
	655759.73	4276304.98	47.50	
	655859.73	4276304.98	49.50	
	655959.73	4276304.98	50.10	
	653959.73	4276404.98	40.60	
	654059.73	4276404.98	41.90	
	654159.73	4276404.98	42.10	
	654259.73	4276404.98	42.20	
	654359.73	4276404.98	42.90	
	654459.73	4276404.98	42.90	
	654559.73	4276404.98	42.80	
	654659.73	4276404.98	43.20	
	654759.73	4276404.98	43.90	
	654859.73	4276404.98	45.10	
	654959.73	4276404.98	45.20	
	655059.73	4276404.98	45.50	
	655159.73	4276404.98	45.40	
	655259.73	4276404.98	45.40	
	655359.73	4276404.98	44.60	
	655459.73	4276404.98	44.80	
	655559.73	4276404.98	44.80	
	655659.73	4276404.98	47.90	
	655759.73	4276404.98	47.70	
	655859.73	4276404.98	48.50	
	655959.73	4276404.98	48.20	
	653959.73	4276504.98	42.10	
	654059.73	4276504.98	42.50	
	654159.73	4276504.98	42.30	
	654259.73	4276504.98	42.90	
	654359.73	4276504.98	43.20	
	654459.73	4276504.98	44.10	
	654559.73	4276504.98	42.90	
	654659.73	4276504.98	42.70	
	654759.73	4276504.98	44.60	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654859.73	4276504.98	44.80	Option not Selected
	654959.73	4276504.98	44.90	
	655059.73	4276504.98	45.00	
	655159.73	4276504.98	45.00	
	655259.73	4276504.98	45.20	
	655359.73	4276504.98	44.90	
	655459.73	4276504.98	45.50	
	655559.73	4276504.98	45.20	
	655659.73	4276504.98	45.10	
	655759.73	4276504.98	47.60	
	655859.73	4276504.98	48.90	
	655959.73	4276504.98	48.90	
	653959.73	4276604.98	41.80	
	654059.73	4276604.98	41.50	
	654159.73	4276604.98	42.90	
	654259.73	4276604.98	42.60	
	654359.73	4276604.98	42.90	
	654459.73	4276604.98	43.30	
	654559.73	4276604.98	42.30	
	654659.73	4276604.98	42.90	
	654759.73	4276604.98	44.70	
	654859.73	4276604.98	44.00	
	654959.73	4276604.98	44.90	
	655059.73	4276604.98	44.90	
	655159.73	4276604.98	45.10	
	655259.73	4276604.98	44.80	
	655359.73	4276604.98	44.60	
	655459.73	4276604.98	45.00	
	655559.73	4276604.98	45.60	
	655659.73	4276604.98	45.80	
	655759.73	4276604.98	45.90	
	655859.73	4276604.98	46.30	
	655959.73	4276604.98	47.00	
	653959.73	4276704.98	39.70	
	654059.73	4276704.98	42.60	
	654159.73	4276704.98	42.20	
	654259.73	4276704.98	42.20	
	654359.73	4276704.98	43.30	
	654459.73	4276704.98	42.80	
	654559.73	4276704.98	42.30	
	654659.73	4276704.98	42.90	
	654759.73	4276704.98	43.50	
	654859.73	4276704.98	44.30	
	654959.73	4276704.98	44.60	
	655059.73	4276704.98	44.70	
	655159.73	4276704.98	44.90	
	655259.73	4276704.98	44.40	
	655359.73	4276704.98	44.40	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	655459.73	4276704.98	44.90	Option not Selected
	655559.73	4276704.98	45.90	
	655659.73	4276704.98	45.80	
	655759.73	4276704.98	45.00	
	655859.73	4276704.98	46.70	
	655959.73	4276704.98	46.70	
	653959.73	4276804.98	38.10	
	654059.73	4276804.98	34.50	
	654159.73	4276804.98	41.70	
	654259.73	4276804.98	42.60	
	654359.73	4276804.98	42.50	
	654459.73	4276804.98	43.80	
	654559.73	4276804.98	43.60	
	654659.73	4276804.98	43.20	
	654759.73	4276804.98	42.90	
	654859.73	4276804.98	44.00	
	654959.73	4276804.98	44.80	
	655059.73	4276804.98	44.60	
	655159.73	4276804.98	44.90	
	655259.73	4276804.98	45.00	
	655359.73	4276804.98	44.60	
	655459.73	4276804.98	45.10	
	655559.73	4276804.98	45.20	
	655659.73	4276804.98	46.20	
	655759.73	4276804.98	47.50	
	655859.73	4276804.98	46.90	
	655959.73	4276804.98	45.80	
	653959.73	4276904.98	37.40	
	654059.73	4276904.98	38.00	
	654159.73	4276904.98	37.90	
	654259.73	4276904.98	42.40	
	654359.73	4276904.98	43.00	
	654459.73	4276904.98	42.50	
	654559.73	4276904.98	43.00	
	654659.73	4276904.98	43.00	
	654759.73	4276904.98	43.30	
	654859.73	4276904.98	43.30	
	654959.73	4276904.98	44.80	
	655059.73	4276904.98	44.70	
	655159.73	4276904.98	45.00	
	655259.73	4276904.98	45.20	
	655359.73	4276904.98	44.40	
	655459.73	4276904.98	45.70	
	655559.73	4276904.98	45.40	
	655659.73	4276904.98	45.00	
	655759.73	4276904.98	47.70	
	655859.73	4276904.98	47.60	
	655959.73	4276904.98	46.60	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	653959.73	4277004.98	38.50	Option not Selected
	654059.73	4277004.98	37.70	
	654159.73	4277004.98	38.10	
	654259.73	4277004.98	40.80	
	654359.73	4277004.98	35.20	
	654459.73	4277004.98	43.00	
	654559.73	4277004.98	41.50	
	654659.73	4277004.98	42.70	
	654759.73	4277004.98	43.60	
	654859.73	4277004.98	43.20	
	654959.73	4277004.98	43.40	
	655059.73	4277004.98	44.60	
	655159.73	4277004.98	45.20	
	655259.73	4277004.98	45.10	
	655359.73	4277004.98	45.90	
	655459.73	4277004.98	45.60	
	655559.73	4277004.98	45.40	
	655659.73	4277004.98	46.30	
	655759.73	4277004.98	47.00	
	655859.73	4277004.98	46.30	
	655959.73	4277004.98	47.40	
	653959.73	4277104.98	38.80	
	654059.73	4277104.98	38.30	
	654159.73	4277104.98	39.20	
	654259.73	4277104.98	40.90	
	654359.73	4277104.98	40.20	
	654459.73	4277104.98	35.60	
	654559.73	4277104.98	40.90	
	654659.73	4277104.98	41.20	
	654759.73	4277104.98	41.30	
	654859.73	4277104.98	43.10	
	654959.73	4277104.98	42.80	
	655059.73	4277104.98	43.60	
	655159.73	4277104.98	44.70	
	655259.73	4277104.98	44.50	
	655359.73	4277104.98	45.40	
	655459.73	4277104.98	45.50	
	655559.73	4277104.98	45.60	
	655659.73	4277104.98	46.30	
	655759.73	4277104.98	46.30	
	655859.73	4277104.98	46.50	
	655959.73	4277104.98	47.30	
	653959.73	4277204.98	39.90	
	654059.73	4277204.98	39.20	
	654159.73	4277204.98	41.70	
	654259.73	4277204.98	40.40	
	654359.73	4277204.98	40.90	
	654459.73	4277204.98	41.00	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654559.73	4277204.98	37.50	Option not Selected
	654659.73	4277204.98	41.90	
	654759.73	4277204.98	42.00	
	654859.73	4277204.98	41.40	
	654959.73	4277204.98	42.50	
	655059.73	4277204.98	43.10	
	655159.73	4277204.98	42.10	
	655259.73	4277204.98	45.00	
	655359.73	4277204.98	45.00	
	655459.73	4277204.98	45.30	
	655559.73	4277204.98	46.30	
	655659.73	4277204.98	46.60	
	655759.73	4277204.98	46.50	
	655859.73	4277204.98	46.60	
	655959.73	4277204.98	46.80	
	653959.73	4277304.98	35.40	
	654059.73	4277304.98	38.90	
	654159.73	4277304.98	42.00	
	654259.73	4277304.98	41.60	
	654359.73	4277304.98	41.70	
	654459.73	4277304.98	40.80	
	654559.73	4277304.98	41.90	
	654659.73	4277304.98	34.80	
	654759.73	4277304.98	42.00	
	654859.73	4277304.98	41.30	
	654959.73	4277304.98	41.50	
	655059.73	4277304.98	41.60	
	655159.73	4277304.98	43.00	
	655259.73	4277304.98	44.30	
	655359.73	4277304.98	44.30	
	655459.73	4277304.98	45.10	
	655559.73	4277304.98	45.40	
	655659.73	4277304.98	45.70	
	655759.73	4277304.98	47.30	
	655859.73	4277304.98	47.10	
	655959.73	4277304.98	47.00	
	653959.73	4277404.98	37.00	
	654059.73	4277404.98	36.40	
	654159.73	4277404.98	39.30	
	654259.73	4277404.98	40.80	
	654359.73	4277404.98	39.00	
	654459.73	4277404.98	41.30	
	654559.73	4277404.98	40.50	
	654659.73	4277404.98	42.30	
	654759.73	4277404.98	41.80	
	654859.73	4277404.98	41.80	
	654959.73	4277404.98	41.30	
	655059.73	4277404.98	41.70	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	655159.73	4277404.98	46.40	Option not Selected
	655259.73	4277404.98	42.40	
	655359.73	4277404.98	42.20	
	655459.73	4277404.98	44.70	
	655559.73	4277404.98	46.00	
	655659.73	4277404.98	46.00	
	655759.73	4277404.98	46.60	
	655859.73	4277404.98	46.70	
	655959.73	4277404.98	47.10	
	653959.73	4277504.98	28.00	
	654059.73	4277504.98	34.30	
	654159.73	4277504.98	39.50	
	654259.73	4277504.98	37.50	
	654359.73	4277504.98	37.90	
	654459.73	4277504.98	38.30	
	654559.73	4277504.98	38.00	
	654659.73	4277504.98	40.60	
	654759.73	4277504.98	36.80	
	654859.73	4277504.98	40.60	
	654959.73	4277504.98	41.80	
	655059.73	4277504.98	42.20	
	655159.73	4277504.98	40.10	
	655259.73	4277504.98	42.70	
	655359.73	4277504.98	41.30	
	655459.73	4277504.98	42.50	
	655559.73	4277504.98	42.40	
	655659.73	4277504.98	45.40	
	655759.73	4277504.98	46.30	
	655859.73	4277504.98	47.20	
	655959.73	4277504.98	46.90	
	653959.73	4277604.98	24.00	
	654059.73	4277604.98	30.50	
	654159.73	4277604.98	33.10	
	654259.73	4277604.98	32.40	
	654359.73	4277604.98	33.20	
	654459.73	4277604.98	32.90	
	654559.73	4277604.98	33.70	
	654659.73	4277604.98	39.50	
	654759.73	4277604.98	41.60	
	654859.73	4277604.98	41.00	
	654959.73	4277604.98	35.00	
	655059.73	4277604.98	40.80	
	655159.73	4277604.98	41.80	
	655259.73	4277604.98	44.00	
	655359.73	4277604.98	45.80	
	655459.73	4277604.98	46.60	
	655559.73	4277604.98	41.90	
	655659.73	4277604.98	42.00	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	655759.73	4277604.98	46.10	Option not Selected
	655859.73	4277604.98	46.70	
	655959.73	4277604.98	47.60	
	653959.73	4277704.98	25.90	
	654059.73	4277704.98	24.20	
	654159.73	4277704.98	24.10	
	654259.73	4277704.98	27.30	
	654359.73	4277704.98	32.20	
	654459.73	4277704.98	32.70	
	654559.73	4277704.98	32.50	
	654659.73	4277704.98	39.50	
	654759.73	4277704.98	36.60	
	654859.73	4277704.98	40.90	
	654959.73	4277704.98	41.00	
	655059.73	4277704.98	40.40	
	655159.73	4277704.98	37.80	
	655259.73	4277704.98	42.30	
	655359.73	4277704.98	40.20	
	655459.73	4277704.98	40.10	
	655559.73	4277704.98	41.80	
	655659.73	4277704.98	43.50	
	655759.73	4277704.98	42.50	
	655859.73	4277704.98	46.00	
	655959.73	4277704.98	46.30	
	653959.73	4277804.98	35.40	
	654059.73	4277804.98	35.20	
	654159.73	4277804.98	29.00	
	654259.73	4277804.98	24.40	
	654359.73	4277804.98	24.10	
	654459.73	4277804.98	27.40	
	654559.73	4277804.98	42.80	
	654659.73	4277804.98	26.80	
	654759.73	4277804.98	25.90	
	654859.73	4277804.98	26.50	
	654959.73	4277804.98	25.50	
	655059.73	4277804.98	37.70	
	655159.73	4277804.98	37.70	
	655259.73	4277804.98	42.30	
	655359.73	4277804.98	40.70	
	655459.73	4277804.98	41.10	
	655559.73	4277804.98	40.50	
	655659.73	4277804.98	40.50	
	655759.73	4277804.98	41.60	
	655859.73	4277804.98	42.30	
	655959.73	4277804.98	43.40	
	653959.73	4277904.98	55.00	
	654059.73	4277904.98	61.10	
	654159.73	4277904.98	76.30	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654259.73	4277904.98	77.00	Option not Selected
	654359.73	4277904.98	50.00	
	654459.73	4277904.98	33.00	
	654559.73	4277904.98	25.50	
	654659.73	4277904.98	25.10	
	654759.73	4277904.98	25.50	
	654859.73	4277904.98	25.30	
	654959.73	4277904.98	37.70	
	655059.73	4277904.98	37.70	
	655159.73	4277904.98	37.80	
	655259.73	4277904.98	40.60	
	655359.73	4277904.98	40.90	
	655459.73	4277904.98	39.60	
	655559.73	4277904.98	40.20	
	655659.73	4277904.98	42.50	
	655759.73	4277904.98	40.80	
	655859.73	4277904.98	41.50	
	655959.73	4277904.98	40.00	
	653959.73	4278004.98	75.50	
	654059.73	4278004.98	76.30	
	654159.73	4278004.98	69.30	
	654259.73	4278004.98	76.80	
	654359.73	4278004.98	77.90	
	654459.73	4278004.98	56.10	
	654559.73	4278004.98	55.60	
	654659.73	4278004.98	53.20	
	654759.73	4278004.98	37.00	
	654859.73	4278004.98	25.20	
	654959.73	4278004.98	37.70	
	655059.73	4278004.98	37.80	
	655159.73	4278004.98	37.70	
	655259.73	4278004.98	37.70	
	655359.73	4278004.98	37.80	
	655459.73	4278004.98	39.70	
	655559.73	4278004.98	40.10	
	655659.73	4278004.98	40.20	
	655759.73	4278004.98	42.60	
	655859.73	4278004.98	41.00	
	655959.73	4278004.98	40.90	
	653959.73	4278104.98	53.30	
	654059.73	4278104.98	56.00	
	654159.73	4278104.98	71.10	
	654259.73	4278104.98	77.70	
	654359.73	4278104.98	77.80	
	654459.73	4278104.98	66.80	
	654559.73	4278104.98	78.80	
	654659.73	4278104.98	78.60	
	654759.73	4278104.98	78.10	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654859.73	4278104.98	69.60	Option not Selected
	654959.73	4278104.98	38.30	
	655059.73	4278104.98	37.80	
	655159.73	4278104.98	37.70	
	655259.73	4278104.98	37.70	
	655359.73	4278104.98	37.70	
	655459.73	4278104.98	37.70	
	655559.73	4278104.98	37.70	
	655659.73	4278104.98	37.50	
	655759.73	4278104.98	40.20	
	655859.73	4278104.98	42.30	
	655959.73	4278104.98	40.00	

Receptor Pathway

Terrain Elevations and Flagpole Heights for Network Grids

Uniform Cartesian Grid

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	653959.73	4276104.98	42.00	Option not Selected
	654059.73	4276104.98	42.00	
	654159.73	4276104.98	42.00	
	654259.73	4276104.98	42.00	
	654359.73	4276104.98	42.10	
	654459.73	4276104.98	42.10	
	654559.73	4276104.98	42.30	
	654659.73	4276104.98	46.70	
	654759.73	4276104.98	46.90	
	654859.73	4276104.98	44.80	
	654959.73	4276104.98	48.50	
	655059.73	4276104.98	48.30	
	655159.73	4276104.98	49.00	
	655259.73	4276104.98	46.30	
	655359.73	4276104.98	48.80	
	655459.73	4276104.98	51.40	
	655559.73	4276104.98	51.30	
	655659.73	4276104.98	51.40	
	655759.73	4276104.98	51.90	
	655859.73	4276104.98	52.10	
	655959.73	4276104.98	53.10	
	653959.73	4276204.98	41.70	
	654059.73	4276204.98	42.00	
	654159.73	4276204.98	42.10	
	654259.73	4276204.98	42.20	
	654359.73	4276204.98	42.60	
	654459.73	4276204.98	42.70	
	654559.73	4276204.98	43.10	
	654659.73	4276204.98	42.50	
	654759.73	4276204.98	43.00	
	654859.73	4276204.98	44.20	
	654959.73	4276204.98	47.00	
	655059.73	4276204.98	47.70	
	655159.73	4276204.98	45.80	
	655259.73	4276204.98	46.30	
	655359.73	4276204.98	46.70	
	655459.73	4276204.98	46.30	
	655559.73	4276204.98	47.10	
	655659.73	4276204.98	49.40	
	655759.73	4276204.98	49.50	
	655859.73	4276204.98	51.60	
	655959.73	4276204.98	53.10	
	653959.73	4276304.98	35.20	
	654059.73	4276304.98	41.90	
	654159.73	4276304.98	41.90	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654259.73	4276304.98	42.10	Option not Selected
	654359.73	4276304.98	42.40	
	654459.73	4276304.98	42.50	
	654559.73	4276304.98	42.90	
	654659.73	4276304.98	43.30	
	654759.73	4276304.98	43.70	
	654859.73	4276304.98	44.30	
	654959.73	4276304.98	45.50	
	655059.73	4276304.98	45.20	
	655159.73	4276304.98	44.60	
	655259.73	4276304.98	45.70	
	655359.73	4276304.98	45.20	
	655459.73	4276304.98	45.70	
	655559.73	4276304.98	48.10	
	655659.73	4276304.98	47.60	
	655759.73	4276304.98	47.50	
	655859.73	4276304.98	49.50	
	655959.73	4276304.98	50.10	
	653959.73	4276404.98	40.60	
	654059.73	4276404.98	41.90	
	654159.73	4276404.98	42.10	
	654259.73	4276404.98	42.20	
	654359.73	4276404.98	42.90	
	654459.73	4276404.98	42.90	
	654559.73	4276404.98	42.80	
	654659.73	4276404.98	43.20	
	654759.73	4276404.98	43.90	
	654859.73	4276404.98	45.10	
	654959.73	4276404.98	45.20	
	655059.73	4276404.98	45.50	
	655159.73	4276404.98	45.40	
	655259.73	4276404.98	45.40	
	655359.73	4276404.98	44.60	
	655459.73	4276404.98	44.80	
	655559.73	4276404.98	44.80	
	655659.73	4276404.98	47.90	
	655759.73	4276404.98	47.70	
	655859.73	4276404.98	48.50	
	655959.73	4276404.98	48.20	
	653959.73	4276504.98	42.10	
	654059.73	4276504.98	42.50	
	654159.73	4276504.98	42.30	
	654259.73	4276504.98	42.90	
	654359.73	4276504.98	43.20	
	654459.73	4276504.98	44.10	
	654559.73	4276504.98	42.90	
	654659.73	4276504.98	42.70	
	654759.73	4276504.98	44.60	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654859.73	4276504.98	44.80	Option not Selected
	654959.73	4276504.98	44.90	
	655059.73	4276504.98	45.00	
	655159.73	4276504.98	45.00	
	655259.73	4276504.98	45.20	
	655359.73	4276504.98	44.90	
	655459.73	4276504.98	45.50	
	655559.73	4276504.98	45.20	
	655659.73	4276504.98	45.10	
	655759.73	4276504.98	47.60	
	655859.73	4276504.98	48.90	
	655959.73	4276504.98	48.90	
	653959.73	4276604.98	41.80	
	654059.73	4276604.98	41.50	
	654159.73	4276604.98	42.90	
	654259.73	4276604.98	42.60	
	654359.73	4276604.98	42.90	
	654459.73	4276604.98	43.30	
	654559.73	4276604.98	42.30	
	654659.73	4276604.98	42.90	
	654759.73	4276604.98	44.70	
	654859.73	4276604.98	44.00	
	654959.73	4276604.98	44.90	
	655059.73	4276604.98	44.90	
	655159.73	4276604.98	45.10	
	655259.73	4276604.98	44.80	
	655359.73	4276604.98	44.60	
	655459.73	4276604.98	45.00	
	655559.73	4276604.98	45.60	
	655659.73	4276604.98	45.80	
	655759.73	4276604.98	45.90	
	655859.73	4276604.98	46.30	
	655959.73	4276604.98	47.00	
	653959.73	4276704.98	39.70	
	654059.73	4276704.98	42.60	
	654159.73	4276704.98	42.20	
	654259.73	4276704.98	42.20	
	654359.73	4276704.98	43.30	
	654459.73	4276704.98	42.80	
	654559.73	4276704.98	42.30	
	654659.73	4276704.98	42.90	
	654759.73	4276704.98	43.50	
	654859.73	4276704.98	44.30	
	654959.73	4276704.98	44.60	
	655059.73	4276704.98	44.70	
	655159.73	4276704.98	44.90	
	655259.73	4276704.98	44.40	
	655359.73	4276704.98	44.40	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	655459.73	4276704.98	44.90	Option not Selected
	655559.73	4276704.98	45.90	
	655659.73	4276704.98	45.80	
	655759.73	4276704.98	45.00	
	655859.73	4276704.98	46.70	
	655959.73	4276704.98	46.70	
	653959.73	4276804.98	38.10	
	654059.73	4276804.98	34.50	
	654159.73	4276804.98	41.70	
	654259.73	4276804.98	42.60	
	654359.73	4276804.98	42.50	
	654459.73	4276804.98	43.80	
	654559.73	4276804.98	43.60	
	654659.73	4276804.98	43.20	
	654759.73	4276804.98	42.90	
	654859.73	4276804.98	44.00	
	654959.73	4276804.98	44.80	
	655059.73	4276804.98	44.60	
	655159.73	4276804.98	44.90	
	655259.73	4276804.98	45.00	
	655359.73	4276804.98	44.60	
	655459.73	4276804.98	45.10	
	655559.73	4276804.98	45.20	
	655659.73	4276804.98	46.20	
	655759.73	4276804.98	47.50	
	655859.73	4276804.98	46.90	
	655959.73	4276804.98	45.80	
	653959.73	4276904.98	37.40	
	654059.73	4276904.98	38.00	
	654159.73	4276904.98	37.90	
	654259.73	4276904.98	42.40	
	654359.73	4276904.98	43.00	
	654459.73	4276904.98	42.50	
	654559.73	4276904.98	43.00	
	654659.73	4276904.98	43.00	
	654759.73	4276904.98	43.30	
	654859.73	4276904.98	43.30	
	654959.73	4276904.98	44.80	
	655059.73	4276904.98	44.70	
	655159.73	4276904.98	45.00	
	655259.73	4276904.98	45.20	
	655359.73	4276904.98	44.40	
	655459.73	4276904.98	45.70	
	655559.73	4276904.98	45.40	
	655659.73	4276904.98	45.00	
	655759.73	4276904.98	47.70	
	655859.73	4276904.98	47.60	
	655959.73	4276904.98	46.60	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	653959.73	4277004.98	38.50	Option not Selected
	654059.73	4277004.98	37.70	
	654159.73	4277004.98	38.10	
	654259.73	4277004.98	40.80	
	654359.73	4277004.98	35.20	
	654459.73	4277004.98	43.00	
	654559.73	4277004.98	41.50	
	654659.73	4277004.98	42.70	
	654759.73	4277004.98	43.60	
	654859.73	4277004.98	43.20	
	654959.73	4277004.98	43.40	
	655059.73	4277004.98	44.60	
	655159.73	4277004.98	45.20	
	655259.73	4277004.98	45.10	
	655359.73	4277004.98	45.90	
	655459.73	4277004.98	45.60	
	655559.73	4277004.98	45.40	
	655659.73	4277004.98	46.30	
	655759.73	4277004.98	47.00	
	655859.73	4277004.98	46.30	
	655959.73	4277004.98	47.40	
	653959.73	4277104.98	38.80	
	654059.73	4277104.98	38.30	
	654159.73	4277104.98	39.20	
	654259.73	4277104.98	40.90	
	654359.73	4277104.98	40.20	
	654459.73	4277104.98	35.60	
	654559.73	4277104.98	40.90	
	654659.73	4277104.98	41.20	
	654759.73	4277104.98	41.30	
	654859.73	4277104.98	43.10	
	654959.73	4277104.98	42.80	
	655059.73	4277104.98	43.60	
	655159.73	4277104.98	44.70	
	655259.73	4277104.98	44.50	
	655359.73	4277104.98	45.40	
	655459.73	4277104.98	45.50	
	655559.73	4277104.98	45.60	
	655659.73	4277104.98	46.30	
	655759.73	4277104.98	46.30	
	655859.73	4277104.98	46.50	
	655959.73	4277104.98	47.30	
	653959.73	4277204.98	39.90	
	654059.73	4277204.98	39.20	
	654159.73	4277204.98	41.70	
	654259.73	4277204.98	40.40	
	654359.73	4277204.98	40.90	
	654459.73	4277204.98	41.00	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654559.73	4277204.98	37.50	Option not Selected
	654659.73	4277204.98	41.90	
	654759.73	4277204.98	42.00	
	654859.73	4277204.98	41.40	
	654959.73	4277204.98	42.50	
	655059.73	4277204.98	43.10	
	655159.73	4277204.98	42.10	
	655259.73	4277204.98	45.00	
	655359.73	4277204.98	45.00	
	655459.73	4277204.98	45.30	
	655559.73	4277204.98	46.30	
	655659.73	4277204.98	46.60	
	655759.73	4277204.98	46.50	
	655859.73	4277204.98	46.60	
	655959.73	4277204.98	46.80	
	653959.73	4277304.98	35.40	
	654059.73	4277304.98	38.90	
	654159.73	4277304.98	42.00	
	654259.73	4277304.98	41.60	
	654359.73	4277304.98	41.70	
	654459.73	4277304.98	40.80	
	654559.73	4277304.98	41.90	
	654659.73	4277304.98	34.80	
	654759.73	4277304.98	42.00	
	654859.73	4277304.98	41.30	
	654959.73	4277304.98	41.50	
	655059.73	4277304.98	41.60	
	655159.73	4277304.98	43.00	
	655259.73	4277304.98	44.30	
	655359.73	4277304.98	44.30	
	655459.73	4277304.98	45.10	
	655559.73	4277304.98	45.40	
	655659.73	4277304.98	45.70	
	655759.73	4277304.98	47.30	
	655859.73	4277304.98	47.10	
	655959.73	4277304.98	47.00	
	653959.73	4277404.98	37.00	
	654059.73	4277404.98	36.40	
	654159.73	4277404.98	39.30	
	654259.73	4277404.98	40.80	
	654359.73	4277404.98	39.00	
	654459.73	4277404.98	41.30	
	654559.73	4277404.98	40.50	
	654659.73	4277404.98	42.30	
	654759.73	4277404.98	41.80	
	654859.73	4277404.98	41.80	
	654959.73	4277404.98	41.30	
	655059.73	4277404.98	41.70	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	655159.73	4277404.98	46.40	Option not Selected
	655259.73	4277404.98	42.40	
	655359.73	4277404.98	42.20	
	655459.73	4277404.98	44.70	
	655559.73	4277404.98	46.00	
	655659.73	4277404.98	46.00	
	655759.73	4277404.98	46.60	
	655859.73	4277404.98	46.70	
	655959.73	4277404.98	47.10	
	653959.73	4277504.98	28.00	
	654059.73	4277504.98	34.30	
	654159.73	4277504.98	39.50	
	654259.73	4277504.98	37.50	
	654359.73	4277504.98	37.90	
	654459.73	4277504.98	38.30	
	654559.73	4277504.98	38.00	
	654659.73	4277504.98	40.60	
	654759.73	4277504.98	36.80	
	654859.73	4277504.98	40.60	
	654959.73	4277504.98	41.80	
	655059.73	4277504.98	42.20	
	655159.73	4277504.98	40.10	
	655259.73	4277504.98	42.70	
	655359.73	4277504.98	41.30	
	655459.73	4277504.98	42.50	
	655559.73	4277504.98	42.40	
	655659.73	4277504.98	45.40	
	655759.73	4277504.98	46.30	
	655859.73	4277504.98	47.20	
	655959.73	4277504.98	46.90	
	653959.73	4277604.98	24.00	
	654059.73	4277604.98	30.50	
	654159.73	4277604.98	33.10	
	654259.73	4277604.98	32.40	
	654359.73	4277604.98	33.20	
	654459.73	4277604.98	32.90	
	654559.73	4277604.98	33.70	
	654659.73	4277604.98	39.50	
	654759.73	4277604.98	41.60	
	654859.73	4277604.98	41.00	
	654959.73	4277604.98	35.00	
	655059.73	4277604.98	40.80	
	655159.73	4277604.98	41.80	
	655259.73	4277604.98	44.00	
	655359.73	4277604.98	45.80	
	655459.73	4277604.98	46.60	
	655559.73	4277604.98	41.90	
	655659.73	4277604.98	42.00	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	655759.73	4277604.98	46.10	Option not Selected
	655859.73	4277604.98	46.70	
	655959.73	4277604.98	47.60	
	653959.73	4277704.98	25.90	
	654059.73	4277704.98	24.20	
	654159.73	4277704.98	24.10	
	654259.73	4277704.98	27.30	
	654359.73	4277704.98	32.20	
	654459.73	4277704.98	32.70	
	654559.73	4277704.98	32.50	
	654659.73	4277704.98	39.50	
	654759.73	4277704.98	36.60	
	654859.73	4277704.98	40.90	
	654959.73	4277704.98	41.00	
	655059.73	4277704.98	40.40	
	655159.73	4277704.98	37.80	
	655259.73	4277704.98	42.30	
	655359.73	4277704.98	40.20	
	655459.73	4277704.98	40.10	
	655559.73	4277704.98	41.80	
	655659.73	4277704.98	43.50	
	655759.73	4277704.98	42.50	
	655859.73	4277704.98	46.00	
	655959.73	4277704.98	46.30	
	653959.73	4277804.98	35.40	
	654059.73	4277804.98	35.20	
	654159.73	4277804.98	29.00	
	654259.73	4277804.98	24.40	
	654359.73	4277804.98	24.10	
	654459.73	4277804.98	27.40	
	654559.73	4277804.98	42.80	
	654659.73	4277804.98	26.80	
	654759.73	4277804.98	25.90	
	654859.73	4277804.98	26.50	
	654959.73	4277804.98	25.50	
	655059.73	4277804.98	37.70	
	655159.73	4277804.98	37.70	
	655259.73	4277804.98	42.30	
	655359.73	4277804.98	40.70	
	655459.73	4277804.98	41.10	
	655559.73	4277804.98	40.50	
	655659.73	4277804.98	40.50	
	655759.73	4277804.98	41.60	
	655859.73	4277804.98	42.30	
	655959.73	4277804.98	43.40	
	653959.73	4277904.98	55.00	
	654059.73	4277904.98	61.10	
	654159.73	4277904.98	76.30	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654259.73	4277904.98	77.00	Option not Selected
	654359.73	4277904.98	50.00	
	654459.73	4277904.98	33.00	
	654559.73	4277904.98	25.50	
	654659.73	4277904.98	25.10	
	654759.73	4277904.98	25.50	
	654859.73	4277904.98	25.30	
	654959.73	4277904.98	37.70	
	655059.73	4277904.98	37.70	
	655159.73	4277904.98	37.80	
	655259.73	4277904.98	40.60	
	655359.73	4277904.98	40.90	
	655459.73	4277904.98	39.60	
	655559.73	4277904.98	40.20	
	655659.73	4277904.98	42.50	
	655759.73	4277904.98	40.80	
	655859.73	4277904.98	41.50	
	655959.73	4277904.98	40.00	
	653959.73	4278004.98	75.50	
	654059.73	4278004.98	76.30	
	654159.73	4278004.98	69.30	
	654259.73	4278004.98	76.80	
	654359.73	4278004.98	77.90	
	654459.73	4278004.98	56.10	
	654559.73	4278004.98	55.60	
	654659.73	4278004.98	53.20	
	654759.73	4278004.98	37.00	
	654859.73	4278004.98	25.20	
	654959.73	4278004.98	37.70	
	655059.73	4278004.98	37.80	
	655159.73	4278004.98	37.70	
	655259.73	4278004.98	37.70	
	655359.73	4278004.98	37.80	
	655459.73	4278004.98	39.70	
	655559.73	4278004.98	40.10	
	655659.73	4278004.98	40.20	
	655759.73	4278004.98	42.60	
	655859.73	4278004.98	41.00	
	655959.73	4278004.98	40.90	
	653959.73	4278104.98	53.30	
	654059.73	4278104.98	56.00	
	654159.73	4278104.98	71.10	
	654259.73	4278104.98	77.70	
	654359.73	4278104.98	77.80	
	654459.73	4278104.98	66.80	
	654559.73	4278104.98	78.80	
	654659.73	4278104.98	78.60	
	654759.73	4278104.98	78.10	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	654859.73	4278104.98	69.60	Option not Selected
	654959.73	4278104.98	38.30	
	655059.73	4278104.98	37.80	
	655159.73	4278104.98	37.70	
	655259.73	4278104.98	37.70	
	655359.73	4278104.98	37.70	
	655459.73	4278104.98	37.70	
	655559.73	4278104.98	37.70	
	655659.73	4278104.98	37.50	
	655759.73	4278104.98	40.20	
	655859.73	4278104.98	42.30	
	655959.73	4278104.98	40.00	

Receptor Pathway

Multi-Tier Grid (Risk)

Fenceline Grid

Receptor Pathway

Multi-Tier Grid (Risk)

Fenceline Grid

Meteorology Pathway

Met Input Data

Surface Met Data

Filename: ..\Met Data\Sac Executive Airport\14-18.SFC

Format Type: Default AERMET format

Profile Met Data

Filename: ..\Met Data\Sac Executive Airport\14-18.PFL

Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 27.00 [m]

Meteorological Station Data

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

Data Period

Data Period to Process

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

Wind Speed Categories

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

Meteorology Pathway

Met Input Data

Surface Met Data

Filename: ..\Met Data\Sac Executive Airport\14-18.SFC

Format Type: Default AERMET format

Profile Met Data

Filename: ..\Met Data\Sac Executive Airport\14-18.PFL

Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 27.00 [m]

Meteorological Station Data

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

Data Period

Data Period to Process

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

Wind Speed Categories

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

Output Pathway

Tabular Printed Outputs

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

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: Easton Place Research Park West.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
24	ALL	1st	24H1GALL.PLT
Annual	ALL	N/A	AN00GALL.PLT

Output Pathway

Tabular Printed Outputs

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

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: Easton Place Research Park West.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
24	ALL	1st	24H1GALL.PLT
Annual	ALL	N/A	AN00GALL.PLT

Results Summary

C:\Users\smyers\Desktop\Easton Place Research Park West\Easton Place

PM10 - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.02750	ug/m^3	655259.73	4276904.98	45.20	0.00	45.20	6/2/2018, 19
24-HR	1ST	0.01608	ug/m^3	655259.73	4276904.98	45.20	0.00	45.20	12/20/2016, 24
ANNUAL		0.00829	ug/m^3	655259.73	4276904.98	45.20	0.00	45.20	

Sensitive Receptor Summary

C:\Users\smyers\Desktop\Easton Place Research Park West\Easton Place

PM10 - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.00593	ug/m^3	Hotel	655033.41	4277035.85	43.12	0.00	43.12	2/6/2015, 1
1-HR	1ST	0.00470	ug/m^3	Rocket Res	655477.32	4277252.61	45.29	0.00	45.29	12/10/2016, 17
1-HR	1ST	0.00859	ug/m^3	Fut Res	655342.20	4277110.88	45.53	0.00	45.53	2/10/2014, 4
1-HR	1ST	0.01043	ug/m^3	Fut Res	655407.74	4276997.93	45.46	0.00	45.46	3/26/2015, 18
1-HR	1ST	0.01043	ug/m^3	Fut Res	655484.43	4276873.82	45.58	0.00	45.58	2/18/2014, 24
1-HR	1ST	0.00720	ug/m^3	Fut Res	655559.73	4276735.77	45.62	0.00	45.62	2/2/2016, 17
1-HR	1ST	0.00487	ug/m^3	Fut Res	655630.85	4276614.46	45.68	0.00	45.68	1/31/2015, 17
24-HR	1ST	0.00330	ug/m^3	Hotel	655033.41	4277035.85	43.12	0.00	43.12	12/8/2014, 24
24-HR	1ST	0.00256	ug/m^3	Rocket Res	655477.32	4277252.61	45.29	0.00	45.29	11/11/2014, 24
24-HR	1ST	0.00471	ug/m^3	Fut Res	655342.20	4277110.88	45.53	0.00	45.53	12/22/2015, 24
24-HR	1ST	0.00486	ug/m^3	Fut Res	655407.74	4276997.93	45.46	0.00	45.46	12/20/2016, 24
24-HR	1ST	0.00425	ug/m^3	Fut Res	655484.43	4276873.82	45.58	0.00	45.58	12/20/2016, 24
24-HR	1ST	0.00333	ug/m^3	Fut Res	655559.73	4276735.77	45.62	0.00	45.62	1/5/2017, 24
24-HR	1ST	0.00228	ug/m^3	Fut Res	655630.85	4276614.46	45.68	0.00	45.68	1/5/2017, 24
ANNUAL		0.00157	ug/m^3	Hotel	655033.41	4277035.85	43.12	0.00	43.12	
ANNUAL		0.00132	ug/m^3	Rocket Res	655477.32	4277252.61	45.29	0.00	45.29	
ANNUAL		0.00322	ug/m^3	Fut Res	655342.20	4277110.88	45.53	0.00	45.53	
ANNUAL		0.00299	ug/m^3	Fut Res	655407.74	4276997.93	45.46	0.00	45.46	
ANNUAL		0.00231	ug/m^3	Fut Res	655484.43	4276873.82	45.58	0.00	45.58	
ANNUAL		0.00118	ug/m^3	Fut Res	655559.73	4276735.77	45.62	0.00	45.62	

Sensitive Receptor Summary

C:\Users\smyers\Desktop\Easton Place Research Park West\Easton Place

PM10 - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.00065	ug/m^3	Fut Res	655630.85	4276614.46	45.68	0.00	45.68	

ATTACHMENT C

Diesel Particulate Matter Emission Calculations

Easton Research Park West
DPM Emission Rates
Operations

Easton Research Park West DPM
Emissions Calculations

On-Site Truck Movement	Avg Speed (mph)	Emission Factor (g/mi)	Daily Truck Trips	length (mi)	g/day	g/sec
Project Trucks	15	0.004752	458	1.02	2.22E+00	2.57E-05

Off-Site Truck Movement - Nimbus Road &Hazle Avenue	Avg Speed (mph)	Emission Factor (g/mi)	Daily Truck Trips (round trips)	length (mi)	g/day	g/sec
Project Trucks	35	0.003666	916	0.4	1.28E+00	1.48E-05

Off-Site Truck Movement - Folsom Boulevard	Avg Speed (mph)	Emission Factor (g/mi)	Daily Truck Trips (round trips)	length (mi)	g/day	g/sec
Project Trucks	35	0.003666	916	0.1	4.70E-01	5.44E-06

Off-Site Truck Movement - Highway 50 Eastbound	Avg Speed (mph)	Emission Factor (g/mi)	Daily Truck Trips (round trips)	length (mi)	g/day	g/sec
Project Trucks	65	0.003666	916	0.5	1.68E+00	1.94E-05

Off-Site Truck Movement - Highway 50 Westbound	Avg Speed (mph)	Emission Factor (g/mi)	Daily Truck Trips (round trips)	length (mi)	g/day	g/sec
Project Trucks	65	0.003666	916	1.0	3.49E+00	4.04E-05

On-Site Truck Idle Emissions	Emission Factor (g/veh/day)	Idling Time (min)	Idling Time (hrs/day)	Daily Trucks	Release Height Above Ground (m)	g/day	g/sec
Project Trucks	0.000600857	15	1.04E-02	458	3.68	2.87E-03	3.32E-08

Sources:

EMFAC2021. PM_{10} Emission Factors are derived from the Year 2023 Heavy-Duty Truck Fleet Mix and represent the weighted average of heavy-heavy duty trucks

Health Risk Calculations at Planned McCanna Hills Development

Annual Avg Concentration: 0.002

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	5.43478E-07	1.64097E-06	1.3E-06	1.12E-06	5.04336E-07	3.146E-07
Risk = DOSEair * CPF * ASF * ED/AT * FAH	1.81483E-08	4.38374E-07	3.08E-07	5.33E-07	8.099630E-08	1.949E-07

		Risk	in one million
Cancer Risk:	70-year exposure	1.18E-06	**1.18**
	30-year exposure	1.07E-06	**1.07**
	9-year exposure	7.65E-07	**0.76**
Threshold:			10 in one million

	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1,090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	209		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.00157	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.96	days/year	Exposure frequency (days/year)
ED	ED (3rd trimester)	0.25	years	Exposure duration (years)
	ED (0 < 2 years)	2		
	ED (2 < 9 years)	7		
	ED (2 < 16, 16 < 30 ye	14		
	ED (16 - 70 years)	54		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 y	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 y	0.85		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **3.14E-04**

C_i 1.57E-03 Concentration (annual average)

REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **8.26E-03**

Max Hourly 1.57E-03

Acute REL (Acrolein) 0.19

Health Risk Calculations at Future McCanna Hills Residences

Annual Avg Concentration: 0.001

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	4.56937E-07	1.37967E-06	1.09E-06	9.43E-07	4.24027E-07	2.645E-07
Risk = DOSEair * CPF * ASF * ED/AT * FAH	1.52584E-08	3.68569E-07	2.59E-07	4.48E-07	6.809880E-08	1.639E-07

		Risk	in one million
Cancer Risk:	70-year exposure	9.96E-07	**1.00**
	30-year exposure	9.00E-07	**0.90**
	9-year exposure	6.43E-07	**0.64**
Threshold:			10 in one million

	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1,090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	209		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.00132	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.96	days/year	Exposure frequency (days/year)
ED	ED (3rd trimester)	0.25	years	Exposure duration (years)
	ED (0 < 2 years)	2		
	ED (2 < 9 years)	7		
	ED (2 < 16, 16 < 30 ye	14		
	ED (16 - 70 years)	54		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 y	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 y	0.85		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **2.64E-04**

C_i 1.32E-03 Concentration (annual average)

REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **6.95E-03**

Max Hourly 1.32E-03

Acute REL (Acrolein) 0.19

Health Risk Calculations at Future McCanna Hills Residences

Annual Avg Concentration: 0.003

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	1.11465E-06	3.36556E-06	2.66E-06	2.3E-06	1.03437E-06	6.453E-07
Risk = DOSEair * CPF * ASF * ED/AT * FAH	3.72213E-08	8.99086E-07	6.32E-07	1.09E-06	1.661198E-07	3.998E-07

		Risk	in one million
Cancer Risk:	70-year exposure	2.43E-06	**2.43**
	30-year exposure	2.20E-06	**2.20**
	9-year exposure	1.57E-06	**1.57**
Threshold:			10 in one million

	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1,090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	209		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.00322	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.96	days/year	Exposure frequency (days/year)
ED	ED (3rd trimester)	0.25	years	Exposure duration (years)
	ED (0 < 2 years)	2		
	ED (2 < 9 years)	7		
	ED (2 < 16, 16 < 30 ye	14		
	ED (16 - 70 years)	54		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 y	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 y	0.85		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **6.44E-04**

C_i 3.22E-03 Concentration (annual average)

REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **1.69E-02**

Max Hourly 3.22E-03

Acute REL (Acrolein) 0.19

Fuel Consumption Modeling Outputs
for the
Easton Research Park West Tentative Subdivision Map Project

Proposed Project
Total Construction-Related and Operational
Gasoline Usage

Table 1. Demolition & Grading Year One			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	470	470,000	10.15
Total Gallons Consumed During Demolition & Grading Year One:			**46,305**

Table 2. Demolition & Grading Year Two			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	446	446,000	10.15
Total Gallons Consumed During Demolition & Grading Year Two:			**43,941**

Table 3. Demolition & Grading Year Three, Stormwater Drainage & Sewer Connection			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	740	740,000	10.15
Total Gallons Consumed During Demolition & Grading Year Three, Stormwater Drainage & Sewer Connection:			**72,906**

Table 4. Phase 1 Building Construction, Year One			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	783	783,000	10.15
Total Gallons Consumed During Phase 1 Building Construction, Year One:			**77,143**

Table 5. Phase 1 Building Construction, Year Two			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	792	792,000	10.15
Total Gallons Consumed During Phase 1 Building Construction, Year Two:			**78,030**

Table 6. Phase 2 Building Construction, Year One			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	821	821,000	10.15
Total Gallons Consumed During Phase 2 Building Construction, Year One:			**80,887**

Table 7. Phase 2 Building Construction, Year Two			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	816	816,000	10.15
Total Gallons Consumed During Phase 2 Building Construction, Year Two:			**80,394**

Notes:
Fuel used by all construction equipment, including vehicle hauling trucks, assumed to be diesel.
[1]Per CalEEMod Output Files found in Air Quality and Greenhouse Gas Emissions Assessment Attachment C
[2]Per Climate Registry Equation 13e

Sources:
[1]ECORP Consulting, 2021.
[2]Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1.* January 2016.
http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf

Proposed Project
Total Construction-Related and Operational
Gasoline Usage

Table 8. Phase 3 Building Construction, Year One			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	877	877,000	10.15
Total Gallons Consumed During Phase 3 Building Construction, Year One:			**86,404**

Table 9. Phase 3 Building Construction, Year Two			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	965	965,000	10.15
Total Gallons Consumed During Phase 3 Building Construction, Year Two:			**95,074**

Table 10. Phase 4 Building Construction, Year One			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	678	678,000	10.15
Total Gallons Consumed During Phase 4 Building Construction, Year One:			**66,798**

Table 11. Phase 4 Building Construction, Year Two			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	689	689,000	10.15
Total Gallons Consumed During Phase 4 Building Construction, Year Two:			**67,882**

Table 12. Average Miles per Gallon in Sacramento County in 2020 [3]								
Area	**Sub-Area**	**Cal. Year**	**Season**	**Veh_tech**	**EMFAC 2021 Category**	**Total Onroad Vehicle Gallons Consumed in Sacramento County in 2020**	**Total Onroad Vehicle Miles Traveled in Sacramento County in 2020**	**Total Passenger Vehicle Miles per Gallon in Sacramento County in 2020**
Sub-Areas	Sacramento County	2022	Annual	All Vehicles	All Vehicles [4]	557,639,300	11,017,302,065	20

Sources:
[3]California Air Resource Board. 2021. EMFAC2021 Mobile Emissions Model.

Table 13. Total Gallons During Project Operations				
Project Onroad Vehicle Daily Trips[4]	**Estimated Miles per Trip[5]**	**Project Onroad Vehicle Daily Miles Traveled**	**Project Onroad Vehicle Daily Fuel Consumption**	**Project Onroad Vehicle Annual Fuel Consumption**
2,080	8.145	16,941.60	857.50	**312,986**

Sources:
[4]Fehr & Peers. 2021. Easton Research Park West Tentative Subdivision Map Project Local Transportation Analysis.
[5]CalEEMod version 2016.3.1

APPENDIX B

Biological Resources Assessment, Easton Research Park West Project –
ECORP Consulting, Inc. DRAFT

DRAFT

Biological Resources Assessment

Easton Research Park West Project

Sacramento County, California

Prepared For:

Easton Development Company, LLC

Prepared By:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
2525 Warren Drive
Rocklin, California 95677

DRAFT

Supersedes April 24, 2020 Version

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Attachment B – Representative Photographs

LIST OF ACRONYMS AND ABBREVIATIONS

ARD	Aquatic Resources Delineation
BA	Biological Assessment
BCC	Birds of conservation concern
BO	Biological Opinion

LIST OF ACRONYMS AND ABBREVIATIONS

BRA	Biological Resources Assessment
BUOW	Burrowing owl
CBOC	California Burrowing Owl Consortium
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFDW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DPS	Distinct Population Segment
ESA	Endangered Species Act
HCP	Habitat Conservation Plan
MBTA	Migratory Bird Treaty Act
NCCP	Natural Community Conservation Plan
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
Project	Easton Research Park West Project
RWQCB	Regional Water Quality Control Board
SSC	Species of special concern
TRBL	Tricolored blackbird
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VELB	Valley elderberry longhorn beetle
WBWG	Western Bat Working Group

1.0 INTRODUCTION

On behalf of Easton Development Company, LLC, ECORP Consulting, Inc. conducted a biological resources assessment (BRA) for the approximately 143.67-acre Easton Research Park West Project (Project) located in Sacramento County, California. The purpose of the BRA was to collect information on the biological resources present or with the potential to occur in the Project Area, assess potential biological impacts related to Project activities, and identify potential mitigation measures to inform and support the Project's California Environmental Quality Act (CEQA) documentation for biological resources.

2.0 STUDY AREA

2.1 Project Location

The Project Study Area (Study Area) is located south of Highway 50, west of Nimbus Road, and north of Florida Road in the city of Rancho Cordova in Sacramento County, California (Figure 1. *Project Location and Vicinity*). The Project site corresponds to parts of the unsectioned portion of the Rio de Los Americanos Landgrant (Mount Diablo Base and Meridian) of the "Buffalo Creek, California" and "Folsom", California" 7.5-minute quadrangles (U.S. Geological Survey [USGS] 1967a and b; photo-revised 1980, respectively) (Figure 1). The approximate center of the site is located at 38.625411º and -121.217331º within the Lower American Watershed (Hydrologic Unit Code #18020111, Natural Resources Conservation Service [NRCS], et al. 2016).

The Study Area is part of the Aerojet campus. A portion of the Study Area overlaps with a separate project (referred to as the "Glenborough Project") that is fully permitted and mitigated (SPK-2004-00515). The area that overlaps with the Glenborough Project will be developed as part of this Project. Since the Glenborough Project is fully permitted and mitigated, the portion of the Study Area that overlaps with the Glenborough Project is not analyzed further in this document. However, resources within the entire Study Area, including the Glenborough Project overlap, are shown on maps for full transparency.

2.2 Project Description

The objective of the Project is to subdivide existing lots for future development of an industrial warehouse campus. The Project is scheduled to begin in 2022 and will be phased over a 20-year ultimate buildout scenario, with construction impact analysis assuming two buildings and associated utilities, stormwater detention basins, parking lots, and access roads will be constructed in each phase.

The Project consists of the following components:

- Grading of the Project Area, including tree and vegetation removal;
- Demolition of existing buildings, structures, foundations, and pavement and disposal of demolition debris off-site;
- Construction of eight warehouse buildings (totaling 1,486,000 square feet);

- Construction of associated stormwater detention basins, parking lots, and interior private streets; and
- Construction and reconfiguration of overhead and underground utilities to serve the Project, including off-site construction of underground utilities (sanitary sewer, stormwater basin outfall ditches, and potable water pipeline).

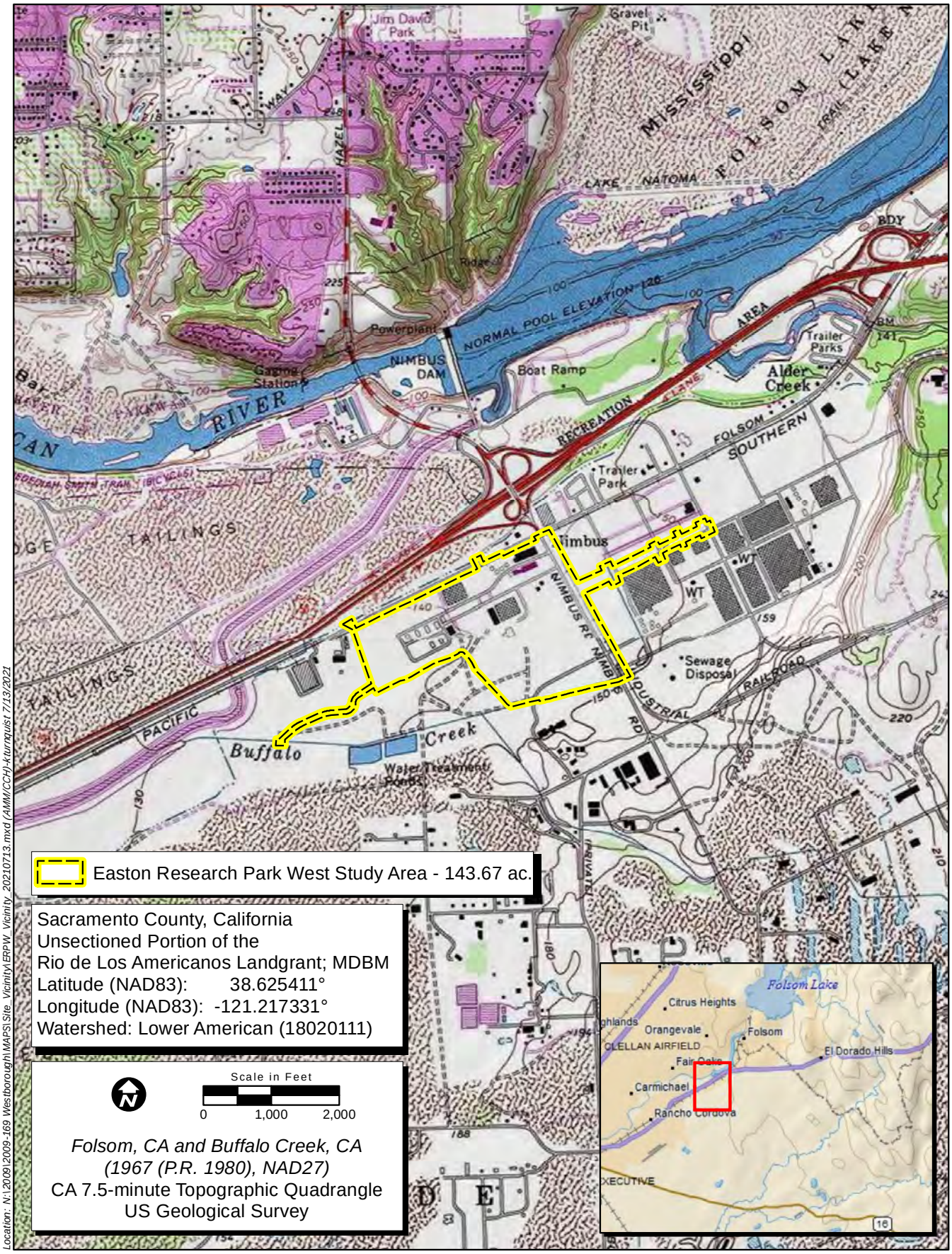
2.3 Purpose of this Biological Resources Assessment

The purpose of this BRA is to assess the potential for occurrence of special-status plant and animal species and their habitats and sensitive habitats such as wetlands and riparian communities within the Study Area. This assessment includes information generated from the reconnaissance-level site assessment and does not include determinate field surveys for most special-status species, except where discussed in more detail in this BRA.

This assessment includes a preliminary analysis of impacts on biological resources anticipated to result from the Project as presently defined. The mitigation recommendations presented in this assessment are based on a preliminary impact analysis, a review of existing literature, and the results of the site reconnaissance survey and other field surveys conducted.

For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under § 15380 of the CEQA Guidelines;
- are identified as a species of special concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- are birds identified as birds of conservation concern (BCC) by the U.S. Fish and Wildlife Service (USFWS);
- are considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California", "plants about which more information is needed", or "plants of limited distribution – a watch list" (i.e., species with a California Rare Plant Rank [CRPR] of 1B, 2, 3, or 4);
- are plants listed as rare under the California Native Plant Protection Act (NPPA) (California Fish and Game Code, § 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, §§ 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).



Location: N:\2009\2009-169 Westborough\MAPS\Site_Vicinity\ERPW_Vicinity_20210713.mxd (AMM/CCH)-kturnquist 7/13/2021

Map Date: 7/13/2021

iService Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed
Copyright:(c) 2018 Garmin

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Location and Vicinity

2018-012 Easton Research Park West

3.0 REGULATORY SETTING

3.1 Federal Regulations

3.1.1 Endangered Species Act

The ESA protects plants and animals that are listed as endangered or threatened by USFWS and the National Marine Fisheries Service (NMFS). Section 9 of ESA prohibits, without authorization, the taking of listed wildlife, where take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" [50 Code of Federal Regulations (CFR) 17.3]. For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant under federal jurisdiction and removing, cutting, digging up, damaging, or destroying any listed plant in any other area in knowing violation of state law [16 U.S. Code (USC) 1538].

Under Section 7 of ESA, federal agencies are required to consult with USFWS and/or NMFS if their actions, including permit approvals and funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion (BO), USFWS and NMFS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for the issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

3.1.1.1 Section 7 Consultation

Section 7 of ESA mandates that all federal agencies consult with USFWS and/or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. If direct and/or indirect effects will occur to critical habitat that appreciably diminish the value of critical habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS. If adverse effects are likely, the federal lead agency must prepare a biological assessment (BA) for the purpose of analyzing the potential effects of the proposed project on listed species and critical habitat to establish and justify an "effect determination." Often a third-party, non-federal applicant drafts the BA for the lead federal agencies. The USFWS/NMFS reviews the BA; if it concludes that the project may adversely affect a listed species or its habitat, it prepares a BO. The BO may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat.

3.1.1.2 Critical Habitat

Critical Habitat is defined in Section 3 of ESA as:

1. the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and

2. specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features essential to the conservation of the species (16 USC 1533). Critical Habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements). Primary constituent elements are the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

1. Space for individual and population growth and for normal behavior
2. Food, water, air, light, minerals, or other nutritional or physiological requirements
3. Cover or shelter
4. Sites for breeding, reproduction, or rearing (or development) of offspring
5. Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species

3.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized under the MBTA, USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of non-game birds in § 3800, migratory birds in § 3513, and birds of prey in § 3503.5 of the California Fish and Game Code.

3.1.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (as amended) provides for the protection of bald eagle and golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit [16 USC 668(a); 50 CFR 22]. USFWS may authorize take of bald eagles and golden eagles for activities where the take is associated with, but not the purpose of, the activity and cannot practicably be avoided (50 CFR 22.26).

3.1.4 Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "…restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). "Discharges of fill material" is defined as the addition of fill material into Waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 CFR § 328.2(f)]. In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to Waters of the U.S. (more than 0.5 acre of impact) may require an individual permit. Projects that only minimally affect Waters of the U.S. (less than 0.5 acre of impact) may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

3.2 State and Local Regulations

3.2.1 California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050-2116) protects species of fish, wildlife, and plants listed by the state as endangered or threatened. Species identified as candidates for listing may also receive protection. Section 2080 of the California ESA prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful projects under permits issued by CDFW.

3.2.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and the California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. Fully protected species are identified in the California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish.

These sections of the California Fish and Game Code provide that fully protected species may not be taken or possessed at any time, including prohibition of CDFW from issuing incidental take permits for fully protected species under the California ESA. CDFW will issue licenses or permits for take of these

species for necessary scientific research or live capture and relocation pursuant to the permit and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

3.2.3 Native Plant Protection Act

The NPPA of 1977 (California Fish and Game Code §§ 1900-1913) was established with the intent to "preserve, protect and enhance rare and endangered plants in this state." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as "endangered" or "rare". The NPPA prohibits the take of plants listed under the NPPA, but the NPPA contains a number of exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the California ESA brought under its protection all plants previously listed as endangered under NPPA. Plants listed as rare under NPPA are not protected under the California ESA, but are still protected under the provisions of NPPA. The Fish and Game Commission no longer lists plants under NPPA, reserving all listings to the California ESA.

3.2.4 California Fish and Game Code Special Protections for Birds

In addition to protections contained within the California ESA and California Fish and Game Code § 3511 described above, the California Fish and Game Code includes a number of sections that specifically protect certain birds.

Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.

Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.

Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests

Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic non-native species, or any part of these birds.

Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

3.2.5 Lake or Streambed Alteration Agreements

Section 1602 of the California Fish and Game Code requires individuals or agencies to provide a Notification of Lake or Streambed Alteration to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, proposed measures to protect affected fish and wildlife resources. The final proposal mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alternation Agreement.

3.2.6 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code 13260(a)]. Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of a Waste Discharge Requirements for these activities.

3.2.7 California Environmental Quality Act

In accordance with CEQA Guidelines § 15380, a species or subspecies not specifically protected under the federal or California ESAs or NPPA may be considered endangered, rare, or threatened for CEQA review purposes if the species meets certain criteria specified in the Guidelines. These criteria include definitions similar to definitions used in ESA, the California ESA, and NPPA. Section 15380 was included in the CEQA Guidelines primarily to address situations in which a project under review may have a significant effect on a species that has not been listed under ESA, the California ESA, or NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as SSC by CDFW and plants identified by the CNPS as rare, threatened, or endangered may meet the CEQA definition of rare or endangered.

3.2.7.1 Species of Special Concern

SSC are defined by the CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under ESA, the California ESA, or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role
- The species is listed as federally (but not State) threatened or endangered, or meets the State definition of threatened or endangered but has not formally been listed
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status

- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status, and
- SSC are typically associated with habitats that are threatened.

Depending on the policy of the lead agency, projects that result in substantial impacts to SSC may be considered significant under CEQA.

3.2.7.2 U.S. Fish and Wildlife Service Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates USFWS "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA." To meet this requirement, USFWS published a list of BCC (USFWS 2008) for the United States. The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

3.2.7.3 California Rare Plant Ranks

The CNPS maintains the *Inventory of Rare and Endangered Plants of California* (CNPS 2021), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, and/or low populations. Plant species meeting one of these criteria are assigned to one of six CRPRs. The rank system was developed in collaboration with government, academia, non-governmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

- Rare Plant Rank 1A – presumed extirpated in California and either rare or extinct elsewhere
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere
- Rare Plant Rank 2A – presumed extirpated in California, but more common elsewhere
- Rare Plant Rank 2B – rare, threatened, or endangered in California but more common elsewhere
- Rare Plant Rank 3 – a review list of plants about which more information is needed
- Rare Plant Rank 4 – a watch list of plants of limited distribution

Additionally, CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 1 through 3, with 1 being the most threatened and 3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- Threat Rank 0.2 – Moderately threatened in California (20-80 percent occurrences threatened/moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (<20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

Factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; and differences in Threat Ranks do not constitute additional or different protection (CNPS 2021).

Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2, and 3 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 4 and at the discretion of the CEQA lead agency.

3.2.7.4 California Environmental Quality Act Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (rare, threatened, or endangered) species are considered significant. Assessment of "impact significance" to populations of non-listed species (e.g., SSC) usually considers the proportion of the species' range that will be affected by a project, impacts to habitat, and the regional and population level effects.

Specifically, § 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state HCP.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant under CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis.

3.2.8 Sacramento County General Plan

The Sacramento County General Plan Conservation Element, amended September 26, 2017, contains policies and implementation measures related to special-status species and their habitats that apply to the proposed Project. These policies are outlined within Section V (Vegetation and Wildlife), Section VI (Aquatic Resources), and Section VII (Terrestrial Resources).

3.2.9 Sacramento County Swainson's Hawk Ordinance

The Sacramento County Swainson's Hawk Mitigation Program, amended by the Board of Supervisors in December of 2009, provides voluntary means for mitigation of impacts to Swainson's Hawk foraging habitat. Those voluntary means differ for projects with impacts under 40 acres and projects with impacts of 40 acres and greater. Options for projects with impacts under 40 acres include paying an impact fee; or providing title or easement to suitable Swainson's Hawk mitigation lands on a per-acre basis. The requirement for projects with impacts of 40 acres and greater is to provide title or easement to Swainson's Hawk mitigation lands. A per acre endowment fee must be paid by the applicant for projects delivering title or easement.

3.2.10 Sacramento County Tree Preservation Ordinance

All native oak trees and some specified non-oak native trees that are six inches in diameter at breast height (dbh) (or 10-inch aggregate dbh for multi-trunk oaks and native walnut trees) are protected under the Sacramento County Tree Preservation Ordinance. In addition, the County has a nonnative tree canopy policy which is sometimes invoked to require mitigation for nonnative tree canopy impacts by creating equivalent canopy onsite. If onsite mitigation is not possible, mitigation can be achieved through funding pursuant to the Tree Preservation Ordinance.

3.2.11 Rancho Cordova Tree Ordinance (Preservation and Protection of Private Trees)

The city council adopted Chapter 19.12 (Preservation and Protection of Private Trees) of the Rancho Cordova Municipal Code, which established regulations for the protection, removal, and preservation of

landmark trees and protected trees within Rancho Cordova. "Landmark tree" means any trees designated by council through resolution as a vital and historical part of the city's landscape such that the trees need to be designated as landmarks for protection and preservation. "Protected tree" includes native oaks having a trunk diameter of at least six inches or greater; any tree species other than a native oak having a trunk diameter of at least 12 inches or greater on nonresidential property; any tree species other than a native oak having a trunk diameter of at least 24 inches or greater on residential property; and any tree planted as a requirement tree for site development, tree permit condition, landscape plan removal replacement, or other designated condition by the public works director or planning director.

4.0 METHODS

4.1 Literature Review

The following resources were reviewed to determine the special-status species that had been previously documented within or in the vicinity of the Study Area:

- CDFW California Natural Diversity Database (CNDDB) data for the "Buffalo Creek, California" and "Folsom, California" 7.5-minute quadrangles as well as the 10 surrounding USGS quadrangles (CDFW 2021);
- USFWS Information, Planning, and Consultation System Resource Report List for the approximate Study Area (USFWS 2021a); and
- California Native Plant Society's (CNPS') electronic Inventory of Rare and Endangered Plants of California was queried for the "Buffalo Creek, California" and "Folsom, California" 7.5-minute quadrangles as well as the 10 surrounding USGS quadrangles (CNPS 2021).

The results of the database queries are included in Attachment A.

Based on database queries, a list of special-status species that are considered to have the potential to occur within the vicinity of the Study Area was generated (Table 1). Each of the species was evaluated for its potential to occur within the Study Area through the literature review, field observations, and survey results and categorized based on the following criteria:

Present - Species was observed during field surveys or is known to occur within the Study Area based on documented occurrences within the CNDDB or other literature.

- **Potential to Occur** - Habitat (including soils and elevation requirements) for the species occurs within the Study Area.
- **Low Potential to Occur** - Marginal or limited amounts of habitat occurs and/or the species is not known to occur within the vicinity of the Study Area based on CNDDB records and other available documentation.
- **Absent** - No suitable habitat (including soils and elevation requirements) and/or the species is not known to occur within the vicinity of the Study Area based on CNDDB records and other documentation, or the species was not found during protocol-level surveys.

4.2 Field Surveys Conducted

ECORP biologists conducted surveys within the Study Area as part of other survey efforts within the Aerojet campus. The results of those field surveys were analyzed and are included in this BRA. The following surveys have been conducted:

- *Aquatic Resources Delineation (ARD):* An ARD was conducted by ECORP in 2020 in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Region Supplement) (USACE 2008a); however, this has not been verified by USACE.
- *Arborist Survey:* A tree inventory was conducted in 2021 by ECORP according to the City of Rancho Cordova's Preservation and Protection of Private Trees Ordinance (and the Sacramento County Arborist Report Requirements (ECORP 2021).
- *Special-Status Plants:* A survey for special-status plant species was conducted in 2018 (ECORP 2018). Determinate-level field surveys were conducted in accordance with guidelines promulgated by USFWS (USFWS 2000), California Department of Fish and Game (CDFG 1983 [revised 2000]), and CNPS (CNPS 2001).
- *Valley Elderberry Longhorn Beetle*: A survey for valley elderberry longhorn beetle (VELB, *Desmocerus californicus dimorphus*;) was conducted by ECORP in 2016. The survey followed the protocol described in the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (Conservation Guidelines) (USFWS 1999).

5.0 RESULTS

5.1 Site Characteristics and Land Use

The Study Area is comprised of previously disturbed grassland with scattered oak trees (*Quercus* sp.). Previous development as part of Aerojet operations has resulted in paved roadways and parking areas, graded dirt roadways, and several remnant structures. The surrounding landscape is made up of previously disturbed portions of the Aerojet campus that were historically mined and put to other facility uses, as well as development and infrastructure along the Highway 50 to the north.

The Study Area is located within flat to gently rolling terrain situated at an elevational range of approximately 140 to 170 feet above mean sea level in the Sacramento Valley Subregion of the Great Central Valley floristic region of California (Baldwin et. al. 2012). The surrounding landscape is a mix of commercial and industrial development along a major highway, and previously disturbed portions of the Aerojet campus.

Representative photographs are included in Attachment B.

5.2 Vegetation Communities

Two vegetation communities or land cover types are present within the Study Area. These include developed/disturbed, and annual grassland. Developed/Disturbed

Developed/disturbed is the dominant land cover within the Study Area. Development onsite includes several structures that were previously used for industrial and/or storage purposes as part of the Aerojet campus. Paved parking areas are present adjacent to the structures and paved roadways run between them. Dirt roads void of vegetation and metal fencing occurs throughout the Study Area.

5.2.1 Annual Grassland

Annual grassland within the Study Area is dominated primarily by nonnative grass and forb species such as Italian ryegrass (*Festuca perennis*), soft brome (*Bromus hordeaceous*), ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua*), rose clover (*Trifolium hirtum*), yellow star thistle (*Centaurea solstitialis*), and Italian thistle (*Carduus pycnocephalus*). Scattered oak trees, including interior live oak (*Quercus wislizenii*), valley oak (*Quercus lobata*), and blue oak (*Quercus douglasii*), occur throughout the annual grassland (ECORP 2021).

5.3 Soils

According to the NRCS' Web Soil Survey (NRCS 2021), six soil types have been mapped within the Study Area. These are: Natomas loam, 0 to 2 percent slopes (181); Redding gravelly loam, 0 to 8 percent slopes, MLRA 17 (198); Urban land (227); Urban land-Natomas complex, 0 to 2 percent slopes (228); Xerorthents, dredge tailings, 2 to 50 percent slopes (245); and Xerorthents, dredge tailings-Urban land complex, 0 to 2 percent slopes (246) (Figure 2. *Natural Resources Conservation Service Soil Types*).

5.4 Potential Aquatic Resources

A total of approximately 0.150 acre of aquatic resources have been mapped within the Study Area (Figure 3. *Aquatic Resources Delineation*). Of the 0.150 acre of aquatic resources, 0.112 acre is included under the Glenborough permit (SPK-2004-00515) and impacts to these features are fully mitigated. The remaining 0.038 acre aquatic resources, consisting of seasonal wetlands, occurs as three small, disturbed features within the eastern and south-central portion of the Study Area (Figure 3). These features and acreages have not been verified by the USACE.

Seasonal Wetland

Seasonal wetlands are ephemerally wet due to accumulation of rainfall and surface runoff within low-lying areas or shallow groundwater. Inundation periods tend to be relatively short (typically confined to winter and spring). Three seasonal wetlands occur within the Study Area (Figure 3).

The seasonal wetlands onsite are small, depressional features predominately vegetated with curly dock (*Rumex crispus*), Italian ryegrass, dense-flower spike primrose (*Epilobium densiflorum*), annual rabbit-foot grass (*Polypogon monspeliensis*), and yellow star thistle.

Figure 2.
Natural Resources Conservation Service Soil Types

Map Features

Easton Research Park West Study

Series Number - Series Name

- 181 - Natomas loam, 0 to 2 percent slopes
- 198 - Redding gravelly loam, 0 to 8 percent slopes, MLRA 17
- 227 - Urban land
- 228 - Urban land-Natomas complex, 0 to 2 percent slopes
- 245 - Xerorthents, dredge tailings, 2 to 50 percent slopes
- 246 - Xerorthents, dredge tailings-Urban land complex, 0 to 2 percent slopes

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Sacramento County, CA

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

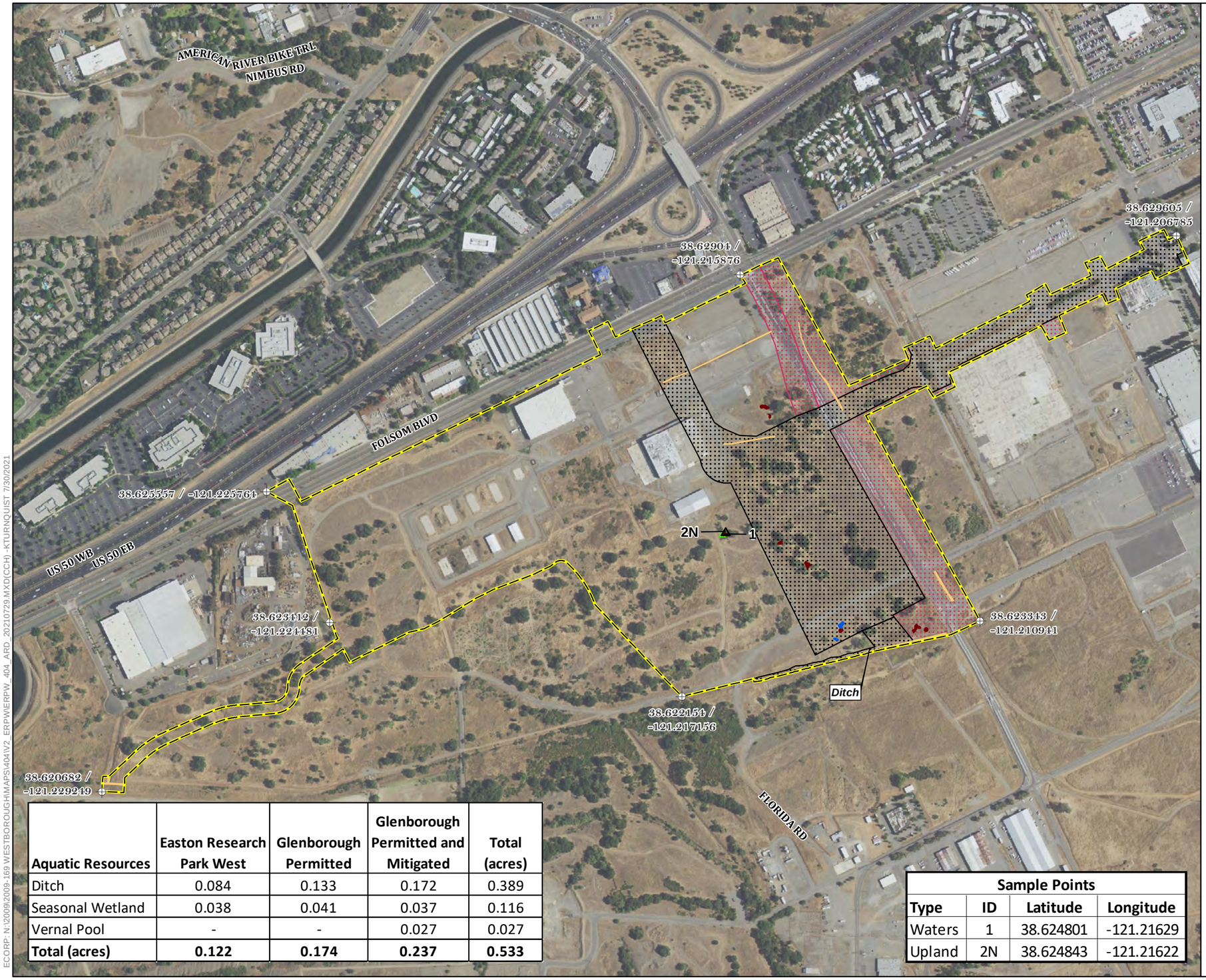
Location: N:\2009\2009-169 Westborough\MAPS\Soils_and_Geology\Soilsv3_ERPWIERPW_soils_20210713.mxd (CCH)-ktumquist 7/13/2021

2018-012.02 Easton Research Park West

Scale in Feet
0 800

Photo Source: NAIP (2018)

Map Date: 7/13/2021



Aquatic Resources	Easton Research Park West	Glenborough Permitted	Glenborough Permitted and Mitigated	Total (acres)
Ditch	0.084	0.133	0.172	0.389
Seasonal Wetland	0.038	0.041	0.037	0.116
Vernal Pool	-	-	0.027	0.027
Total (acres)	**0.122**	**0.174**	**0.237**	**0.533**

Sample Points			
Type	**ID**	**Latitude**	**Longitude**
Waters	1	38.624801	-121.21629
Upland	2N	38.624843	-121.21622

Figure 3.
Aquatic Resources Delineation

Map Features

- Easton Research Park West Study Area (143.67 ac.)
- Glenborough Phase 1 & Phase 2 Permitted and Mitigated (SPK-2004-00515)
- Future Glenborough Phases Permitted

Sample Points

- Upland Point
- Waters Point

Aquatic Resources[1*]

Wetlands

- Seasonal Wetland
- Vernal Pool

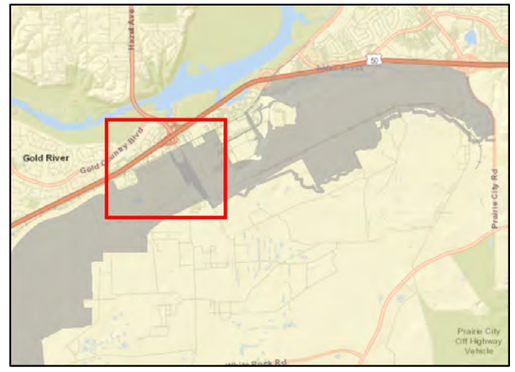
Other

- Ditch

[1] Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0 as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Sacramento District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.

** The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.*

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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ENVIRONMENTAL CONSULTANTS

2018-012.02 Easton Research Park West

Scale in Feet
0 300 600

Photo Source: NAIP (2018)

Map Date: 7/30/2021

ECORP: N:\2009\2009-169 WESTBOROUGH\MAPS\404\V2_ERPWERPW_404_ARD_20210729.MXD(CCH) :KTURNQUIST 7/30/2021

5.5 Wildlife

Wildlife use onsite is expected to be minimal due to the highly impacted and developed nature of the Study Area and vicinity. The Study Area and surrounding area to the south have historically been mined, and subsequently used for activities related to the Aerojet campus. The area to the north includes a major highway and associated infrastructure, as well as some commercial development. The remnant grassland and oak woodland in the greater surrounding landscape provide potential nesting and foraging habitat for many bird species, including raptors, and foraging and roosting habitat for bat species.

5.6 Evaluation of Special-Status Species

Table 1 lists all the special-status plant and animal species (as defined in Section 2.3) identified in the literature review as potentially occurring within the vicinity of the Study Area. Included in this table are the listing status for each species, a brief habitat description, and an evaluation on the potential for each species to occur within the Study Area.

Following the table is a brief description and discussion of each special-status species that was determined to have potential to occur onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Plants						
Sanborn's onion (*Allium sanbornii* var. *sanbornii*)	–	–	4.2	Chaparral, cismontane woodland, and lower montane coniferous forests, usually with gravelly, serpentinite soils (853'–4,954').	May–September	Absent. No suitable habitat onsite.
Ione manzanita *(Arctostaphylos myrtifolia)*	FT	–	1B.2	Chaparral and cismontane woodlands associated with very acidic, nutrient-poor, coarse soils typical of the Ione Formation (197'–1,903').	November–March	Absent. No suitable habitat onsite.
Big-scale balsamroot *(Balsamorhiza macrolepis* var. *macrolepis)*	–	–	1B.2	Chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentinite soils (148'–5,102').	March–June	Absent. The grasslands onsite provide suitable habitat; however, not observed during 2018 survey.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Valley brodiaea (*Brodiaea rosea* ssp. *vallicola*)	–	–	4.2	Occurs in old alluvial terraces and silt, sandy, or gravelly soils in vernal pools and swales within valley and foothill grassland (33'–1,100').	April–May	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Brewer's calandrinia *(Calandrinia breweri)*	–	–	4.2	Sandy or loamy soils, disturbed sites, and burns within chaparral and coastal scrub (33'–4,003').	March–June	Absent. No suitable habitat onsite.
Stebbins' morning-glory *(Calystegia stebbinsii)*	FE	CE	1B.1	Gabbroic or serpentine soils in chaparral and cismontane woodland (607'–3,576').	April–July	Absent. No suitable habitat onsite.
Chaparral sedge *(Carex xerophila)*	–	–	1B.2	Serpentinite or gabbroic soils within chaparral, cismontane woodland, and lower montane coniferous forest (1,444'–2,526').	March–June	Absent. No suitable habitat onsite.
Pine Hill ceanothus *(Ceanothus roderickii)*	FE	CR	1B.1	Rocky serpentinite or gabbroic soil in chaparral and cismontane woodland (804'–3,576').	April–June	Absent. No suitable habitat onsite.
Red Hills soaproot *(Chlorogalum grandiflorum)*	–	–	1B.2	Serpentinite or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest, occasionally on non–ultramafic soils (804'–5,545').	May–June	Absent. No suitable habitat onsite.
Hispid bird's-beak *(Chloropyron molle* ssp. *hispidum)*	–	–	1B.1	Alkaline soils in meadows and seeps, playas, and valley and foothill grasslands (3'–509').	June–September	Absent. No suitable alkaline habitat onsite.
Brandegee's clarkia *(Clarkia biloba* ssp. *brandegeeae)*	–	–	4.2	Chaparral, cismontane woodlands, and lower montane coniferous forest often along roadcuts (246'–3,002').	May–July	Absent. No suitable habitat.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Bisbee Peak rush-rose *(Crocanthemum suffrutescens)*	–	–	3.2	Often gabbroic or Ione soil or in burned or disturbed areas within chaparral (246'–2,198').	April–August	Absent. No suitable habitat onsite.
Dwarf downingia *(Downingia pusilla)*	–	–	2B.2	Mesic areas in valley and foothill grassland, and vernal pools. Species appears to have an affinity for slight disturbance (i.e., scraped depressions, ditches) (Baldwin et al. 2012, CDFW 2021 (3'–1,460').	March–May	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Ione buckwheat *(Eriogonum apricum* var. *apricum)*	FE	CE	1B.1	Openings in chaparral communities found on Ione soils (197'–476').	July–October	Absent. No suitable habitat onsite.
Irish Hill buckwheat *(Eriogonum apricum* var. *prostratum)*	FE	CE	1B.1	Openings in chaparral communities found on Ione soils (295'–394').	June–July	Absent. No suitable habitat onsite.
Jepson's woolly sunflower *(Eriophyllum jepsonii)*	–	–	4.3	Chaparral, cismontane woodland, and coastal scrub, sometimes on serpentinite (656'–3,363').	April–June	Absent. No suitable habitat onsite.
Tuolumne button-celery *(Eryngium pinnatisectum)*	–	–	1B.2	Vernal pools and other mesic conditions in cismontane woodland and lower montane coniferous forests (230'–3,002').	May–August	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Pine Hill flannelbush *(Fremontodendron decumbens)*	FE	CR	1B.2	Serpentine or gabbro rock outcrops in chaparral and cismontane woodland (1,394'–2,493').	April–July	Absent. No suitable habitat onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Stinkbells *(Fritillaria agrestis)*	–	–	4.2	Clay and sometimes serpentinite soils in chaparral, cismontane woodland, Pinyon and juniper woodland, and valley and foothill grassland (33'–5,102').	March–June	Absent. The grasslands onsite provide suitable habitat; however, not observed during 2018 survey.
El Dorado bedstraw *(Galium californicum* ssp. *sierrae)*	FE	CR	1B.2	Gabbroic soil in chaparral, cismontane woodland and lower montane coniferous forest communities (328'–1,919').	May–June	Absent. No suitable habitat onsite.
Boggs Lake hedge–hyssop *(Gratiola heterosepala)*	-	CE	1B.2	Marshes, swamps, lake margins, and vernal pools (33'–7,792').	April–August	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Hogwallow starfish *(Hesperevax caulescens)*	-	-	4.2	Alkaline in mesic areas with clay soil within valley and foothill grassland and shallow Vernal pools (0'–1,657').	March–June	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Parry's horkelia *(Horkelia parryi)*	–	–	1B.2	Ione and other soil formations in chaparral and cismontane woodlands (262'–3,510').	April–September	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Coast iris *(Iris longipetala)*	–	–	4.2	Mesic areas in coastal prairie, lower montane coniferous forest, and meadows and seeps (0'–1,969').	March–May	Absent. Out of the known range for this species.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Ahart's dwarf rush *(Juncus leiospermus* var. *ahartii)*	-	-	1B.2	Mesic areas in valley and foothill grassland. Species has an affinity for slight disturbance such as farmed fields (USFWS 2005b) (98'–751').	March–May	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Red Bluff dwarf rush *(Juncus leiospermus* var. *leiospermus)*	–	–	1B.1	Vernally mesic areas in chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools (115'–4,101').	March–June	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Legenere *(Legenere limosa)*	–	–	1B.1	Various seasonally inundated areas including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages (USFWS 2005b) (3'–2,887').	April–June	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Serpentine leptosiphon (*Leptosiphon ambiguus*)	–	–	4.2	Usually serpentine soils within cismontane woodland, coastal scrub, and valley and foothill grassland (394'–3,707').	March–June	Absent. Out of the known range for this species.
Humboldt lily *(Lilium humboldtii* ssp. *humboldtii)*	–	–	4.2	Occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest (295'–4,199').	May–August	Absent. No suitable habitat onsite.
Hoary navarretia *(Navarretia eriocephala)*	–	–	4.3	Vernally mesic areas in cismontane woodland and valley and foothill grassland (345'–1,312').	May–June	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Pincushion navarretia *(Navarretia myersii* ssp. *myersii)*	–	–	1B.1	Often acidic soils in vernal pools (66'–1,083').	April–May	Absent. The seasonal wetlands onsite are marginally suitable habitat; however, not observed during 2018 survey.
Slender Orcutt grass *(Orcuttia tenuis)*	FT	CE	1B.1	Vernal pools, often gravelly (115'–5,774').	May–September	Absent. No suitable habitat.
Sacramento Orcutt grass *(Orcuttia viscida)*	FE	CE	1B.1	Vernal pools (98'–328').	April–July	Absent. No suitable habitat.
Layne's ragwort (*Packera layneae*)	FT	CR	1B.2	Rocky serpentinite or gabbroic soil in chaparral and cismontane woodland communities (656'–3,560').	April–August	Absent. No suitable habitat onsite.
Sanford's arrowhead *(Sagittaria sanfordii)*	–	–	1B.2	Shallow marshes and freshwater swamps (0'–2,133').	May–October	Absent. No suitable habitat.
El Dorado County mule ears *(Wyethia reticulata)*	–	–	1B.2	Clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest communities (607'–2,067').	April–August	Absent. No suitable habitat onsite.
Invertebrates						
Conservancy fairy shrimp (*Branchinecta conservatio)*	FE	-	-	Vernal pools/wetlands.	November-April	Absent. Outside of the known range for this species.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	-	-	Vernal pools/wetlands.	November-April	Low potential. Marginal habitat present onsite.
Valley elderberry longhorn beetle	FT	–	–	Elderberry shrubs.	Any season	Potential. Elderberry shrubs

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
(*Desmocerus californicus dimorphus*)						were mapped onsite during surveys (ECORP 2016).
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	-	-	Vernal pools/wetlands.	November-April	Low potential. Marginal habitat present onsite.
Fish						
Delta smelt (*Hypomesus transpacificus*)	FT	CE	–	Water bodies connected to the Sacramento-San Joaquin delta.	N/A	Absent. No suitable habitat present onsite.
Steelhead (CA Central Valley Distinct Population Segment (DPS) (*Oncorhynchus mykiss*)	FT	-	-	Undammed rivers, streams, creeks.	N/A	Absent. No suitable habitat present onsite.
Amphibians						
California tiger salamander (Central California DPS) (*Ambystoma californiense*)	FT	CT	CDFW WL	Vernal pools, wetlands (breeding) and adjacent grassland or oak woodland; needs underground refuge (e.g., ground squirrel and/or gopher burrows). Largely terrestrial as adults.	March-May	Absent. Out of the acknowledged range for this species.
Foothill yellow-legged frog (*Rana boylii*)	-	CE	SSC	Foothill yellow-legged frogs can be active all year in warmer locations, but may become inactive or hibernate in colder climates. At lower elevations, foothill yellow-legged frogs likely spend most of the year in or near streams. Adult frogs, primarily males, will gather	May-October	Absent. No suitable habitat present onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
				along main-stem rivers during spring to breed.		
California red-legged frog (*Rana draytonii*)	FT	-	SSC	Lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Adults must have aestivation habitat to endure summer dry down.	May 1-November 1	Absent. Out of the acknowledged range for this species.
Western spadefoot (*Spea hammondii*)	-	-	SSC	California endemic species of vernal pools, swales, wetlands and adjacent grasslands throughout the Central Valley.	March-May	Low Potential. Marginal habitat present onsite.
Reptiles						
Northwestern pond turtle (*Actinemys marmorata*)	-	-	SSC	Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	April-September	Absent. No suitable habitat present onsite.
Giant garter snake (*Thamnophis gigas*)	FT	CT	-	Freshwater ditches, sloughs, and marshes in the Central Valley. Almost extirpated from the southern parts of its range.	April-October	Absent. No suitable habitat present onsite and outside of acknowledged range for this species.
Birds						
Clark's grebe *(Aechmophorus clarkii)*	-	-	BCC	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Breeds on freshwater to brackish marshes, lakes, reservoirs and ponds, with a preference for large stretches of open water fringed with emergent vegetation.	June-August (breeding)	Absent. No suitable habitat present onsite.
Song sparrow "Modesto"	-	-	SSC	Resident in central and southwest California, including Central Valley;	April-June	Absent. No suitable habitat present onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
(*Melospiza melodia*)				nests in marsh, scrub habitat		
San Clemente spotted towhee (*Pipilo maculatus clementae*)	-	-	BCC, SSC	Resident on Santa Catalina and Santa Rosa Islands; extirpated on San Clemente Island, California. Breeds in dense, broadleaf shrubby brush, thickets, and tangles in chaparral, oak woodland, island woodland, and Bishop pine forest.	Year round resident; breeding season is April-July	Absent. The Study Area is outside of the range for this species.
Tricolored blackbird (*Agelaius tricolor*)	-	CT	BCC, SSC	Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta Cos south to San Bernardino, Riverside and San Diego Counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen Counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields.	March-August	Low Potential. Marginal suitable foraging habitat present onsite.
Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)	-	-	BCC, SSC	Breeds in salt marshes of San Francisco Bay; winters San Francisco south along coast to San Diego County.	March-July	Absent. The Study Area is outside of the range for this species.
Grasshopper sparrow (*Ammodramus savannarum*)	-	-	SSC	In California, breeding range includes most coastal counties south to Baja California; western	May-August	Absent. No suitable habitat present onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
				Sacramento Valley and western edge of Sierra Nevada region. Nests in moderately open grasslands and prairies with patchy bare ground. Avoids grasslands with extensive shrub cover; more likely to occupy large tracts of habitat than small fragments; removal of grass cover by grazing often detrimental.		
Burrowing owl *(Athene cunicularia)*	-	-	BCC, SSC	Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g., prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds.	February-August	Low Potential. Marginal suitable habitat present onsite.
Oak titmouse (*Baeolophus inornatus*)			BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree).	March-July	Potential. Suitable habitat present onsite.
Swainson's hawk (*Buteo swainsoni*)	-	CT	BCC	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during	March-August	Potential. Suitable nesting and foraging habitat present onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
				disking/harvesting, irrigated pastures		
Ferruginous hawk (*Buteo regalis*)	-	-	BCC, CDFW WL	Rarely breeds in California (Lassen County); winter range includes grassland and shrubsteppe habitats from Northern California (except northeast and northwest corners) south to Mexico and east to Oklahoma, Nebraska, and Texas.	September-March (wintering)	Absent. No suitable habitat present onsite.
Wrentit (*Chamaea fasciata*)	-	-	BCC	Coastal sage scrub, northern coastal scrub, chaparral, dense understory of riparian woodlands, riparian scrub, coyote brush and blackberry thickets, and dense thickets in suburban parks and gardens.	March-August	Absent. No suitable habitat present onsite.
Nuttall's woodpecker *(Dryobates nuttallii)*	-	-	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands.	April-July	Potential. Suitable habitat present onsite.
White-tailed kite (*Elanus leucurus*)	-	-	CFP	Nesting occurs within trees in low elevation grassland, agricultural, wetland, oak woodland, riparian, savannah, and urban habitats.	March-August	Potential. Suitable habitat present onsite.
Golden eagle (*Aquila chrysaetos*)	-	-	BCC, CFP	Nesting habitat includes mountainous canyon land, rimrock terrain of open desert and grasslands, riparian, oak woodland/savannah, and chaparral. Nesting occurs on cliff ledges, river banks, trees, and human-made structures (e.g., windmills,	Nest (February-August); winter CV (October-February)	Absent. No suitable habitat present onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
				platforms, and transmission towers). Breeding occurs throughout California, except the immediate coast, Central Valley floor, Salton Sea region, and the Colorado River region, where they can be found during Winter.		
Bald eagle (*Haliaeetus leucocephalus)*	Delisted	CE	CFP, BCC	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands	February – September (nesting); October-March (wintering)	Absent. No suitable habitat present onsite.
California black rail (*Laterallus jamaicensis coturniculus*)	-	CT	BCC, CFP	Salt marsh, shallow freshwater marsh, wet meadows, and flooded grassy vegetation. In California, primarily found in coastal and Bay-Delta communities, but also in Sierran foothills (Butte, Yuba, Nevada, Placer, El Dorado counties)	March-September (breeding)	Absent. No suitable habitat present onsite.
Lewis' woodpecker (*Melanerpes lewis*)	-	-	BCC	In California, breeds in Siskiyou and Modoc Counties, Warmer Mountains, inner coast ranges from Tehama to San Luis Obispo Counties, San Bernardino Mountains, and Big Pine Mountain (Inyo County); nesting habitat includes open ponderosa pine forest, open riparian woodland,	April-September (breeding); September-March (winter in Central Valley).	Absent. No suitable habitat present onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
				logged/burned forest, and oak woodlands. Does not breed on the west side of Sierran crest (Beedy and Pandalfino 2013).		
Yellow-billed magpie (*Pica nuttallii*)	-	-	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings.	April-June	Potential. Suitable habitat present onsite.
Bank swallow (*Riparia riparia*)	-	CT	-	Nests colonially along coasts, rivers, streams, lakes, reservoirs, and wetlands in vertical banks, cliffs, and bluffs in alluvial, friable soils. May also nest in sand, gravel quarries and road cuts. In California, breeding range includes northern and central California.	May-July	Absent. No suitable habitat present onsite.
Purple martin (*Progne subis*)	-	-	SSC	In California, breeds along coast range, Cascade-northern Sierra Nevada region and isolated population in Sacramento. Nesting habitat includes montane forests, Pacific lowlands with dead snags; the isolated Sacramento population nests in weep holes under elevated highways/bridges. Winters in South America.	May-August	Absent. No suitable habitat present onsite.
Rufous hummingbird *(Selasphorus rufus)*	-	-	BCC	Breeds in British Columbia and Alaska (does not breed in California). Winters in coastal	April-July	Absent. No suitable habitat present onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
				Southern California south into Mexico. Common migrant during March-April in Sierra Nevada foothills and June-August in Lower Conifer to Alpine zone of Sierra Nevada. Nesting habitat includes secondary succession communities and openings, mature forests, parks and residential area.		
Lawrence's goldfinch (*Spinus lawrencei*)	-	-	BCC	Breeds in Sierra Nevada and inner Coast Range foothills surrounding the Central Valley and the southern Coast Range to Santa Barbara County east through southern California to the Mojave Desert and Colorado Desert into the Peninsular Range. Nests in arid and open woodlands with chaparral or other brushy areas, tall annual weed fields, and a water source (e.g., small stream, pond, lake), and to a lesser extent riparian woodland, coastal scrub, evergreen forests, pinyon-juniper woodland, planted conifers, and ranches or rural residences near weedy fields and water.	March-September	Absent. No suitable habitat present onsite.
California thrasher (*Toxostoma redivivum*)	-	-	SSC, BCC	Resident and endemic to coastal and Sierra Nevada-Cascade foothill areas of California. Nests are usually well hidden in dense shrubs, including scrub oak, California lilac, and chamise.	February-July	Absent. No suitable habitat present onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Mammals						
Pallid bat *(Antrozous pallidus)*	-	-	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (Western Bat Working Group [WBWG] 2017).	April-September	Low potential. Marginal habitat present onsite.
American badger *(Taxidea taxus)*	-	-	SSC	Drier open stages of most shrub, forest, and herbaceous habitats with friable soils.	Any season	Absent. No suitable habitat present onsite.

Status Codes:

FESA	Federal Endangered Species Act
CESA	California Endangered Species Act
FE	FESA listed, Endangered
FT	FESA listed, Threatened
BCC	USFWS Bird of Conservation Concern (USFWS 2002)
CR	CESA- or NPPA-listed, Rare
CT	CESA- or NPPA-listed, Threatened
CE	CESA or NPPA listed, Endangered
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5 050-reptiles/amphibians)
CDFW WL	CDFW Watch List
SSC	CDFW Species of Special Concern (CDFW, updated July 2017)
1A	CRPR/Presumed extinct
1B	CRPR/Rare or Endangered in California and elsewhere
2B	Plants rare, threatened, or endangered in California but more common elsewhere
3	CRPR/Plants About Which More Information is Needed – A Review List
4	CRPR/Plants of Limited Distribution – A Watch List
0.1	Threat Rank/Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Threat Rank/Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3	Threat Rank/Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)
Delisted	Formally Delisted (delisted species are monitored for 5 years)

DPS = Distinct Population Segment

Based on the assessment of special-status species and the results of surveys conducted, 12 species were found to have some potential to occur within the Study Area. These special-status species include three invertebrates, one amphibian, seven birds, and one mammal, as described in more detail below. No special-status plant species were found during surveys in 2018 (ECORP 2018), and no special-status reptiles species are expected to occur based on a lack of habitat or range for the species.

5.6.1 Invertebrates

5.6.1.1 Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp (*Branchinecta lynchi*) is listed as threatened pursuant to the federal ESA. Historically, the range of vernal pool fairy shrimp extended throughout the Central Valley of California. Vernal pool fairy shrimp populations have been found in several locations throughout California, with habitat extending from Stillwater Plain in Shasta County through the Central Valley to Pixley in Tulare County, and along the Central Coast range from northern Solano County to Pinnacles National Monument in San Benito County (Eng et al. 1990, Fugate 1992, Sugnet and Associates 1993). Additional populations occur in San Luis Obispo, Santa Barbara, and Riverside counties. The historic and current ranges of vernal pool fairy shrimp are very similar in extent; however, the remaining populations are more fragmented and isolated than during historical times (USFWS 2005a). Threats to vernal pool fairy shrimp include agricultural conversion and development that result in habitat loss. Habitat loss also occurs through changes in natural hydrology, incompatible livestock grazing, pollution by storm water, and disturbance from recreational activities (USFWS 2005a).

The life cycle of vernal pool fairy shrimp is adapted to seasonally inundated features such as vernal pools, seasonal wetlands, and seasonal wetland swales. Fairy shrimp embryos survive the dry season in cyst form. Cysts "hatch" soon after pools become inundated during the wet season. Fairy shrimp complete their life cycle quickly and feed on small particles of detritus, algae, and bacteria (Eriksen and Belk 1999).

Critical Habitat for vernal pool species was designated in August 2003 by USFWS (2003) and revised in 2005 (USFWS 2005b) and 2006 (USFWS 2006). The site does not occur within Critical Habitat for vernal pool fairy shrimp. The *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (Recovery Plan)* includes vernal pool fairy shrimp conservation strategies (USFWS 2005a).

There are nine documented CNDDB occurrences of vernal pool fairy shrimp within 5 miles of the Study Area (CDFW 2021). The seasonal wetlands onsite provide marginally suitable habitat for this species; therefore, vernal pool fairy shrimp has low potential to occur onsite.

5.6.1.2 Vernal Pool Tadpole Shrimp

Vernal pool tadpole shrimp (*Lepidurus packardi)* is listed as endangered pursuant to the federal ESA. The historic range of the vernal pool tadpole shrimp likely extended throughout the Central Valley of California, and has been documented from east of Redding in Shasta County south to Fresno County, and from the San Francisco Bay Wildlife Refuge in Alameda County. The historic and current ranges of vernal pool tadpole shrimp are very similar in extent; however, the remaining populations are more fragmented and isolated than during historical times (USFWS 2005a). The largest threats to vernal pool tadpole shrimp

are loss of habitat through urbanization. Other threats include encroachment of nonnative annual grasses, agricultural conversion, and parasitism by flukes (Trematoda) of an undetermined species (Ahl 1991). Some populations are also threatened by pesticide drift from adjacent farmlands (USFWS 2005a).

This species is associated with low-alkalinity seasonal pools in grasslands throughout the northern and eastern portions of the Central Valley. Suitable vernal pools and seasonal swales are generally underlain by hardpan or sandstone. Vernal pool tadpole shrimp are adapted to seasonally inundated features such as vernal pools, seasonal wetlands, and seasonal wetland swales. Tadpole shrimp embryos survive the dry season in cyst form. Cysts "hatch" soon after pools become inundated during the wet season. Sexually mature adults may persist three to four weeks after habitat inundation (Sugnet and Associates 1993).

Critical Habitat for vernal pool species was designated in August 2003 by USFWS (2003) and revised in 2005 (USFWS 2005b) and 2006 (USFWS 2006). The site does not occur within Critical Habitat for vernal pool tadpole shrimp. The *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (Recovery Plan)* includes vernal pool tadpole shrimp conservation strategies (USFWS 2005a).

There are 10 documented CNDDB occurrences of vernal pool tadpole shrimp within five miles of the Study Area (CDFW 2021). The seasonal wetlands onsite provide marginally suitable habitat for this species; therefore, vernal pool tadpole shrimp has low potential to occur onsite.

5.6.1.3 Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*, VELB) is listed as threatened pursuant to the federal ESA. The VELB occurs in metapopulations throughout the Central Valley (Collinge et. al 2001 as cited in USFWS 2017). These metapopulations (subpopulations) occur throughout contiguous riparian habitat which shift temporarily and spatially based on changing environmental conditions. This temporal and spatial shifting of the metapopulations results in a patchy and ever-changing distribution of the species. Research indicates that dense elderberry shrub clumps in healthy riparian habitat is the primary habitat for the VELB (USFWS 2017). The beetle's current distribution extends from Shasta County in the north to Fresno County in the south and includes everything from the valley floor up into the lower foothills (USFWS 2017).

The VELB is completely dependent on its larval host plant, elderberry (*Sambucus* sp.), which occurs in riparian and other woodland and scrub communities (USFWS 1999, 2017). The vast majority of VELB occurrences have been recorded below 500 feet (152 meters), however, rare occurrences have been recorded up to approximately 3,000 feet (USFWS 1999, 2017). Elderberry plants, located within the range of the beetle, with one or more stems measuring 1.0 inch or greater in diameter at ground level are considered to be habitat for the species (USFWS 1999). The adult flight season extends from late March through July (USFWS 2017). During that time the adults feed on foliage and perhaps flowers, mate, and females lay eggs on living elderberry plants (Barr 1991). The first instar larvae bore into live elderberry stems, where they develop for one to two years feeding on the pith. The fifth instar larvae create exit holes in the stems and then plug the holes and remain in the stems through pupation (Talley et al. 2007).

There are nine documented CNDDB occurrences of VELB within five miles of the Study Area (CDFW 2021). Additionally, elderberry shrubs were documented within the Study Area during the 2016 survey (Figure 4. *Valley Elderberry Longhorn Beetle Habitat)*. A total of 213 shrubs are located within the Study Area, including those that were fully mitigated for by the Glenborough Project (Figure 4). One shrub within the Study Area was observed with evidence of VELB (Figure 4). Therefore, VELB has potential to occur.

5.6.2 Amphibians

5.6.2.1 Western Spadefoot

Western spadefoot (*Spea hammondii*) is not listed pursuant to either the California or federal ESAs; however, it is considered an SSC by CDFW. Western spadefoot is typically associated with lowland washes, floodplains, rivers, vernal pools, alluvial fans, playas, and alkali flats (Stebbins 1985) in the Central Valley, although they also occur in foothills and mountains to approximately 4,000 feet above mean sea level. This species is found in open areas with sandy or gravelly soils and may be found in valley and foothill grasslands, open chaparral, and pine-oak woodland habitats (USFWS 2005b). Adult western spadefoots are terrestrial and enter water only to breed (Dimmitt and Ruibal 1980). f

Individuals may spend eight to nine months in upland burrows during dry periods, emerging from burrows after late-winter and early-spring rains to forage and mate. Surface activity is generally nocturnal and has been documented in every month from October to May (Morey 1988; Morey and Guinn 1992).

There are two documented CNDDB occurrences of western spadefoot within five miles of the Study Area (CDFW 2021). The seasonal wetlands provide very marginal habitat for this species. Western spadefoot has low potential to occur onsite.

5.6.3 Birds

5.6.3.1 Tricolored Blackbird

The tricolored blackbird (TRBL, *Agelaius tricolor*), is listed as threatened under the California ESA. Additionally, it is considered a BCC by USFWS and an SSC by CDFW. This colonial nesting species is distributed widely throughout the Central Valley, Coast Range, and into Oregon, Washington, Nevada, and Baja California (Meese et al. 2014). TRBL nests in colonies that can range from several pairs to several thousand pairs, depending on prey availability, the presence of predators, or level of human disturbance. tricolor blackbird nesting habitat includes emergent marsh, riparian woodland/scrub, blackberry thickets, densely vegetated agricultural and idle fields (e.g., wheat, triticale, safflower, fava bean fields, thistle, mustard, cane, and fiddleneck), usually with some nearby standing water or ground saturation (Meese et al. 2014). They feed mainly on grasshoppers during the breeding season, but may also forage upon a variety of other insects, grains, and seeds in open grasslands, wetlands, feedlots, dairies, and agricultural fields (Meese et al. 2014). The nesting season is generally from March through August.

There are eight documented CNDDB occurrences of TRBL within five miles of the Study Area (CDFW 2021). The partially-disturbed grasslands onsite provide marginal potential foraging habitat for tricolored blackbird; therefore, tricolored blackbird has low potential to occur.

Figure 4. Valley Elderberry Longhorn Beetle Habitat



Map Features

- Easton Research Park West Project - 143.67 ac.
- Glenborough Project - Fully Mitigated
- Existing Elderberry Shrubs – VELB Evidence (1)
- Existing Elderberry Shrubs – No VELB Evidence (197)
- Existing Elderberry Shrubs – Unknown Evidence (15)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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ECORP N:\2009\2009-169 WESTBOROUGHMAPS\SSS_SURVEY_AND_MAPPING\VELB\V3_ERPWERPW_ELDERBERRY_LOC_BRA_20210713.MXD(CCH) -KTURNQUIST 7/27/2021

2018-012.02 Easton Research Park West

Scale in Feet
0 300 600

Photo Source: NAIP (2018)

Map Date: 7/27/2021

5.6.3.2 Burrowing Owl

The burrowing owl (BUOW, *Athene cunicularia*) is not listed pursuant to either the California or federal ESAs; however, it is designated as a BCC by USFWS and an SSC by CDFW. This species generally occupies dry open rolling hills, grasslands, deserts, sagebrush scrub, agricultural areas, earthen levees and berms, coastal uplands, and urban vacant lots, as well as the margins of airports, golf courses, and roads (California Department of Fish and Game [CDFG] 2012; Klute et al. 2003). The species' breeding range extends across the western United States from the Pacific coast to western Nebraska, north into parts of Canada and south to Baja California and into mainland Mexico (Klute et al. 2003). Urbanization and other human-induced landscape changes are the drivers of BUOW population declines (Boal and Dykstra 2018).

BUOW have three basic habitat requirements: open, well-drained terrain; short, sparse vegetation; and underground burrows or burrow facsimiles (CDFG 2012; Klute et al. 2003) in which to take refuge and to breed. BUOW typically use burrows created by fossorial mammals, particularly the California ground squirrel (*Otospermophilus beecheyi*). In areas developed by humans, they may also use burrow surrogates, such as cement culverts or pipes; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement (California Department of Fish and Game [CDFG] 1995, 2012). The breeding season for BUOW typically occurs between February 1 and August 31 (California Burrowing Owl Consortium [CBOC] 1993, CDFG 1995, 2012). During the breeding season, foraging occurs throughout the day, at dawn, dusk and during daylight hours (Poulin and Todd 2006).

There is one documented occurrence of BUOW within five miles of the Study Area (CDFW 2021). The remnant grassland and partially disturbed areas onsite provide marginal potential habitat. Burrowing owl has low potential to occur onsite.

5.6.3.3 Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) are not listed and protected under either state or federal ESAs, but are considered a USFWS BCC. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley (Cicero et al. 2017). They are found in dry oak or oak-pine woodlands, but may also use scrub oaks or other brush near woodlands (Cicero et al. 2017). Nesting occurs during March through July.

There are no documented CNDDB occurrences of oak titmouse within five miles of the Study Area (CDFW 2021). However, the oak trees onsite provide potential nesting habitat for the species. Oak titmouse has potential to occur onsite.

5.6.3.4 Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is listed as a threatened species pursuant to the California ESA. Additionally, Swainson's hawk is designated as a BCC by USFWS. Historic declines in Swainson's hawk populations are attributed to pesticide use and rodent population reduction, along with loss of native habitat (Bechard 2010; CDFG 1994). This species nests in North America (Canada, western United States,

and Mexico), including California's Central Valley. Swainson's hawk typically winters as far south as Argentina in South America and as far north as Mexico (Airola et al. 2019). However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta (Bechard et al. 2010). In California, the nesting season for ranges from mid-March to late August (CDFG 1994; Estep 1989).

Swainson's hawk nest within tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas (CDFG 1994; Estep 1989). The species requires suitable foraging habitat in proximity to suitable nesting trees (CDFG 1994; Estep 1989). Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. Swainson's hawk are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, disking, and irrigating (Estep 1989), which results in a temporary increase in readily available prey items for this species.

There are six documented CNDDB occurrences of Swainson's hawk within five miles of the Study Area. Trees onsite provide potential nesting and the grassland onsite provides potential foraging habitat for the species. Swainson's hawk has potential to occur onsite.

5.6.3.5 Nuttall's Woodpecker

The Nuttall's woodpecker (*Dryobates nuttallii*) is not listed and protected under either state or federal ESAs, but is considered a USFWS BCC. The species is resident from Siskiyou County south to Baja California. Nuttall's woodpecker nests in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands (Lowther 2000). Breeding occurs during April through July.

There are no documented CNDDB occurrences of Nuttall's woodpecker within five miles of the Study Area (CDFW 2021). However, the scattered oak trees onsite provide potential nesting and foraging habitat. Nuttall's woodpecker has potential to occur onsite.

5.6.3.6 White-tailed Kite

White-tailed kite (*Elanus leucurus*) is not listed pursuant to either the California or federal ESAs; however, the species is fully protected pursuant to Section 3511 of the California Fish and Game Code. This species is a common resident in the Central Valley and the entire length of the California coast, and all areas up to the Sierra Nevada foothills and southeastern deserts (Dunk 1995). In northern California, white-tailed kite nesting occurs from March through early August, with nesting activity peaking from March through June. Nesting occurs in trees within riparian, oak woodland, savannah, and agricultural communities that are near foraging areas such as low elevation grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands (Dunk 1995).

There are 10 documented CNDDB occurrences of white-tailed kite within five miles of the Study Area (CDFW 2021). The oak trees onsite provide potential nesting and grassland provides potential foraging habitat. White-tailed kite has potential to occur onsite.

5.6.3.7 Yellow-billed Magpie

The yellow-billed magpie (*Pica nuttalli*) is not listed pursuant to either the California or federal ESAs but is considered a USFWS BCC. This endemic species is a yearlong resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or cropland. Nest building begins in late-January to mid-February, which may take up to 6-8 weeks to complete, with eggs laid during April-May, and fledging during May-June (Koenig and Reynolds 2009). The young leave the nest at about 30 days after hatching (Koenig and Reynolds 2009). Yellow-billed magpies are highly susceptible to West Nile Virus, which may have been the cause of death to thousands of magpies during 2004-2006 (Koenig and Reynolds 2009).

There are no documented CNDDB occurrences of yellow-billed magpie within five miles of the Study Area (CDFW 2021). However, the trees onsite provide potential nesting habitat. Yellow-billed magpie has potential to occur onsite.

5.6.4 Mammals

5.6.4.1 Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. This species ranges throughout North America from the interior of British Columbia, south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 ft) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (above 7,000 ft). This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges and barns. Pallid bats are feeding generalists that glean a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. This species is not thought to migrate long distances between summer and winter sites (WBWG 2017).

There is one documented CNDDB occurrence of pallid bat within five miles of the Study Area (CDFW 2021). The oak trees and manmade structures onsite provide marginal roosting habitat. Pallid bat has low potential to occur onsite.

5.7 Wildlife Movement/Corridors

The Study Area is previously disturbed and partially developed (Figure 3). Additionally, a heavily trafficked highway exists northwest of the Study Area. The surrounding landscape is made up of previously disturbed portions of the Aerojet campus, as well as development and infrastructure along Highway 50 (see Figure 1). Therefore, the Study Area does not provide an important movement corridor, and development associated with the Project is not expected to adversely impact wildlife movement.

5.7.1 Oak Trees

An arborist survey was conducted within a large portion of the Study Area on October 20 and 30, 2020 by ECORP certified arborist Krissy Walker-Berry (ECORP 2021, Attachment C). A total of 204 trees were inventoried during the survey, including several species of oak: interior live oak (*Quercus wislizenii*), valley oak (*Quercus lobata*), and blue oak (*Quercus douglasii*). Oak trees are regulated by Sacramento County in accordance with the Sacramento County General Plan, and by Rancho Cordova in accordance with the Rancho Cordova Tree Ordinance (Preservation and Protection of Private Trees). A tree permit will be required per one or both ordinances, depending on the location within the Study Area of the tree(s) for removal.

5.8 Critical Habitat

The Study Area is not located within the range of designated Critical Habitat for special-status species (USFWS 2021b).

6.0 RECOMMENDATIONS

Because the Study Area has been previously disturbed, biological diversity onsite has likely been reduced. A small amount of aquatic resources occur within the unpermitted portion of the Study Area (0.038-acre seasonal wetland). Scattered oak trees occur onsite, as well as potential habitat for multiple special-status species.

6.1 Aquatic Resources

The Study Area supports aquatic resources that are potential Waters of the U.S. and Waters of the State subject to verification by the USACE and RWQCB, respectively (Figure 3). The Project, as currently designed, proposes to impact aquatic resources. The following measures are recommended to minimize potential impacts to aquatic resources:

- A permit authorization to fill wetlands under the Section 404 of the federal Clean Water Act (Section 404 Permit) will be obtained from USACE prior to discharging any dredged or fill materials into any Waters of the U.S. Final mitigation measures will be developed as part of the Section 404 Permit process to ensure no-net-loss of wetland function and values.
- A Water Quality Certification or waiver pursuant to Section 401 of the CWA must be obtained from the RWQCB for Section 404 permit actions.
- Pursuant to the Porter-Cologne Water Quality Act, a permit authorization from the RWQCB is required prior to the discharge of material in an area that could affect Waters of the State. Mitigation requirements for discharge to Waters of the State \ will be developed in consultation with the RWQCB.

No features that may be subject to Section 1600 of the Fish and Game Code were identified in the Study Area; therefore, a Streambed Alteration Agreement from CDFW pursuant to Section 1602 of the California Fish and Game Code is not required.

6.2 Special-Status Species

6.2.1 Workers Awareness Training

Prior to start of construction activities, a qualified biologist shall conduct an education program for all persons involved with the proposed Project. The program shall consist of a presentation from the Biologist that includes a discussion of the biology and general behavior of the species discussed above, information about the distribution and habitat needs of these animals, sensitivity of these animals to human activities, and their status of legal protection.

6.2.2 Invertebrates

6.2.2.1 Vernal Pool Fairy and Tadpole Shrimp

Presence of federally listed large branchiopods will be assumed in onsite wetland features. A Biological Assessment (ECORP 2020) has been prepared and submitted to USFWS and appropriate mitigation will be determined through the Section 7 process.

The following measures are recommended to minimize potential impacts to Vernal Pool Fairy and Tadpole Shrimp:

- Assume presence of Vernal Pool Fairy and Tadpole Shrimp and initiate the Section 7 consultation process with USFWS through the Clean Water Act Section 404 Process; OR conduct protocol-level surveys for these species to determine presence or absence prior to consultation.
- If presence is assumed or confirmed after protocol surveys, acquire a Biological Opinion for the Project and implement all conditions of the Biological Opinion, including purchasing compensatory mitigation for permanent impacts to branchiopod habitat. Compensatory mitigation will be determined through the Section 7 process and outlined in the Biological Opinion.

6.2.2.2 Valley Elderberry Longhorn Beetle

As mentioned in Section 4.2, a survey for VELB was conducted in 2016 and shrubs were observed onsite (Figure 4). Implementation of the Project will require removal of elderberry shrubs, and a Biological Assessment (ECORP 2020) has been prepared and submitted to USFWS. Appropriate mitigation will be determined through the Section 7 process.

The following measures are recommended to minimize potential impacts to VELB:

- Initiate Section 7 consultation process with USFWS through the Clean Water Act Section 404 process on the Project effects to ESA-listed VELB and acquire a Biological Opinion for the Project. Implement all conditions of the Biological Opinion.
- Elderberry shrubs will be avoided to the extent practicable. For any impacts to elderberry shrubs, appropriate avoidance measures and a mitigation plan will be developed in consultation with USFWS and implemented during the appropriate timeframe.

- The area surrounding avoided elderberry shrubs shall be fenced and/or flagged as close to construction limits as possible.
- As much as feasible, all activities that could occur within 165 feet of an avoided elderberry shrub will be conducted outside of the flight season of VELB (March - July).
- Herbicides will not be used within the drip line of any elderberry shrubs. Insecticides will not be used within 100 feet of an elderberry shrub and will be applied using a backpack sprayer or similar direct application method.
- The potential effects of dust on VELB will be minimized by applying water during construction activities or by presoaking work areas that will occur within 100 feet of any potential elderberry shrub habitat.

6.2.3 Amphibians

6.2.3.1 Western Spadefoot

Implementation of the following minimization measures will ensure that there are no significant impacts to western spadefoot:

- Preconstruction surveys for western spadefoot will be conducted within the limits of construction to detect adults, larvae, and/or egg masses, within 48 hours prior to the start of construction.
- If no western spadefoots are found, no further measures pertaining to this species are necessary.
- If adults, larvae, or egg masses are found, they will be relocated to suitable habitat within an on- or off-site preserve(s), in consultation with CDFW.

6.2.4 Birds (including nesting raptors)

Suitable nesting and/or foraging habitat for several special-status birds is present within the Study Area. In addition to the special-status birds, all native birds, including raptors, are protected under the California Fish and Game Code and the MBTA. If nesting birds are present, the Project could result in harassment to or take of nesting individuals. As such, to ensure that there are no impacts to protected birds and/or active nests, the following mitigation measures are recommended if Project activities will occur within the nesting season (approximately February 1-September 15):

6.2.4.1 Nesting Birds

- A preconstruction survey for nesting birds will be conducted by a qualified biologist within 14 days (or fewer if recommended by CDFW) of commencement of Project activities. The survey will occur within the Study Area and a 100-foot buffer. If an active nest is located, a no-disturbance buffer will be established as determined by the biologist in consultation with CDFW and maintained until the nest is confirmed to be no longer active by the biologist.

6.2.4.2 Raptors

- A preconstruction survey for nesting raptors will be conducted within 14 days of commencement of Project activities by a qualified wildlife biologist within the Study Area and a 500-foot buffer. If an active nest is located, a no-disturbance buffer will be established as determined by the biologist in consultation with CDFW and maintained until a qualified biologist determines the young have fledged and are no longer reliant upon the nest for survival.

6.2.4.3 Swainson's Hawk

- A preconstruction survey for nesting Swainson's hawk will be conducted by a qualified biologist within 14 days of commencement of Project activities within the Study Area and a 0.25-mile buffer. As described above, if Swainson's hawks are found to be nesting in the vicinity, a no-disturbance buffer will be established in consultation with CDFW and maintained until a qualified biologist determines the young have fledged and are no longer reliant upon the nest for survival.
- Mitigation for permanent impacts to SWHA foraging habitat has been purchased for the portions of the Study Area that overlap with the Glenborough Project in accordance with the CEQA Environmental Impact Report Mitigation Measures for that Project.
- Mitigation for permanent impacts to SWHA foraging habitat for the remaining portions of the Study Area is required (see Figure 3). Compensatory mitigation should be consistent with the Sacramento County SWHA Ordinance.

6.2.4.4 Burrowing Owl

- A preconstruction survey for nesting burrowing owl will be conducted by a qualified biologist within 14 days prior to commencement of Project activities within the Study Area and a 250-foot buffer. Surveys shall be conducted at appropriate times and in appropriate weather conditions to maximize detection. If active burrowing owl burrows are found, an avoidance buffer will be immediately established, and an avoidance plan will be prepared in consultation with CDFW prior to the commencement of any ground-disturbing activities.

6.2.5 Mammals

6.2.5.1 Pallid Bat

The Study Area contains potential roosting habitat for pallid bat. To ensure that there are no significant impacts to special-status bats, the following mitigation measures are recommended:

- Prior to commencement of Project activities, a qualified biologist will survey for all suitable roosting habitat (e.g., manmade structures, trees, rock outcrops) within the Study Area proposed for removal and or disturbance. If no suitable roosting habitat is identified, no further measures are necessary.

- If suitable roosting habitat is identified, a qualified biologist will conduct an evening bat emergence survey that may include acoustic monitoring to determine whether or not bats are present. If roosting bats are found, consultation with CDFW is required prior to initiation of construction activities.

6.3 Sacramento County/Rancho Cordova Tree Preservation Ordinances

The Study Area may be subject to both the City of Rancho Cordova and Sacramento County Tree Preservation Ordinances. The following measures are recommended to comply with the City and/or County's Tree Preservation Ordinances if trees will be impacted as part of the Project:

- Prior to tree removal, an arborist survey will be conducted for any areas within the Study Area not previously surveyed (see Attachment C).
- If the proposed Project activities occur within the dripline of, or require the removal of, any trees, a Tree Permit will be required, and the corresponding tree ordinance shall be consulted for tree mitigation and preservation measures. This will include the development of a tree protection plan or its equivalent. This plan will provide arborist recommendations for preserved trees and general recommendations during and after construction activities as well as specific recommendations for long term maintenance.

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LIST OF ATTACHMENTS

Attachment A – Results of Database Queries

Attachment B – Representative Photographs

Attachment C – Arborist Report

ATTACHMENT A

Results of Database Queries

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Sacramento County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS

Giant Garter Snake Thamnophis gigas — Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4482

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2076

Fishes

NAME	STATUS

Delta Smelt Hypomesus transpacificus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS

Conservancy Fairy Shrimp Branchinecta conservatio — Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/8246

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Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2246

Flowering Plants

NAME	STATUS

Sacramento Orcutt Grass Orcuttia viscida — Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/5507

Slender Orcutt Grass Orcuttia tenuis — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/1063

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Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

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NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

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Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

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Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any

week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

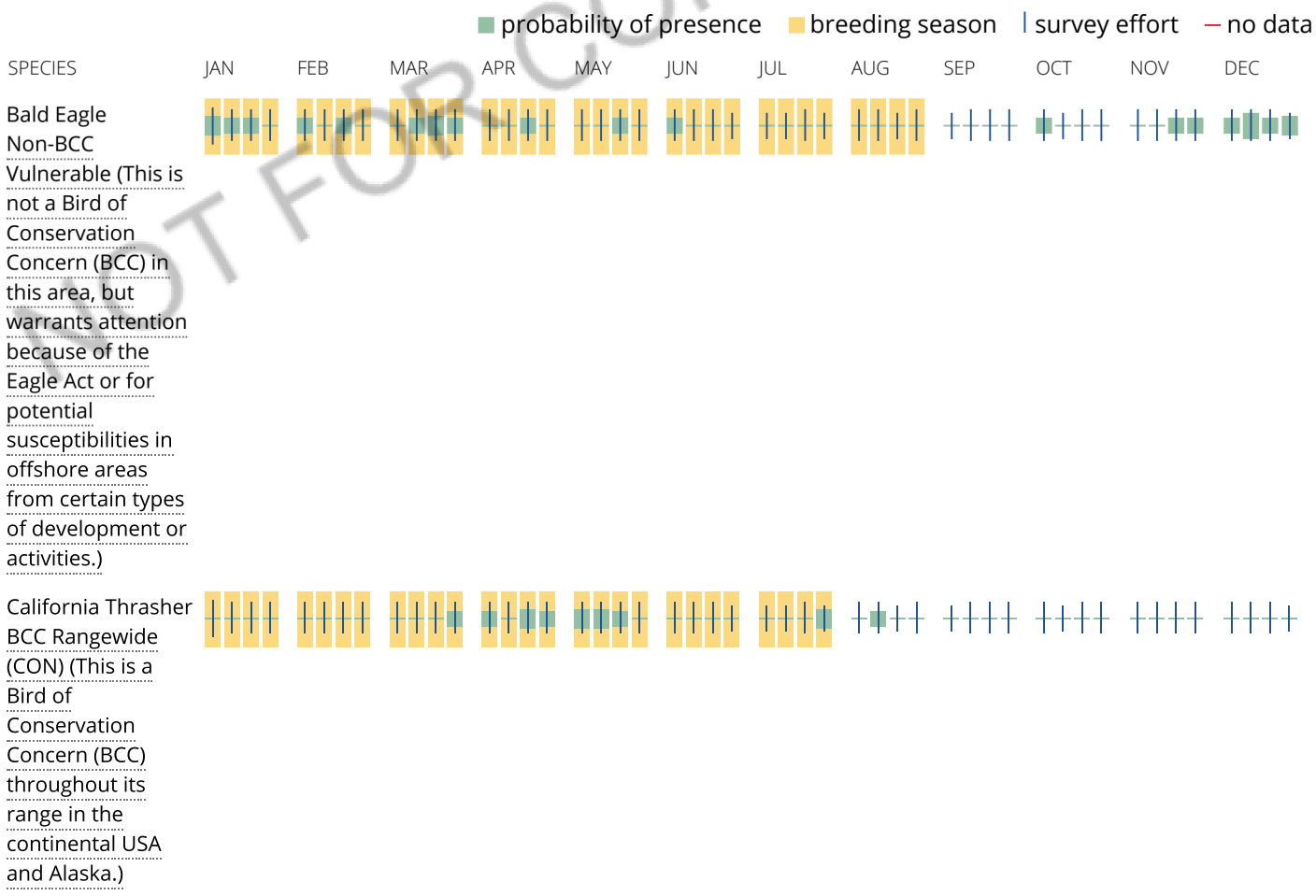
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

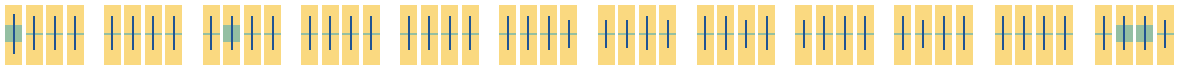
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

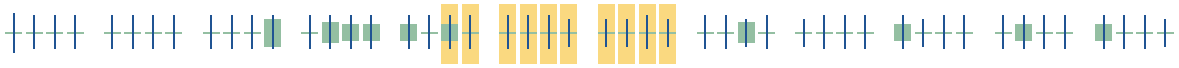
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Clark's Grebe BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Common Yellowthroat BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

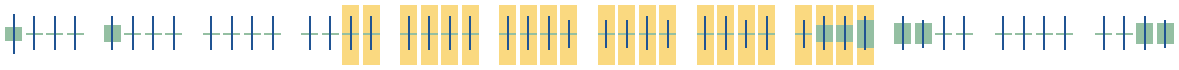


Lawrence's Goldfinch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

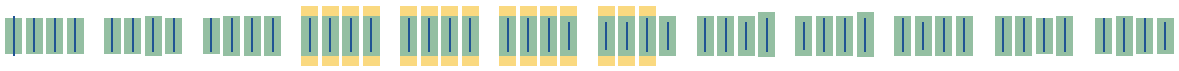


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Lewis's Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



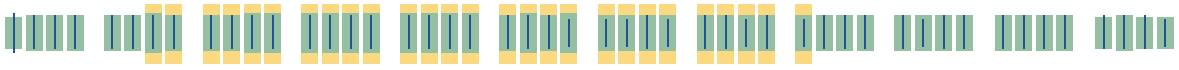
Oak Titmouse BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



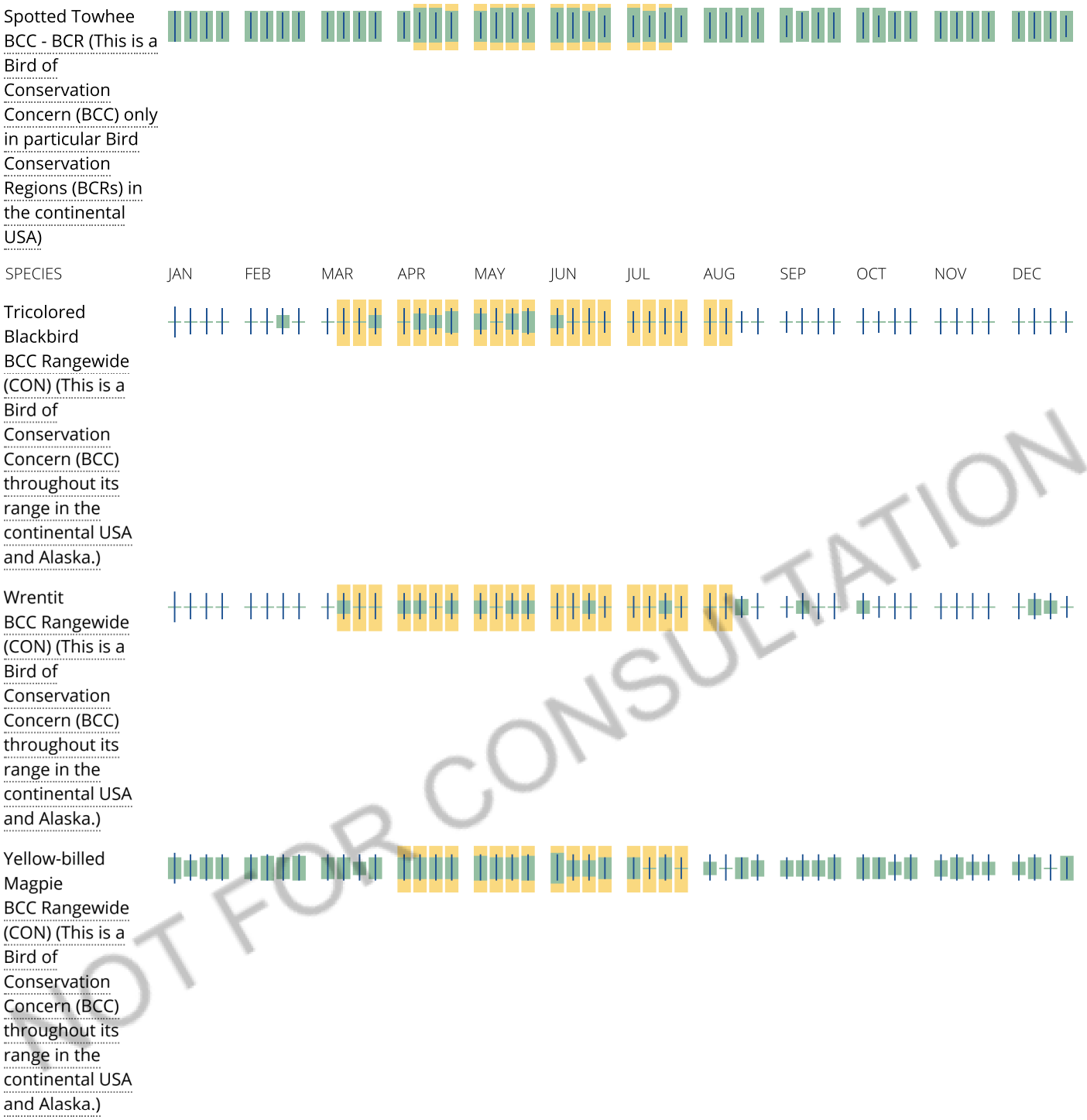
Rufous Hummingbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Song Sparrow BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review.

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Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1Cx
- PEM1Fx

FRESHWATER POND

- PUBFx
- PUSKx

RIVERINE

- R5UBFx
- R5UBF

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

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Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Folsom (3812162) OR Folsom SE (3812151) OR Buffalo Creek (3812152) OR Roseville (3812173) OR Citrus Heights (3812163) OR Carmichael (3812153) OR Elk Grove (3812143) OR Sloughhouse (3812142) OR Carbondale (3812141) OR Clarksville (3812161) OR Pilot Hill (3812171) OR Rocklin (3812172))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAA01181	***Ambystoma californiense pop. 1*** California tiger salamander - central California DPS	Threatened	Threatened	G2G3	S2S3	WL
AAABF02020	***Spea hammondii*** western spadefoot	None	None	G2G3	S3	SSC
AAABH01022	***Rana draytonii*** California red-legged frog	Threatened	None	G2G3	S2S3	SSC
AAABH01050	***Rana boylii*** foothill yellow-legged frog	None	Endangered	G3	S3	SSC
ABNFD01020	***Phalacrocorax auritus*** double-crested cormorant	None	None	G5	S4	WL
ABNGA04010	***Ardea herodias*** great blue heron	None	None	G5	S4	
ABNGA04040	***Ardea alba*** great egret	None	None	G5	S4	
ABNKC01010	***Pandion haliaetus*** osprey	None	None	G5	S4	WL
ABNKC06010	***Elanus leucurus*** white-tailed kite	None	None	G5	S3S4	FP
ABNKC10010	***Haliaeetus leucocephalus*** bald eagle	Delisted	Endangered	G5	S3	FP
ABNKC12040	***Accipiter cooperii*** Cooper's hawk	None	None	G5	S4	WL
ABNKC19070	***Buteo swainsoni*** Swainson's hawk	None	Threatened	G5	S3	
ABNKC19120	***Buteo regalis*** ferruginous hawk	None	None	G4	S3S4	WL
ABNKC22010	***Aquila chrysaetos*** golden eagle	None	None	G5	S3	FP
ABNKD06030	***Falco columbarius*** merlin	None	None	G5	S3S4	WL
ABNME03041	***Laterallus jamaicensis coturniculus*** California black rail	None	Threatened	G3G4T1	S1	FP
ABNSB10010	***Athene cunicularia*** burrowing owl	None	None	G4	S3	SSC
ABPAU01010	***Progne subis*** purple martin	None	None	G5	S3	SSC

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
ABPAU08010	***Riparia riparia*** bank swallow	None	Threatened	G5	S2	
ABPBXA0020	***Ammodramus savannarum*** grasshopper sparrow	None	None	G5	S3	SSC
ABPBXB0020	***Agelaius tricolor*** tricolored blackbird	None	Threatened	G1G2	S1S2	SSC
AFCHA0209K	***Oncorhynchus mykiss irideus pop. 11*** steelhead - Central Valley DPS	Threatened	None	G5T2Q	S2	
AMACC02010	***Lasionycteris noctivagans*** silver-haired bat	None	None	G3G4	S3S4	
AMACC10010	***Antrozous pallidus*** pallid bat	None	None	G4	S3	SSC
AMAFJ01010	***Erethizon dorsatum*** North American porcupine	None	None	G5	S3	
AMAJF04010	***Taxidea taxus*** American badger	None	None	G5	S3	SSC
ARAAD02030	***Emys marmorata*** western pond turtle	None	None	G3G4	S3	SSC
ARADB36150	***Thamnophis gigas*** giant gartersnake	Threatened	Threatened	G2	S2	
CTT37D00CA	***Ione Chaparral*** Ione Chaparral	None	None	G1	S1.1	
CTT42110CA	***Valley Needlegrass Grassland*** Valley Needlegrass Grassland	None	None	G3	S3.1	
CTT44110CA	***Northern Hardpan Vernal Pool*** Northern Hardpan Vernal Pool	None	None	G3	S3.1	
CTT44132CA	***Northern Volcanic Mud Flow Vernal Pool*** Northern Volcanic Mud Flow Vernal Pool	None	None	G1	S1.1	
CTT45310CA	***Alkali Meadow*** Alkali Meadow	None	None	G3	S2.1	
CTT45320CA	***Alkali Seep*** Alkali Seep	None	None	G3	S2.1	
CTT61430CA	***Great Valley Valley Oak Riparian Forest*** Great Valley Valley Oak Riparian Forest	None	None	G1	S1.1	
ICBRA03030	***Branchinecta lynchi*** vernal pool fairy shrimp	Threatened	None	G3	S3	
ICBRA03150	***Branchinecta mesovallensis*** midvalley fairy shrimp	None	None	G2	S2S3	
ICBRA06010	***Linderiella occidentalis*** California linderiella	None	None	G2G3	S2S3	
ICBRA10010	***Lepidurus packardi*** vernal pool tadpole shrimp	Endangered	None	G4	S3S4	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
ICBRA23010	***Dumontia oregonensis*** hairy water flea	None	None	G1G3	S1	
IICOL48011	***Desmocerus californicus dimorphus*** valley elderberry longhorn beetle	Threatened	None	G3T2	S3	
IICOL5V010	***Hydrochara rickseckeri*** Ricksecker's water scavenger beetle	None	None	G2?	S2?	
IIHYM24250	***Bombus occidentalis*** western bumble bee	None	Candidate Endangered	G2G3	S1	
IIHYM24480	***Bombus crotchii*** Crotch bumble bee	None	Candidate Endangered	G3G4	S1S2	
IIHYM35030	***Andrena blennospermatis*** Blennosperma vernal pool andrenid bee	None	None	G2	S2	
IIHYM35210	***Andrena subapasta*** An andrenid bee	None	None	G1G2	S1S2	
IIPLE23020	***Cosumnoperla hypocrena*** Cosumnes stripetail	None	None	G2	S2	
ILARA14020	***Banksula californica*** Alabaster Cave harvestman	None	None	GH	SH	
PDAPI0Z0P0	***Eryngium pinnatisectum*** Tuolumne button-celery	None	None	G2	S2	1B.2
PDAST11061	***Balsamorhiza macrolepis*** big-scale balsamroot	None	None	G2	S2	1B.2
PDAST8H1V0	***Packera layneae*** Layne's ragwort	Threatened	Rare	G2	S2	1B.2
PDAST9X0D0	***Wyethia reticulata*** El Dorado County mule ears	None	None	G2	S2	1B.2
PDCAM060C0	***Downingia pusilla*** dwarf downingia	None	None	GU	S2	2B.2
PDCAM0C010	***Legenere limosa*** legenere	None	None	G2	S2	1B.1
PDCIS020F0	***Crocanthemum suffrutescens*** Bisbee Peak rush-rose	None	None	G2?Q	S2?	3.2
PDCON040H0	***Calystegia stebbinsii*** Stebbins' morning-glory	Endangered	Endangered	G1	S1	1B.1
PDERI04240	***Arctostaphylos myrtifolia*** Ione manzanita	Threatened	None	G1	S1	1B.2
PDONA05053	***Clarkia biloba ssp. brandegeeae*** Brandegee's clarkia	None	None	G4G5T4	S4	4.2
PDPGN080F1	***Eriogonum apricum var. apricum*** Ione buckwheat	Endangered	Endangered	G2T1	S1	1B.1
PDPGN080F2	***Eriogonum apricum var. prostratum*** Irish Hill buckwheat	Endangered	Endangered	G2T1	S1	1B.1

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDPLM0C0X1	***Navarretia myersii ssp. myersii*** pincushion navarretia	None	None	G2T2	S2	1B.1
PDRHA04190	***Ceanothus roderickii*** Pine Hill ceanothus	Endangered	Rare	G1	S1	1B.1
PDROS0W0C0	***Horkelia parryi*** Parry's horkelia	None	None	G2	S2	1B.2
PDRUB0N0E7	***Galium californicum ssp. sierrae*** El Dorado bedstraw	Endangered	Rare	G5T1	S1	1B.2
PDSCR0J0D1	***Chloropyron molle ssp. hispidum*** hispid salty bird's-beak	None	None	G2T1	S1	1B.1
PDSCR0R060	***Gratiola heterosepala*** Boggs Lake hedge-hyssop	None	Endangered	G2	S2	1B.2
PDSTE03030	***Fremontodendron decumbens*** Pine Hill flannelbush	Endangered	Rare	G1	S1	1B.2
PMALI040Q0	***Sagittaria sanfordii*** Sanford's arrowhead	None	None	G3	S3	1B.2
PMCYP03M60	***Carex xerophila*** chaparral sedge	None	None	G2	S2	1B.2
PMJUN011L1	***Juncus leiospermus var. ahartii*** Ahart's dwarf rush	None	None	G2T1	S1	1B.2
PMJUN011L2	***Juncus leiospermus var. leiospermus*** Red Bluff dwarf rush	None	None	G2T2	S2	1B.1
PMLIL0G020	***Chlorogalum grandiflorum*** Red Hills soaproot	None	None	G3	S3	1B.2
PMLIL0V010	***Fritillaria agrestis*** stinkbells	None	None	G3	S3	4.2
PMPOA4G050	***Orcuttia tenuis*** slender Orcutt grass	Threatened	Endangered	G2	S2	1B.1
PMPOA4G070	***Orcuttia viscida*** Sacramento Orcutt grass	Endangered	Endangered	G1	S1	1B.1

Record Count: 75

Search Results

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Search Criteria: Quad is one of [**3812162,3812152,3812173,3812172,3812171,3812161,3812163,3812153,3812151,3812141,3812142,3812143**]

Scientific Name | Common Name | Family | Lifeform | Blooming Period | Fed List | State List | Global Rank | State Rank | CA Rare Plant Rank | General Habitats | Micro Habitats | Lowest Elevation | Highest Elevation | CA Endemic | Date Added | Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Allium sanbornii var. *sanbornii*	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	None	None	G4T3T4	S3S4	4.2	No Photo Available
Arctostaphylos myrtifolia	Ione manzanita	Ericaceae	perennial evergreen shrub	Nov-Mar	FT	None	G1	S1	1B.2	No Photo Available
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	 ©1998 Dean Wm. Taylor
Brodiaea rosea ssp. *vallicola*	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr-May(Jun)	None	None	G5T3	S3	4.2	No Photo Available
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	None	None	G4	S4	4.2	No Photo Available
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	FE	CE	G1	S1	1B.1	No Photo Available
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	No Photo Available
Ceanothus roderickii	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	FE	CR	G1	S1	1B.1	No Photo Available
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	None	None	G3	S3	1B.2	No Photo Available
Chloropyron molle ssp. *hispidum*	hispid salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Sep	None	None	G2T1	S1	1B.1	No Photo Available
Clarkia biloba ssp. *brandegeeae*	Brandegee's clarkia	Onagraceae	annual herb	May-Jul	None	None	G4G5T4	S4	4.2	No Photo Available
Crocanthemum suffrutescens	Bisbee Peak rush-rose	Cistaceae	perennial evergreen shrub	Apr-Aug	None	None	G2?Q	S2?	3.2	No Photo Available

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA PLANT RANK	PHOTO
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2	No Photo Available
Eriogonum apricum var. *apricum*	Ione buckwheat	Polygonaceae	perennial herb	Jul-Oct	FE	CE	G2T1	S1	1B.1	No Photo Available
Eriogonum apricum var. *prostratum*	Irish Hill buckwheat	Polygonaceae	perennial herb	Jun-Jul	FE	CE	G2T1	S1	1B.1	No Photo Available
Eriophyllum jepsonii	Jepson's woolly sunflower	Asteraceae	perennial herb	Apr-Jun	None	None	G3	S3	4.3	No Photo Available
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual/perennial herb	May-Aug	None	None	G2	S2	1B.2	No Photo Available
Fremontodendron decumbens	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	FE	CR	G1	S1	1B.2	No Photo Available
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	No Photo Available
Galium californicum ssp. *sierrae*	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	FE	CR	G5T1	S1	1B.2	No Photo Available
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2	No Photo Available
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	No Photo Available
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	None	None	G2	S2	1B.2	No Photo Available
Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May(Jun)	None	None	G3	S3	4.2	No Photo Available
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	None	None	G2T1	S1	1B.2	No Photo Available
Juncus leiospermus var. *leiospermus*	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	None	None	G2T2	S2	1B.1	No Photo Available
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	No Photo Available
Leptosiphon ambiguus	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	No Photo Available
Lilium humboldtii ssp. *humboldtii*	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	None	None	G4T3	S3	4.2	No Photo Available
Navarretia eriocephala	hoary navarretia	Polemoniaceae	annual herb	May-Jun	None	None	G4?	S4?	4.3	No Photo Available
Navarretia myersii	pincushion	Polemoniaceae	annual herb	Apr-May	None	None	G2T2	S2	1B.1	

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
ssp. *myersii*	navarretia									No Photo Available
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	G2	S2	1B.1	No Photo Available
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	G1	S1	1B.1	No Photo Available
Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	FT	CR	G2	S2	1B.2	No Photo Available
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	No Photo Available
Wyethia reticulata	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	No Photo Available

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Representative Photographs



Photo 1. Representative photo of oak trees and annual grassland onsite. Photo taken March 5, 2020.



Photo 2. Representative photo of a seasonal wetland onsite, facing northeast. Photo taken March 5, 2020.



Photo 3. Representative photo of annual grassland onsite. Photo taken March 5, 2020.



Photo 4. Representative photo of a seasonal wetland onsite, facing southeast. Photo taken March 5, 2020.

Arborist Report

Arborist Survey Report

Easton Research Park West Project

Rancho Cordova and Sacramento County, California

Prepared For:

Easton Development Company, LLC

March 11, 2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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3.0 METHODS 2
4.0 RESULTS 4
5.0 CONCLUSION 5
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LIST OF ATTACHMENTS

Attachment A – Tree Inventory for the Easton Research Park West Project

Attachment B – Tree Survey Data (October 20 and 30, 2020)

LIST OF ACRONYMS AND ABBREVIATIONS

City	City of Rancho Cordova
County	Sacramento County
dsh	Diameter at standard height
Glenborough	Glenborough Project
NRCS	Natural Resources Conservation Service
Project	Easton Research Park West Project
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey

1.0 INTRODUCTION

On behalf of the Easton Development Company, LLC, ECORP Consulting, Inc. conducted an arborist survey for the Easton Research Park West Project (Project), located in Rancho Cordova and Sacramento County, California. A portion of the Project occurs within the boundary of the Glenborough Project (Glenborough). Trees that are within Glenborough are subject to the mitigation required for that project and are not addressed further in this report. This report only addresses trees within the Project that do not overlap with Glenborough.

The purpose of this survey was to identify, map, and assess the general condition of trees within the Project site according to the City of Rancho Cordova's (City) Preservation and Protection of Private Trees Ordinance (Chapter 19.12; City of Rancho Cordova 2020) and the Sacramento County (County) Arborist Report Requirements (Sacramento County 2020). Due to the Project falling within the limits of two separate municipalities (the City and the County), where the definitions overlapped, the code with the more stringent definition took precedence. The following are definitions from both sources that were used to guide the methodology and data collection for this survey effort.

Size Threshold: All native oak and specified non-oak native trees (see Species List) that are four inches in diameter at standard height (dsh) and larger or 10-inch aggregate diameter for multi-trunk native oak and Northern California black walnut trees, and any tree species not listed on the Species List that is at least 12 inches in diameter or greater.

Species List: Valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*), blue oak (*Quercus douglasii*), coast live oak (*Quercus agrifolia*), oracle oak (*Quercus* x *morehus*), native oak hybrids, California sycamore (*Platanus racemosa*), Northern California black walnut (*Juglans californica* v. *hindsii*), Oregon ash (*Fraxinus latifolia*), Goodding's black willow (*Salix gooddingii*), box elder (*Acer negundo* v. *californicum*), white alder (*Alnus rhombifolia*), and California buckeye (*Aesculus californica*).

Impacted Trees: All onsite trees and all offsite trees that have canopies overhanging the site or that may be impacted by offsite Project-related construction. Please note that an impact analysis is not included in this report.

Heritage Tree: This classification is for a California native oak tree growing on any land in the County, including privately owned land, with a trunk 60 inches or greater in girth (equal to 19 inches dsh or larger) measured 4.5 feet above the ground (from Sacramento County Code §19.04.030).

2.0 SITE DESCRIPTION

The approximately 105.5-acre Project is located south of Highway 50 and Folsom Boulevard and west of Nimbus Road in Rancho Cordova, California. The Project corresponds to an unsectioned portion of the Rio de Los Americanos Landgrant (Mount Diablo Base Meridian) within the "Folsom, California" and the "Buffalo Creek, California" U.S. Geological Survey (USGS) 7.5-minute quadrangles (USGS 1967a

[photorevised 1980] and 1967b [photorevised 1980]) (Figure 1. *Project Location and Vicinity*). The approximate center of the Project is located at 38.626036° latitude and -121.219026° longitude within the Lower American watershed (Hydrologic Unit Code #18020111; Natural Resources Conservation Service [NRCS], USGS, and U.S. Environmental Protection Agency [USEPA] 2017).

The Project site is comprised of flat to gently rolling terrain situated in the Sacramento Valley Subregion of the California Floristic Province (Baldwin et al. 2012) at an elevational range of 140 to 150 feet above mean sea level. The Project is composed of a combination of developed areas, roadways, and undeveloped annual grassland. Land uses on the north side of Folsom Boulevard include transportation corridors for Highway 50 and the Union Pacific Railroad, as well as commercial, industrial, and low-density residential properties. Surrounding lands to the east, south, and west are largely Aerojet property, with a few industrial and commercial properties to the west bordering Highway 50.

3.0 METHODS

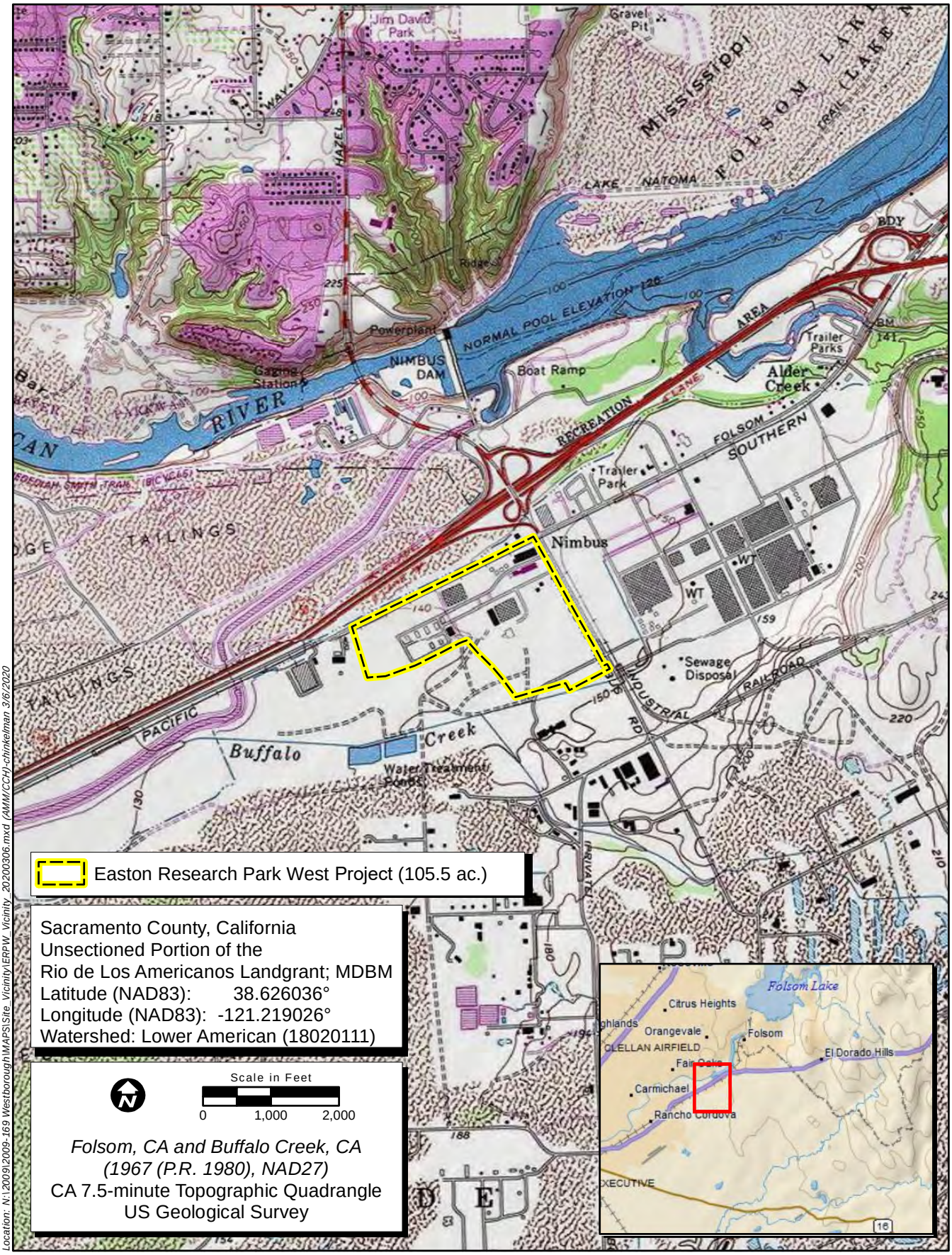
ECORP arborist Krissy Walker-Berry (International Society of Arboriculture Certification #WE-11308A) conducted the field survey on October 20 and 30, 2020, with ECORP biologist Gabrielle Attisani. During the field survey, the ECORP staff walked the accessible portions of the Project site and recorded data using a sub-meter accuracy Global Positioning System unit.

Data collected included location, species, tree tag number, dsh, dripline radius, health, structure, dripline environment, and overall condition[1]. In accordance with the definitions listed in Section 1.0, all trees in the Species List that meet the size threshold were surveyed.

The survey results are intended for general Project planning purposes only; therefore, these results should not be considered a detailed tree analysis (i.e., results do not include hazard assessment, tree health diagnosis, preservation/removal recommendations, or pruning advisement). The following terms define the collected data:

DSH: Trunk diameter at 4.5 feet above grade on the high side of the tree except for a tree that branches at or below dsh, in which case the dsh then means the diameter at the narrowest point between the grade and the branching point. For a tree with a common root system that branches at the ground, dsh means the sum of the diameter of all trunks at 4.5 feet above natural grade. Occasional deviations from this were required for trees with unusual structural configurations (e.g., horizontal trunks). On multi-trunked trees (trees with multiple vertical trunks in contact at or near ground level), the report lists total aggregate diameter along each individual trunk diameter.

[1] Recommendations were not provided for any of the trees as the impacts for the Project have not yet been determined.



Map Date: 3/6/2020

iService Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed
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Figure 1. Location and Vicinity

2018-012 Easton Research Park West

Dripline Radius/Root Protection Zone: A circle with the radius being the measurement of the length of the distance from the trunk to the end of the longest limb.

Health: A measure of overall vigor and vitality of the tree and rated as good, fair, or poor based on an assessment of crown density, leaf color and size, active callusing, shoot growth rate, extent of crown dieback, cambium layer health, and tree age.

Structure: A measure of the tree's structural stability and failure potential and rated as good, fair, or poor based on assessment of specific structural features (e.g., decay, conks, co-dominant trunks, included bark, abnormal lean, one-sided canopy, history of failure, prior construction impact, pruning history).

Dripline Environment: A brief written description of the growing condition of the immediate area beneath the defined dripline protection zone (natural grasses, steep terrain, existing roadway or structure, utility lines, drainage swales, previous grading cuts or fills, fire damage, etc.)

Overall Condition: Based on the foregoing tree health and structural assessment, the arborist shall assign a numerical rating of the tree based on the following ratings: 0) dead, 1) severe decline, 2) declining, 3) fair, 4) good, and 5) excellent.

In addition, where appropriate, notes were taken regarding any unusual features (e.g., large trunk cavities, obvious damage or disease, girdling by barbed wire).

4.0 RESULTS

A total of 204 trees were inventoried for the Project. Of these trees, 29 trees were either inaccessible, or located on unknown property ownership. Therefore, tree tags were not installed on these trees and locations were estimated in the field; however, they have been assigned a tree number in the 5,000 range. A map depicting the locations of all inventoried trees is included in Attachment A. Detailed tree survey data for each tree are included in Attachment B.

Nine species were inventoried for the Project. The trees inventoried from the Species List include: 95 interior live oak, 52 valley oak, four blue oak, four Goodding's black willow, and one Northern California black walnut. Remaining native trees that were inventoried included 44 Fremont's cottonwood (*Populus fremontii*), one sandbar willow (*Salix exigua*), and one Pacific willow (*Salix lasiandra*). One non-native Callery pear (*Pyrus calleryana*) was also inventoried for the Project.

Three trees meet the definition of Heritage Tree; this includes tree tags 1133 (Fremont's cottonwood), 12081 (interior live oak), and 12279(Northern California black walnut).

5.0 CONCLUSION

The Project contains 204 trees with potential to be impacted by Project activities. If the proposed Project activities occur within the dripline or remove any of these trees, a Tree Permit will be required and the corresponding tree ordinance shall be consulted for tree mitigation and preservation measures. This will include the development of a tree protection plan or its equivalent. This plan will provide arborist recommendations for preserved trees and general recommendations during and after construction activities as well as specific recommendations for long term maintenance.

6.0 REFERENCES

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_____. 1967b (Photo Revised 1980). "Buffalo Creek, CA" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.

LIST OF ATTACHMENTS

Attachment A – Tree Inventory for the Easton Research Park West Project

Attachment B – Tree Survey Data (October 20 and 30, 2020)

ATTACHMENT A

Tree Inventory for the Easton Research Park West Project

Attachment A.
Arborist Survey Results



Map Features

- Easton Research Park West Project
- Glenborough Project - Fully Mitigated

Tree Species (204)

- Blue Oak (4)
- Callery Pear (1)
- Fremont's Cottonwood (44)
- Goodding's Black Willow (4)
- Interior Live Oak (95)
- Northern California Black Walnut (1)
- Pacific Willow (1)
- Sandbar Willow (2)
- Valley Oak (52)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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2018-012.02 Easton Research Park West

Scale in Feet
0 187.5 375

Photo Source: NAIP (2018)

Map Date: 12/16/2020

ATTACHMENT B

Easton Research Park West Tree Survey Data (October 20 and 30, 2020)

Easton Research Park West
Tree Survey Data (October 20 and 30, 2020)

Tree Tag #	Common Name	Latin Name	DBH (inches)	Multistemmed Stem Sizes	Dripline (feet)	Approximate Height (feet)	Health	Structure	Dripline Environment	Overall Tree Condition	Field Note
672	Callery Pear	*Pyrus calleryana*	15		17	23	Fair	Fair	Natural Grasses	Fair	
1080	Interior Live Oak	*Quercus wislizeni*	24.5		28	35	Good	Fair	Poison oak and duff	Good	
1081	Valley Oak	*Quercus lobata*	10		23	22	Good	Good	Poison oak and duff	Good	
1082	Sandbar Willow	*Salix exigua*	15	11,4	13	20	Poor	Poor	Poison oak and duff	Declining	
1083	Goodding's Black Willow	*Salix gooddingii*	14		10	23	Fair	Poor	Poison oak and duff	Fair	
1084	Fremont's Cottonwood	*Populus fremontii*	20		18	30	Fair	Poor	Poison hemlock and duff	Declining	
1086	Valley Oak	*Quercus lobata*	8.5		13	25	Fair	Fair	Natural Grasses	Fair	
1087	Interior Live Oak	*Quercus wislizeni*	17		18	28	Good	Good	Natural Grasses	Good	
1088	Valley Oak	*Quercus lobata*	7		10	20	Fair	Good	Natural Grasses	Fair	
1089	Interior Live Oak	*Quercus wislizeni*	37.5		28	45	Good	Good	Natural Grasses	Good	
1090	Interior Live Oak	*Quercus wislizeni*	15.5		25	30	Good	Fair	Poison oak and duff	Good	
1091	Pacific Willow	*Salix lasiandra*	29	13,16	12	13	Poor	Poor	Natural Grasses	Severe Decline	
1092	Interior Live Oak	*Quercus wislizeni*	28	11,17	33	28	Fair	Poor	Poison oak and duff	Declining	
1093	Interior Live Oak	*Quercus wislizeni*	55.5	32,23.5	28	30	Fair	Poor	Poison oak and duff	Declining	
1094	Fremont's Cottonwood	*Populus fremontii*	38		20	22	Poor	Poor	Poison oak and duff	Severe Decline	
1096	Interior Live Oak	*Quercus wislizeni*	52.5		30	36	Fair	Poor	Duff	Declining	
1097	Interior Live Oak	*Quercus wislizeni*	32		30	35	Fair	Poor	Poison oak and duff	Declining	
1098	Fremont's Cottonwood	*Populus fremontii*	30		12	28	Poor	Poor	Natural Grasses	Severe Decline	
1099	Valley Oak	*Quercus lobata*	20		13	25	Poor	Poor	Natural Grasses	Severe Decline	
1100	Fremont's Cottonwood	*Populus fremontii*	19.5		11	17	Poor	Poor	Natural Grasses	Severe Decline	
1101	Fremont's Cottonwood	*Populus fremontii*	16		10	18	Poor	Poor	Natural Grasses	Severe Decline	
1102	Interior Live Oak	*Quercus wislizeni*	10.5		14	15	Good	Fair	Natural Grasses	Good	
1103	Fremont's Cottonwood	*Populus fremontii*	15.5		18	25	Poor	Poor	Natural Grasses	Declining	
1104	Fremont's Cottonwood	*Populus fremontii*	12		1	23	Poor	Poor	Natural Grasses	Severe Decline	
1105	Fremont's Cottonwood	*Populus fremontii*	19		22	30	Fair	Poor	Natural Grasses	Fair	
1106	Interior Live Oak	*Quercus wislizeni*	18		18	25	Good	Fair	Duff	Good	
1107	Fremont's Cottonwood	*Populus fremontii*	32		23	35	Fair	Poor	Poison oak and duff	Declining	Bees in tree
1114	Interior Live Oak	*Quercus wislizeni*	36	16,20	20	32	Good	Fair	Poison oak and duff	Good	
1115	Interior Live Oak	*Quercus wislizeni*	13		18	23	Good	Good	Poison oak and duff	Good	
1116	Valley Oak	*Quercus lobata*	11		14	22	Good	Good	Natural Grasses	Excellent	
1117	Valley Oak	*Quercus lobata*	5		11	18	Good	Good	Natural Grasses	Excellent	
1118	Fremont's Cottonwood	*Populus fremontii*	10.5		8	22	Poor	Fair	Duff	Declining	
1119	Interior Live Oak	*Quercus wislizeni*	6.5		12	18	Good	Fair	Natural Grasses	Good	
1120	Fremont's Cottonwood	*Populus fremontii*	14.5		25	25	Poor	Poor	Duff	Declining	
1121	Fremont's Cottonwood	*Populus fremontii*	22		20	30	Poor	Poor	Duff	Severe Decline	
1122	Fremont's Cottonwood	*Populus fremontii*	13		18	30	Poor	Fair	Poison oak and duff	Declining	
1123	Interior Live Oak	*Quercus wislizeni*	14		13	18	Good	Fair	Natural Grasses	Good	
1124	Fremont's Cottonwood	*Populus fremontii*	19		32	25	Fair	Poor	Duff	Declining	
1125	Fremont's Cottonwood	*Populus fremontii*	13.5		15	27	Fair	Poor	Duff	Declining	
1126	Fremont's Cottonwood	*Populus fremontii*	17		18	25	Fair	Poor	Poison oak and duff	Declining	
1127	Fremont's Cottonwood	*Populus fremontii*	20.5		15	25	Poor	Poor	Natural Grasses	Declining	
1128	Fremont's Cottonwood	*Populus fremontii*	20.5		10	25	Poor	Poor	Natural Grasses	Declining	
1129	Interior Live Oak	*Quercus wislizeni*	10		18	22	Fair	Good	Natural Grasses	Good	
1130	Valley Oak	*Quercus lobata*	6.5		11	28	Good	Good	Poison oak and duff	Good	

Easton Research Park West
Tree Survey Data (October 20 and 30, 2020)

Tree Tag #	Common Name	Latin Name	DBH (inches)	Multistemmed Stem Sizes	Dripline (feet)	Approximate Height (feet)	Health	Structure	Dripline Environment	Overall Tree Condition	Field Note
1131	Interior Live Oak	*Quercus wislizeni*	9		13	20	Good	Good	Poison oak and duff	Good	
1132	Fremont's Cottonwood	*Populus fremontii*	28		26	35	Poor	Poor	Duff	Severe Decline	
1133	Fremont's Cottonwood	*Populus fremontii*	66.5	42,24.5	30	30	Poor	Poor	Natural Grasses	Severe Decline	
1134	Interior Live Oak	*Quercus wislizeni*	21		16	25	Good	Good	Duff	Good	
1135	Interior Live Oak	*Quercus wislizeni*	15.5		22	25	Good	Good	Natural Grasses	Excellent	
1136	Interior Live Oak	*Quercus wislizeni*	8		14	20	Good	Good	Natural Grasses	Good	
1137	Valley Oak	*Quercus lobata*	14		18	35	Fair	Good	Natural Grasses	Fair	
1138	Interior Live Oak	*Quercus wislizeni*	26.5		25	40	Fair	Fair	Poison oak and duff	Fair	
1139	Interior Live Oak	*Quercus wislizeni*	13		11	16	Good	Good	Natural Grasses	Good	
1140	Interior Live Oak	*Quercus wislizeni*	12.5		16	25	Good	Good	Natural Grasses	Good	
1141	Interior Live Oak	*Quercus wislizeni*	10.5		25	25	Good	Fair	Duff	Good	
1142	Interior Live Oak	*Quercus wislizeni*	9		17	30	Fair	Fair	Duff	Fair	
1143	Interior Live Oak	*Quercus wislizeni*	8.5		22	27	Fair	Fair	Natural Grasses	Fair	
1144	Interior Live Oak	*Quercus wislizeni*	8		25	22	Fair	Poor	Duff	Fair	
1145	Interior Live Oak	*Quercus wislizeni*	8		18	25	Fair	Fair	Poison oak and duff	Fair	
1146	Interior Live Oak	*Quercus wislizeni*	5		15	13	Fair	Poor	Poison oak and duff	Declining	
1147	Interior Live Oak	*Quercus wislizeni*	5		17	15	Fair	Poor	Poison oak and duff	Declining	
1148	Valley Oak	*Quercus lobata*	27		30	45	Fair	Good	Poison oak and duff	Fair	
1149	Interior Live Oak	*Quercus wislizeni*	15		22	33	Good	Good	Natural Grasses	Good	
1150	Interior Live Oak	*Quercus wislizeni*	26.5		30	25	Fair	Poor	Natural Grasses	Declining	
1151	Interior Live Oak	*Quercus wislizeni*	14		17	25	Good	Good	Poison oak and duff	Good	
1152	Interior Live Oak	*Quercus wislizeni*	9		17	25	Good	Good	Poison oak and duff	Good	
1153	Interior Live Oak	*Quercus wislizeni*	15		18	25	Good	Good	Duff	Good	
1154	Interior Live Oak	*Quercus wislizeni*	6		12	22	Fair	Good	Natural Grasses	Fair	
1155	Valley Oak	*Quercus lobata*	36		30	45	Fair	Fair	Poison oak and duff	Declining	
1156	Interior Live Oak	*Quercus wislizeni*	7		15	20	Fair	Fair	Poison oak and duff	Fair	
1157	Interior Live Oak	*Quercus wislizeni*	8.5		14	27	Fair	Good	Duff	Fair	
1158	Interior Live Oak	*Quercus wislizeni*	8		12	13	Fair	Fair	Poison oak and duff	Declining	
1159	Interior Live Oak	*Quercus wislizeni*	30		35	40	Fair	Fair	Duff	Fair	
1160	Interior Live Oak	*Quercus wislizeni*	19.5		18	25	Good	Fair	Natural Grasses	Good	
1161	Interior Live Oak	*Quercus wislizeni*	11		21	25	Poor	Good	Natural Grasses	Declining	
1162	Valley Oak	*Quercus lobata*	7.5		11	30	Fair	Good	Duff	Fair	
1163	Interior Live Oak	*Quercus wislizeni*	10.5		13	20	Fair	Good	Duff	Fair	
1164	Interior Live Oak	*Quercus wislizeni*	16.5		19	25	Fair	Good	Duff	Fair	
1165	Valley Oak	*Quercus lobata*	4		6	25	Poor	Fair	Duff	Declining	
1166	Interior Live Oak	*Quercus wislizeni*	8.5		18	22	Fair	Good	Duff	Fair	
1167	Interior Live Oak	*Quercus wislizeni*	5.5		13	20	Fair	Good	Duff	Fair	
1168	Interior Live Oak	*Quercus wislizeni*	7.5		17	22	Fair	Good	Duff	Fair	
1169	Interior Live Oak	*Quercus wislizeni*	7		17	26	Fair	Good	Duff	Fair	
1170	Interior Live Oak	*Quercus wislizeni*	7		14	22	Good	Good	Duff	Good	
1171	Sandbar Willow	*Salix exigua*	24	11.5,12.5	13	18	Fair	Fair	Natural Grasses	Fair	
1172	Interior Live Oak	*Quercus wislizeni*	4.5		10	15	Fair	Good	Duff	Fair	
1173	Interior Live Oak	*Quercus wislizeni*	9.5	2,7.5	14	20	Good	Good	Duff	Good	
1174	Interior Live Oak	*Quercus wislizeni*	17		19	25	Good	Good	Natural Grasses	Good	

Easton Research Park West
Tree Survey Data (October 20 and 30, 2020)

Tree Tag #	Common Name	Latin Name	DBH (inches)	Multistemmed Stem Sizes	Dripline (feet)	Approximate Height (feet)	Health	Structure	Dripline Environment	Overall Tree Condition	Field Note
1175	Blue Oak	*Quercus douglasii*	11		18	25	Fair	Good	Natural Grasses	Good	
1176	Interior Live Oak	*Quercus wislizeni*	7.5		11	15	Good	Fair	Natural Grasses	Good	
1177	Interior Live Oak	*Quercus wislizeni*	22		23	30	Good	Fair	Duff	Fair	
1178	Interior Live Oak	*Quercus wislizeni*	47		32	40	Good	Fair	Duff	Fair	
1179	Interior Live Oak	*Quercus wislizeni*	43		34	30	Fair	Fair	Duff	Fair	
1180	Blue Oak	*Quercus douglasii*	4		10	17	Good	Good	Natural Grasses	Good	
1181	Valley Oak	*Quercus lobata*	10		17	35	Fair	Good	Natural Grasses	Fair	
1182	Interior Live Oak	*Quercus wislizeni*	6.5		14	25	Good	Good	Natural Grasses	Good	
1183	Interior Live Oak	*Quercus wislizeni*	10		12	20	Fair	Fair	Natural Grasses	Fair	
1184	Valley Oak	*Quercus lobata*	18		27	35	Fair	Fair	Duff	Declining	
1185	Valley Oak	*Quercus lobata*	13		18	35	Good	Good	Natural Grasses	Good	
1186	Interior Live Oak	*Quercus wislizeni*	8		10	15	Good	Good	Natural Grasses	Good	
1187	Interior Live Oak	*Quercus wislizeni*	9.5		11	20	Good	Good	Duff	Good	
1188	Interior Live Oak	*Quercus wislizeni*	4		8	12	Good	Good	Natural Grasses	Good	
1189	Valley Oak	*Quercus lobata*	17		19	35	Fair	Good	Natural Grasses	Fair	
1190	Interior Live Oak	*Quercus wislizeni*	22.5		27	40	Good	Good	Duff	Good	
1191	Interior Live Oak	*Quercus wislizeni*	15.5		20	25	Good	Fair	Duff	Good	
1192	Blue Oak	*Quercus douglasii*	8.5		14	18	Good	Good	Duff	Good	
1193	Interior Live Oak	*Quercus wislizeni*	11		6	10	Poor	Poor	Poison oak and duff	Severe Decline	
1194	Interior Live Oak	*Quercus wislizeni*	14		18	15	Good	Poor	Duff	Fair	
1195	Valley Oak	*Quercus lobata*	27		23	35	Fair	Fair	Duff	Fair	
1196	Interior Live Oak	*Quercus wislizeni*	14		16	20	Good	Good	Poison oak and duff	Good	
1197	Valley Oak	*Quercus lobata*	17.5		13	25	Poor	Good	Natural Grasses	Declining	
1244	Valley Oak	*Quercus lobata*	9.5		10	23	Good	Good	Natural Grasses	Good	
1245	Valley Oak	*Quercus lobata*	16		12	30	Fair	Fair	Natural Grasses	Fair	
1246	Interior Live Oak	*Quercus wislizeni*	14.5		20	20	Good	Good	Duff	Good	
1247	Interior Live Oak	*Quercus wislizeni*	20		18	35	Good	Fair	Duff	Good	
1248	Valley Oak	*Quercus lobata*	19.5		23	40	Fair	Fair	Natural Grasses	Fair	
1249	Valley Oak	*Quercus lobata*	13		28	20	Fair	Fair	Duff	Fair	
1250	Valley Oak	*Quercus lobata*	12		23	35	Fair	Good	Duff	Fair	
1251	Valley Oak	*Quercus lobata*	14		18	32	Fair	Fair	Natural Grasses	Declining	Tree flush with fence
1252	Valley Oak	*Quercus lobata*	5.5		11	18	Fair	Poor	Natural Grasses	Declining	Tree growing through fence
1253	Valley Oak	*Quercus lobata*	34		32	40	Fair	Poor	Duff	Fair	Tree on steep slope
1254	Interior Live Oak	*Quercus wislizeni*	29		28	35	Fair	Fair	Duff	Fair	
1255	Blue Oak	*Quercus douglasii*	17		15	22	Fair	Fair	Natural Grasses	Declining	
1256	Interior Live Oak	*Quercus wislizeni*	11		12	25	Good	Good	Natural Grasses	Good	
1257	Fremont's Cottonwood	*Populus fremontii*	30		20	45	Poor	Poor	Poison oak and duff	Declining	
1258	Fremont's Cottonwood	*Populus fremontii*	30		25	35	Poor	Poor	Poison oak and duff	Declining	
1259	Interior Live Oak	*Quercus wislizeni*	56	23,33	28	35	Fair	Poor	Poison oak and duff	Fair	
1260	Goodding's Black Willow	*Salix gooddingii*	23	13,10	25	20	Fair	Poor	Poison oak and duff	Declining	
1261	Goodding's Black Willow	*Salix gooddingii*	5		15	15	Poor	Poor	Poison oak and duff	Severe Decline	
1262	Interior Live Oak	*Quercus wislizeni*	25		35	35	Fair	Poor	Poison oak and duff	Fair	
1263	Goodding's Black Willow	*Salix gooddingii*	28	16,12	15	40	Poor	Poor	Poison oak and duff	Declining	
1264	Interior Live Oak	*Quercus wislizeni*	16		18	25	Good	Fair	Poison oak and duff	Good	

Easton Research Park West
Tree Survey Data (October 20 and 30, 2020)

Tree Tag #	Common Name	Latin Name	DBH (inches)	Multistemmed Stem Sizes	Dripline (feet)	Approximate Height (feet)	Health	Structure	Dripline Environment	Overall Tree Condition	Field Note
1265	Interior Live Oak	*Quercus wislizeni*	11		14	18	Good	Good	Duff	Good	
1266	Interior Live Oak	*Quercus wislizeni*	9		17	18	Fair	Poor	Duff	Fair	
1267	Interior Live Oak	*Quercus wislizeni*	16.5	10,6.5	25	22	Fair	Fair	Duff	Fair	
1268	Interior Live Oak	*Quercus wislizeni*	12	3,2,1.5,4,1.5	16	15	Good	Fair	Duff	Good	
1269	Valley Oak	*Quercus lobata*	5.5		18	15	Fair	Poor	Duff	Declining	
1270	Interior Live Oak	*Quercus wislizeni*	11		15	16	Good	Poor	Duff	Fair	
5000	Fremont's Cottonwood	*Populus fremontii*	23		15	25	Poor	Poor	Poison oak and duff	Declining	
5001	Fremont's Cottonwood	*Populus fremontii*	38		32	45	Fair	Poor	Poison oak and duff	Fair	
5002	Interior Live Oak	*Quercus wislizeni*	37.5	19,18.5	24	30	Fair	Good	Poison oak and duff	Good	
5003	Fremont's Cottonwood	*Populus fremontii*	36		20	40	Fair	Poor	Poison oak and duff	Declining	
5004	Interior Live Oak	*Quercus wislizeni*	54	9.5,2.5,42	28	30	Fair	Poor	Duff	Declining	
5005	Interior Live Oak	*Quercus wislizeni*	16		18	25	Fair	Good	Poison oak and duff	Fair	
5006	Valley Oak	*Quercus lobata*	15		18	40	Fair	Good	Poison oak and duff	Fair	
5007	Fremont's Cottonwood	*Populus fremontii*	39		28	40	Fair	Poor	Poison oak and duff	Severe Decline	
5008	Fremont's Cottonwood	*Populus fremontii*	35		25	35	Fair	Poor	Poison oak and duff	Declining	
5009	Fremont's Cottonwood	*Populus fremontii*	25		23	35	Fair	Fair	Poison oak and duff	Declining	
5010	Valley Oak	*Quercus lobata*	14		18	30	Good	Good	Poison oak and duff	Good	
5011	Interior Live Oak	*Quercus wislizeni*	26		27	40	Fair	Fair	Poison oak and duff	Declining	
5012	Interior Live Oak	*Quercus wislizeni*	10		20	18	Good	Fair	Poison oak and duff	Good	
5013	Valley Oak	*Quercus lobata*	15		20	35	Fair	Good	Poison oak and duff	Fair	
5014	Interior Live Oak	*Quercus wislizeni*	14		15	10	Fair	Poor	Duff	Fair	
5015	Fremont's Cottonwood	*Populus fremontii*	13		18	22	Good	Fair	Duff	Good	
5016	Valley Oak	*Quercus lobata*	24		22	35	Fair	Poor	Natural Grasses	Declining	
5017	Interior Live Oak	*Quercus wislizeni*	12		18	18	Fair	Poor	Poison oak and duff	Declining	
5018	Interior Live Oak	*Quercus wislizeni*	12		18	16	Fair	Poor	Poison oak and duff	Fair	
5019	Fremont's Cottonwood	*Populus fremontii*	35		25	40	Fair	Fair	Poison oak and duff	Declining	
5020	Interior Live Oak	*Quercus wislizeni*	29	12,17	20	25	Good	Poor	Poison oak and duff	Fair	
5021	Interior Live Oak	*Quercus wislizeni*	15		15	25	Fair	Poor	Poison oak and duff	Fair	
5022	Interior Live Oak	*Quercus wislizeni*	12		25	20	Fair	Poor	Poison oak and duff	Fair	
5023	Valley Oak	*Quercus lobata*	4		10	20	Fair	Good	Natural Grasses	Fair	
5024	Valley Oak	*Quercus lobata*	7		10	25	Fair	Good	Natural Grasses	Fair	
5025	Valley Oak	*Quercus lobata*	9		13	23	Fair	Good	Natural Grasses	Fair	
5026	Valley Oak	*Quercus lobata*	4.5		9	15	Fair	Good	Duff	Fair	
5027	Valley Oak	*Quercus lobata*	5		11	25	Fair	Good	Duff	Fair	
5028	Valley Oak	*Quercus lobata*	37		33	45	Fair	Fair	Duff	Fair	
12066	Interior Live Oak	*Quercus wislizeni*	50.5	38,12.5	27	35	Fair	Poor	Natural Grasses	Declining	
12068	Valley Oak	*Quercus lobata*	16		21	35	Fair	Good	Natural Grasses	Fair	
12069	Valley Oak	*Quercus lobata*	20		27	45	Fair	Fair	Natural Grasses	Fair	
12070	Valley Oak	*Quercus lobata*	12.5		16	35	Fair	Good	Natural Grasses	Fair	
12072	Fremont's Cottonwood	*Populus fremontii*	23		13	40	Poor	Good	Natural Grasses	Declining	
12072	Fremont's Cottonwood	*Populus fremontii*	29		18	30	Fair	Fair	Poison oak and duff	Fair	
12073	Interior Live Oak	*Quercus wislizeni*	36.5		27	40	Good	Good	Natural Grasses	Good	
12074	Interior Live Oak	*Quercus wislizeni*	33.5		25	45	Fair	Fair	Duff	Declining	
12076	Valley Oak	*Quercus lobata*	32		28	45	Fair	Fair	Natural Grasses	Fair	

Easton Research Park West
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Tree Tag #	Common Name	Latin Name	DBH (inches)	Multistemmed Stem Sizes	Dripline (feet)	Approximate Height (feet)	Health	Structure	Dripline Environment	Overall Tree Condition	Field Note
12081	Interior Live Oak	*Quercus wislizeni*	63	32,31	35	40	Fair	Poor	Duff	Fair	
12106	Fremont's Cottonwood	*Populus fremontii*	43.5		30	40	Good	Good	Natural Grasses	Good	
12122	Fremont's Cottonwood	*Populus fremontii*	38		25	25	Fair	Poor	Poison oak and duff	Declining	
12124	Fremont's Cottonwood	*Populus fremontii*	32		27	35	Poor	Poor	Poison oak and duff	Severe Decline	
12127	Fremont's Cottonwood	*Populus fremontii*	25.5		21	40	Fair	Fair	Natural Grasses	Fair	
12128	Fremont's Cottonwood	*Populus fremontii*	24		20	40	Fair	Poor	Duff	Declining	
12129	Fremont's Cottonwood	*Populus fremontii*	36		23	40	Fair	Fair	Poison oak and duff	Fair	
12134	Valley Oak	*Quercus lobata*	32.5		30	40	Fair	Good	Natural Grasses	Good	
12167	Valley Oak	*Quercus lobata*	25		23	45	Fair	Good	Natural Grasses	Good	
12174	Valley Oak	*Quercus lobata*	37		30	37	Fair	Good	Natural Grasses	Fair	
12175	Valley Oak	*Quercus lobata*	39		33	40	Fair	Good	Natural Grasses	Good	
12220	Fremont's Cottonwood	*Populus fremontii*	19		18	40	Poor	Fair	Natural Grasses	Declining	
12222	Fremont's Cottonwood	*Populus fremontii*	26		18	45	Poor	Fair	Natural Grasses	Declining	
12226	Fremont's Cottonwood	*Populus fremontii*	24		22	25	Poor	Poor	Poison oak and duff	Declining	
12264	Valley Oak	*Quercus lobata*	24.5		23	33	Good	Good	Natural Grasses	Good	
12274	Interior Live Oak	*Quercus wislizeni*	42		25	30	Fair	Fair	Duff	Fair	
12275	Interior Live Oak	*Quercus wislizeni*	20		20	27	Fair	Fair	Natural Grasses	Fair	
12276	Valley Oak	*Quercus lobata*	15.5		17	30	Fair	Good	Poison oak and duff	Fair	
12279	Northern California Black Walnut	*Juglans hindsii*	135.5	46,48.5,41	38	35	Fair	Poor	Natural Grasses	Declining	
12287	Valley Oak	*Quercus lobata*	20		24	40	Fair	Good	Poison oak and duff	Declining	
12291	Interior Live Oak	*Quercus wislizeni*	24.5		28	35	Fair	Fair	Poison oak and duff	Fair	
12292	Valley Oak	*Quercus lobata*	18		21	35	Fair	Good	Natural Grasses	Fair	
12429	Fremont's Cottonwood	*Populus fremontii*	45.5		20	40	Poor	Poor	Natural Grasses	Severe Decline	
12430	Fremont's Cottonwood	*Populus fremontii*	58		30	35	Poor	Poor	Natural Grasses	Severe Decline	
12434	Fremont's Cottonwood	*Populus fremontii*	44		21	40	Fair	Poor	Natural Grasses	Declining	
12435	Valley Oak	*Quercus lobata*	39		32	45	Fair	Fair	Duff	Fair	
12437	Valley Oak	*Quercus lobata*	18.5		25	32	Fair	Fair	Natural Grasses	Declining	
12438	Valley Oak	*Quercus lobata*	17		20	32	Fair	Fair	Duff	Fair	

APPENDIX C

Confidential Addendum Cultural Resources Inventory, Integrity Assessment, and Finding of Effect for the Easton Research Park West Project Offsite Improvements, Sacramento County California – ECORP Consulting, Inc. July 28, 2021, and Tribal Cultural Resources Notification and Consultation Conclusion Letters

NOT INCLUDED DUE TO CONFIDENTIALITY

APPENDIX D

Noise Impact Assessment Easton Research Park West Project –
ECORP Consulting, Inc. July 2021

Noise Impact Assessment

Easton Research Park West Project

Rancho Cordova, California

Prepared For:

City of Rancho Cordova Planning Department
2729 Prospect Park Drive
Rancho Cordova, CA 59670

July 2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Attachment B – Federal Highway Administration Highway Noise Prediction Model

Attachment C – SoundPLAN Outputs – Onsite Project Noise

LIST OF ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
ANSI	American National Standards Institute
APN	Assessor Parcel Number
Caltrans	California Department of Transportation
CALVENO	California Vehicle Noise Emission Levels
City	City of Rancho Cordova
CNEL	Community Noise Equivalent Level
County	County of Sacramento
dB	Decibel
dBA	A-weighted decibels
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Hz	Hertz
L_{dn}	Day-night average sound level
L_{eq}	Measure of ambient noise
L_{max}	The maximum A-weighted noise level during the measurement period.
L_{min}	The minimum A-weighted noise level during the measurement period.
NIOSH	National Institute for Occupational Safety and Health
OPR	Office of Planning and Research
RCNM	Roadway Construction Noise Model
PG&E	Pacific Gas and Electric Company
PPV	Peak particle velocity
Project	Easton Research Park West Project
RMS	Root mean square
sf	Square foot
SRTRR	Sacramento Regional Transit Railroad (Gold Line Light Rail)
STC	Sound Transmission Class
US 50	United States Highway 50
WEAL	Western Electro-Acoustic Laboratory, Inc.

1.0 INTRODUCTION

This report documents the results of a Noise Impact Assessment completed for the Easton Research Park West Project (Project), which includes the development 1,486,000 square feet (sf) of a warehouse campus and associated parking and infrastructure in the City of Rancho Cordova, California. This assessment compares the predicted Project noise levels to noise standards promulgated by the City of Rancho Cordova General Plan Noise Element and the Municipal Code; as well as standards found in the County of Sacramento General Plan Noise Element and Municipal Code associated with future noise-sensitive receptors located within the Project vicinity, but within unincorporated areas of Sacramento County (Easton/Glenborough Place future development site).

1.1 Project Location

The Project Site comprises approximately 105.5 acres of land near the southwestern corner of the Hazel Avenue/Folsom Boulevard intersection, within the City of Rancho Cordova (see Figure 1. *Project Location and Vicinity*). The Project Site is within the Aerojet Special Planning Area, as identified in the City of Rancho Cordova's General Plan Land Use Map, and is surrounded by Folsom Boulevard to the north with US 50 beyond, Nimbus Road and undeveloped land beyond to the east, and undeveloped land to the south and west with commercial land uses beyond. Regional access to the Project Site is provided by US 50, which is an eight-lane freeway. Access to the site is provided through the Hazel Avenue interchange, Hazel Avenue, and Folsom Boulevard.

The Project Site consists of flat terrain, overgrown with grasses; previously developed industrial areas in the northern portion of the site, which includes paved areas and foundations of several warehouses formerly used by Aerojet (165,000 sf of warehouse buildings proposed for demolition); and an interior access road.

Vacant land owned by Easton Development, LLC associated with former Aerojet operations, immediately east of the Project site, is planned for future mixed-use development under the Easton Place/Glenborough & Easton Place Land Use Plan (Easton Development Company, LLC 2019). For the purposes of this analysis, future noise-sensitive receptors to be located within the Easton Place/Glenborough & Easton Place Land Use Master Plan were considered and analyzed for any future Project noise-generation that would have the potential to exceed standards promulgated in the City or County noise standards, as applicable.

The Project is anticipated to generate 2,080 additional one-way vehicle trips per day, with 458 being heavy duty truck trips (Fehr & Peers 2021).

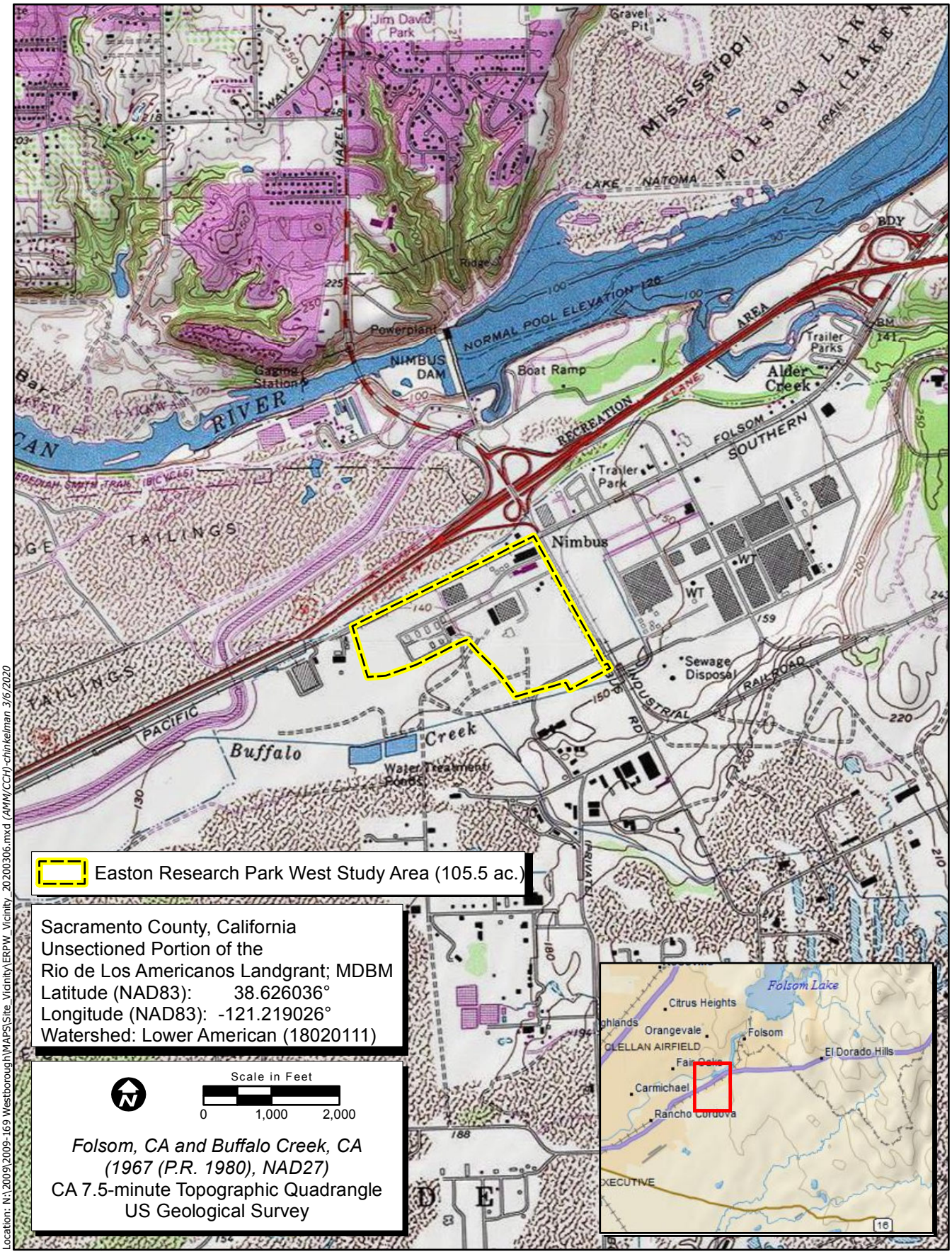
1.2 Project Description

The Project is scheduled to begin in early 2022 and would be phased over the 20-year buildout period. This analysis assumes that there would be a demolition phase, grading phase, offsite sewer infrastructure phase. Two buildings and associated utilities, stormwater detention basins, parking lots, and access roads would be constructed in individual phases. While nighttime work is not anticipated, there is a chance that

it may be required during the Project. In the event of night work, light plants with 50-horsepower generators would be used. Generators required for light plants are assumed to qualify under the California Air Resources Control Board Portable Equipment Registration Program.

Project development includes (see Figure 2. *Conceptual Site Plan*):

- Grading entire 105.5-acre Project site, including tree and vegetation removal, except possibly for small areas around some existing elderberry shrubs that can be avoided by incorporating them into landscaping plans.
- Demolition of existing buildings, structures, foundations, and pavement with off-site demolition debris disposal.
- Ground-disturbing activities.
- Construction of eight warehouse buildings totaling 1,486,000 sf, with 55 feet maximum height.
- Construction of associated stormwater detention basins, parking lots, and interior private streets.
- Construction and reconfiguration of overhead and underground utilities to serve the Project Site, including potential off-site utility construction.
- Access provided via driveways off Jughandle Road connecting to Folsom Boulevard and Hazel Avenue in the northern portion of the Project site, and via one driveway connecting to the Hazel Avenue extension in the southern portion of the Project site.
- A 61.91-acre Remainder Lot where no development or ground disturbance is proposed to occur .
- Phasing over a 20-year time span, with the likely construction of two buildings being constructed per phase.



Location: N:\2009\2009-169 Westborough\MAPS\Site_Vicinity\ERPW_Vicinity_20200306.mxd (AMM/CCH)-chinkelman 3/6/2020

Map Date: 3/6/2020

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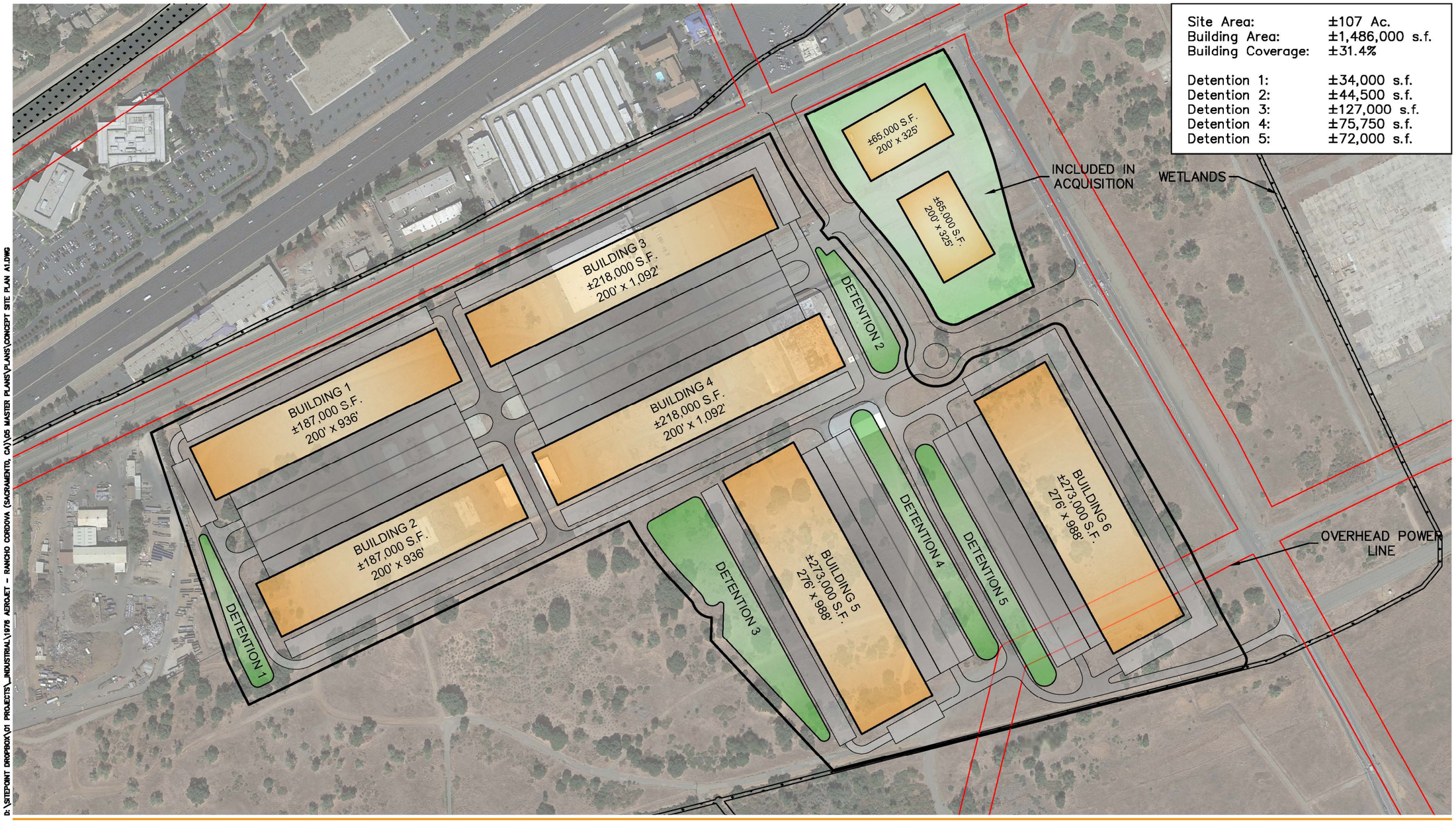
Figure 1. Project Location and Vicinity

2018-012 Easton Research Park West

AEROJET - RANCHO CORDOVA (SACRAMENTO, CA)

CONCEPT SITE PLAN A1

2021.02.03
SCALE 1:300



Site Area:	±107 Ac.
Building Area:	±1,486,000 s.f.
Building Coverage:	±31.4%
Detention 1:	±34,000 s.f.
Detention 2:	±44,500 s.f.
Detention 3:	±127,000 s.f.
Detention 4:	±75,750 s.f.
Detention 5:	±72,000 s.f.

D:\SITEPOINT DROPBOX\01 PROJECTS_INDUSTRIAL\1976 AEROJET - RANCHO CORDOVA (SACRAMENTO, CA)\05 MASTER PLANS\PLANS\CONCEPT SITE PLAN A1.DWG

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Figure 2. Concept Site Plan A1 Layout

2020-161.01 Easton Research Park West Project

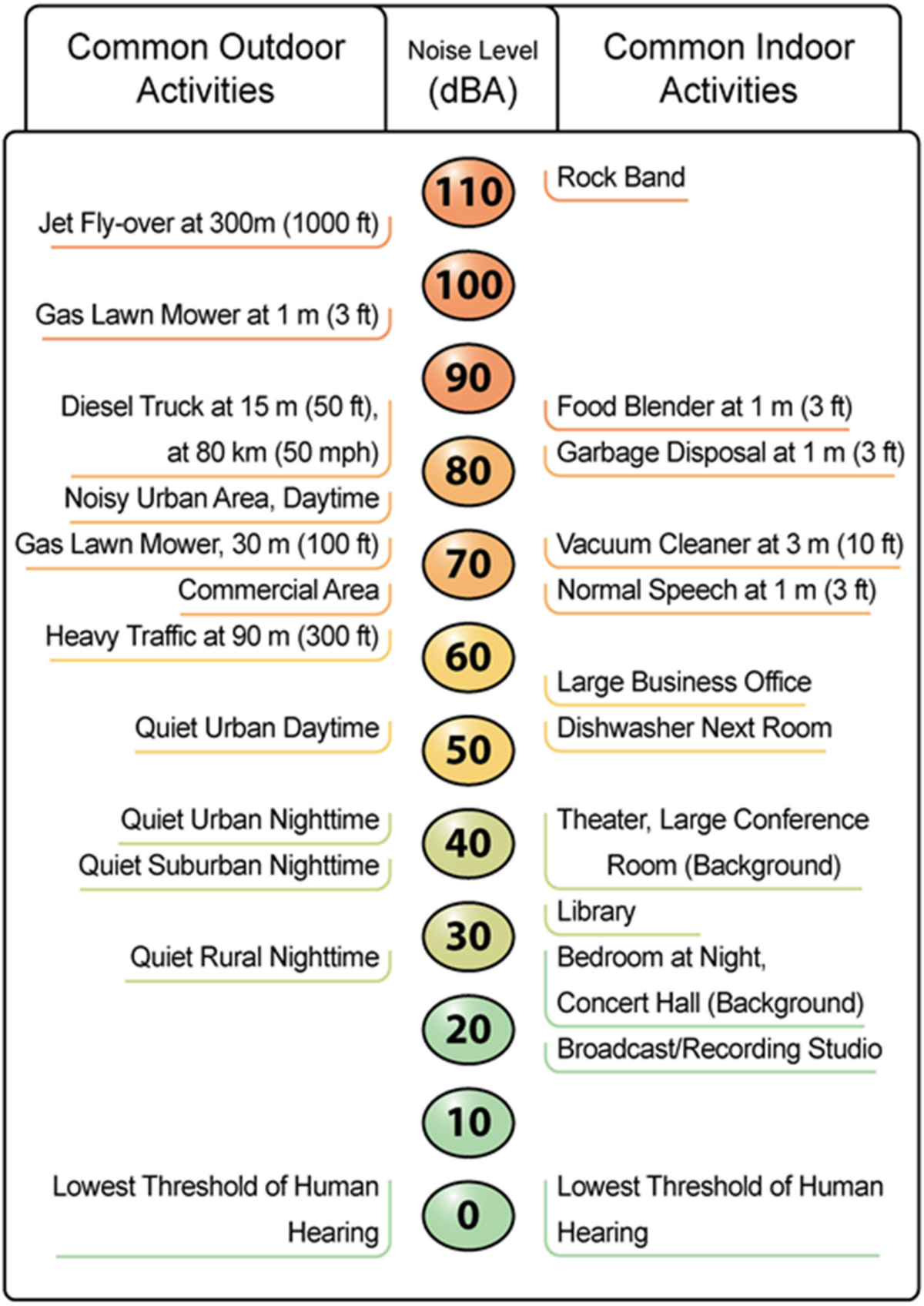
2.0 ENVIRONMENTAL NOISE

2.1 Fundamentals of Noise and Environmental Sound

2.1.1 Addition of Decibels

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be three dB higher than one source under the same conditions (Federal Transit Administration [FTA] 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by three dB). Under the decibel scale, three sources of equal loudness together would produce an increase of five dB.

Typical noise levels associated with common noise sources are depicted in Figure 3. *Common Noise Levels*.



Source: California Department of Transportation (Caltrans) 2020a

Figure 3 Common Noise Levels

Easton Research Park West

2.1.2 Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately six dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately three dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of three dB per doubling of distance is assumed (FHWA 2011).

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about five dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. [WEAL] 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the “line of sight” between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver.

The manner in which older strucutres in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. [HMMH] 2006). Generally, in exterior noise environments ranging from 60 dBA Community Noise Equivalent Level (CNEL) to 65 dBA CNEL, interior noise levels can typically be maintained below 45 dBA, a typically residential interior noise standard, with the incorporation of an adequate forced air mechanical ventilation system in each residential building, and standard thermal-pane residential windows/doors with a minimum rating of Sound Transmission Class (STC) 28. (STC is an integer rating of how well a building partition attenuates airborne sound. In the U.S., it is widely used to rate interior partitions, ceilings, floors, doors, windows, and exterior wall configurations.) In exterior noise environments of 65 dBA CNEL or greater, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments less than 75 dBA CNEL with proper wall construction techniques following California Building Code methods, the selections of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

2.1.3 Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels/community noise equivalent level (in L_{dn}/CNEL). The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined as follows:

- **Equivalent Noise Level (L_{eq})** is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **Day-Night Average (L_{dn})** is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
- **Community Noise Equivalent Level (CNEL)** is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

Table 2-1 provides a list of other common acoustical descriptors.

Table 2-1. Common Acoustical Descriptors

Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where one pascal is the pressure resulting from a force of one newton exerted over an area of one square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded one percent, 10 percent, 50 percent, and 90 percent of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average Leq with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.4 dBA Ldn.
Community Noise Equivalent Level, CNEL	A 24-hour average Leq with a five dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The A weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a

method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within approximately 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within approximately 1 to 2 dBA.

2.1.4 Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60- to 70-dBA range, and high, above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of one dBA cannot be perceived by humans.
- Outside of the laboratory, a three-dBA change is considered a just-perceivable difference.
- A change in level of at least five dBA is required before any noticeable change in community response would be expected. An increase of five dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

2.1.5 Effects of Noise on People

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources.

2.2 Fundamentals of Environmental Groundborne Vibration

2.2.1 Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or manmade causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building damage. For human response, however, an average vibration amplitude is more appropriate because it takes time for the human body to respond to the excitation (the human body responds to an average vibration amplitude, not a peak amplitude). Because the average particle velocity over time is zero, the RMS amplitude is typically used to assess human response. The RMS value is the average of the amplitude squared over time, typically a 1- sec. period (FTA 2018).

Table 2-2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high-noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks generally generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances, which as identified in Table 2-2 is considered very unlikely to cause damage to buildings of any type. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment.

Table 2-2. Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/ second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006–0.019	64–74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings, yet threshold at which there is a risk of architectural damage to fragile buildings
0.2	94	Vibrations may begin to annoy people	Threshold at which there is a risk of architectural damage to normal dwellings
0.4–0.6	98–104	Vibrations considered unpleasant by people subjected to continuous vibrations	Architectural damage and possibly minor structural damage

Source: Caltrans 2020b

3.0 EXISTING ENVIRONMENTAL NOISE SETTING

3.1 Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The Project Site is generally surrounded by commercial and industrial development, with a residential mobile home park (Twilight RV and Mobile Home Park) located northeast of the Project Site boundary. Potential residential land uses are currently approved for development directly east of and adjacent to the Project Site, beyond Nimbus Road (soon to be Hazel Avenue once the *Hazel Avenue/US 50 Interchange Project* construction is completed). Surrounding land uses include retail, commercial space, a gas station, restaurants, recreation (Monster Mini Golf), residential (mobile home park), and transient lodging (Comfort Inn and Suites) uses to the north beyond Folsom Boulevard and the railroad traversing parallel to the Project Site's northern boundary; Schnitzer Steel Recycling Center and a furniture retail store to the west; undeveloped land to the south; and undeveloped land to the east beyond Nimbus Road (soon to be Hazel Avenue) with a handful of parking lots, an Aerojet industrial facility, and a car dealership beyond. The nearest existing noise-sensitive receptors to the Project Site include the Comfort Inn and Suites, located immediately north of the Project Site beyond Folsom Boulevard and the Sacramento Regional Transit Railroad (SRTRR); and the mobile home park, located approximately 691 feet northeast of the Project Site. Additionally, future noise sensitive receptors include residences planned for development in the approved Easton Place/Glenborough & Easton Place Land Use Master Plan, located approximately 98 feet east of the Project Site beyond Nimbus Road/Hazel Avenue (or 176 feet distant in areas designed as the future Hazel Avenue *Ultimate* [modified] roadway scenario [MacKay and Somps 2021]).

3.2 Existing Ambient Noise Environment

The City of Rancho Cordova and the Project vicinity are impacted by various noise sources that vary widely for several reasons, such as changes in traffic volumes, seasonal activities, population density, or environmental conditions. It is subject to typical urban noise such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities. Mobile sources of noise, especially cars and trucks traversing Folsom Boulevard and US 50, are the most common source of noise in the Project vicinity. Industrial land uses in the vicinity are also substantial contributors of noise, such as the Schnitzer Steel Recycling Center east of the Project Site. Other sources of noise are the various land users (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the Project vicinity that generate stationary-source noise.

According to the Rancho Cordova General Plan Environmental Impact Report (2006a), the roadway segment on Folsom Boulevard between Sunrise Boulevard and Hazel Avenue, which traverses the Project

Site's northern boundary, has an average daily traffic count of 13,300 vehicles. According to the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108), which calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions; this amount of roadway traffic on Folsom Boulevard generates an ambient noise level of 64 dBA L_{dn} at 100 feet from the centerline.

Vehicular noise varies with the volume, speed, and type of traffic. Slower traffic produces less noise than fast-moving traffic. Trucks typically generate more noise than cars. Additionally, infrequent or intermittent noise is associated with vehicles including sirens, vehicle alarms, slamming of doors, garbage and construction vehicle activity, and honking of horns. These noises are combined with typical urban noise and are regulated by a variety of agencies.

The Project Site is affected by existing railway noise. The SRTRR railway corridor traversing the northern boundary of the Project Site extends from the Sacramento Valley Station junction in Downtown Sacramento to the Historic Downtown Folsom Station in Folsom. The SRTRR is a light rail transit line used primarily to transit passengers going between Sacramento and Folsom, with numerous stops in between. According to the City of Rancho Cordova General Plan Environmental Impact Report Noise Element (2006a), this railway generates day-night noise levels of 60 dBA L_{dn} at a distance of 270 feet from the at-grade intersection and 67 dBA L_{dn} at a distance of 100 feet from the at-grade intersection. Project operations would largely occur over 100 feet from this railway at the nearest proposed building.

The Project Site is located outside of any airport land use plan. Furthermore, the Project site is located beyond two miles from any airport or airstrip. The Sacramento Mather Air Force Base (AFB) is the closest airport, located approximately six miles southwest of the Project Site. Thus, the ambient noise environment of the Project area is not heavily influenced by aircraft noise.

The American National Standards Institute (ANSI) Standard 12.9-2013/Part 3 "Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-Term Measurements with an Observer Present" provides a table of approximate background sound levels in L_{dn}, daytime L_{eq}, and nighttime L_{eq}, based on land use and population density. The ANSI standard estimation divides land uses into six distinct categories. Descriptions of these land use categories, along with the typical daytime and nighttime levels, are provided in Table 3-1. At times, one could reasonably expect the occurrence of periods that are both louder and quieter than the levels listed in the table. ANSI notes, "95% prediction interval [confidence interval] is on the order of +/- 10 dB." The majority of the Project area would be considered ambient noise Category 2 or 3.

Table 3-1. ANSI Standard 12.9-2013/Part 3 A-weighted Sound Levels Corresponding to Land Use and Population Density

Category	Land Use	Description	People per Square Mile	Typical L_{dn}	Daytime L_{eq}	Nighttime L_{eq}
1	Noisy Commercial & Industrial Areas and Very Noisy Residential Areas	Very heavy traffic conditions, such as in busy, downtown commercial areas; at intersections for mass transportation or for other vehicles, including elevated trains, heavy motor trucks, and other heavy traffic; and at street corners where many motor buses and heavy trucks accelerate.	63,840	67 dBA	66 dBA	58 dBA
2	Moderate Commercial & Industrial Areas and Noisy Residential Areas	Heavy traffic areas with conditions similar to Category 1, but with somewhat less traffic; routes of relatively heavy or fast automobile traffic, but where heavy truck traffic is not extremely dense.	20,000	62 dBA	61 dBA	54 dBA
3	Quiet Commercial, Industrial Areas and Normal Urban & Noisy Suburban Residential Areas	Light traffic conditions where no mass transportation vehicles and relatively few automobiles and trucks pass, and where these vehicles generally travel at moderate speeds; residential areas and commercial streets, and intersections, with little traffic compose this category.	6,384	57 dBA	55 dBA	49 dBA
4	Quiet Urban & Normal Suburban Residential Areas	These areas are similar to Category 3, but for this group, the background is either distant traffic or is unidentifiable; typically, the population density is one-third the density of Category 3.	2,000	52 dBA	50 dBA	44 dBA
5	Quiet Residential Areas	These areas are isolated, far from significant sources of sound, and may be situated in shielded areas, such as a small wooded valley.	638	47 dBA	45 dBA	39 dBA
6	Very Quiet Sparse Suburban or rural Residential Areas	These areas are similar to Category 4 but are usually in sparse suburban or rural areas; and, for this group, there are few if any nearby sources of sound.	200	42 dBA	40 dBA	34 dBA

Source: The American National Standards Institute (ANSI) 2013

4.0 REGULATORY FRAMEWORK

4.1 Federal

4.1.1 Occupational Safety and Health Act of 1970

OSHA regulates onsite noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 decibels with A-weighting (dBA) over an eight-hour work shift (29 Code of Regulations 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

4.1.2 Federal Interagency Committee on Noise (FICON)

The 2000 FICON findings provide guidance as to the significance of changes in ambient noise levels due to transportation noise sources. FICON recommendations are based on studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. FICON's measure of substantial increase for transportation noise exposure is as follows:

- If the existing ambient noise levels at existing noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL.

4.2 State

4.2.1 State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting noise-sensitive land uses, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines, published by the Office of Planning and Research (OPR 2003), also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

State OPR Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

4.3 Local

4.3.1 Rancho Cordova General Plan Noise Element

The goal of the Noise Element of the General Plan is to identify the major sources of noise within the City and discuss the City's role in ensuring comfortable and safe noise levels throughout the community. By identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noise, noise considerations will influence the general distribution, location, and intensity of future land use. The result is that effective land use planning and mitigation can alleviate the majority of noise problems. The Rancho Cordova General Plan Noise Element includes the following goals, policies, and actions regarding noise that are applicable to the Proposed Project:

Goal N-1 Ensure that all new development will be free of noise disturbances.

Policy N-1.1 Establish standards and policies consistent with those in Tables N-1 [shown here as Table 4-1] to govern maximum sound levels in new development.

Policy N-1.2 Ensure that the indoor and outdoor areas of new projects will be located, constructed, and/or shielded from noise sources in compliance with the City's noise standards to the maximum extent feasible.

Policy N.1.3 Ensure that proposed non-residential land uses likely to exceed the City's standards do not create noise disturbances in existing noise-sensitive areas.

Policy N.1.4 Mitigate noise created by proposed non-transportation noise sources to comply with the City's noise standards to the maximum extent feasible.

Policy N.1.6 Ensure that comfortable noise levels and adequate privacy are maintained in higher density development.

Policy N-1.7 To the extent feasible and appropriate, the City shall require the use of temporary construction noise control measures for public and private projects that may include the use of temporary noise barriers, temporary relocation of noise-sensitive land uses or other appropriate measures.

Table 4-1. City of Rancho Cordova Noise Level Performance Standards for New Projects Affected by or Including Non-Transportation Noise Sources			
Stationary Noise Source	**Noise Level Descriptor**	**Daytime Maximum (7:00 a.m. to 10:00 p.m.)**	**Nighttime Maximum (10:00 p.m. to 7:00 a.m.)**
Typical	Hourly L_{eq}, dB	55	45
Tonal, impulsive, repetitive, or consist primarily of speech or music	Hourly L_{eq}, dB	50	40

Source: City of Rancho Cordova General Plan Noise Element

Notes: The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels.

Policy N.1.1 Establish standards and policies consistent with those in Tables N-1 and N-2 [shown here as Tables 4-1 and 4-2] to govern maximum sound levels in new development.

Policy N.1.5 Mitigate noise created by the construction of new transportation noise sources (such as new roadways or new light rail service) to the maximum extent feasible to comply with the City's standards.

Policy N.1.6 Ensure that comfortable noise levels and adequate privacy are maintained in higher density development.

Policy N.2.4 Emphasize site planning and project design when noise mitigation measures are required.

Table 4-2. City of Rancho Cordova Noise Level Performance Standards for Maximum Transportation Noise Exposure

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
All Residential	60[3]	45	NA
Residential subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (e.g., the passing of a single train)	60[3]	40[5]	NA
Transient Lodging – Motels, Hotels	60[4]	45	NA
Hospitals and Nursing Homes	60[3]	45	NA
Theaters and Auditoriums, Music Halls	NA	NA	35
Churches, Meeting Halls,	60[3]	NA	40
Office Buildings	NA	NA	45
Schools, Libraries, Museums	NA	NA	45
Playgrounds, Neighborhood Parks	70	NA	NA

Source: City of Rancho Cordova General Plan Noise Element
Notes:
NA: Not Applicable;
1. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.
2. As determined for a typical worst-case hour during periods of use.
3. Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practival application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
4. In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.
5. The intent of this noise standard is to provide increase protection against sleep disturbance for residences located near railroad tracks.

4.3.2 Rancho Cordova Municipal Code

The City's regulations with respect to noise are included in Chapter 6, *Health and Sanitation*, of the City Code. Section 6.68.090, *Noise Control - Exemptions*, of Chapter 6 states that exemptions from City noise standards include noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and on Fridays commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday; and on each Sunday after the hour of 8:00 p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed

to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

For all construction activity conducted outside of the previously discussed exempt hours, the following standards apply:

Chapter 6 – Noise Control

Sec. 6.68.070. - Exterior Noise Standards.

A. The following noise standards, unless otherwise specifically indicated in this chapter, shall apply to all properties within a designated noise area:

Table 4-3. City of Rancho Cordova Exterior Noise Standards

Noise Area	City Zoning Districts	Time Period	Exterior Noise Standard
1	RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, RD-20, R-3, RD-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5	7:00 a.m. to 10:00 p.m. (Daytime) 10:00 p.m. to 7:00 a.m. (Nighttime)	55 dBA (L_{eq}) 50 dBA (L_{eq})

4.3.3 Sacramento County General Plan Noise Element

While the Project Site is located under the jurisdiction of the City of Rancho Cordova, there are residential land uses approved for future development in the Project vicinity but within unincorporated areas of Sacramento County (Easton/Glenborough Place future development site) and thus within the jurisdiction of the County of Sacramento. The Noise Element of the County of Sacramento General Plan provides a basis for comprehensive local policies to control and abate environmental noise and to protect the citizens of unincorporated Sacramento County from excessive noise exposure. Fundamental goals of the Noise Element include providing sufficient information concerning the community noise environment so that noise may be effectively considered in the land use planning process, developing strategies for abating excessive noise exposure through cost-effective mitigation measures in combination with appropriate zoning to avoid incompatible land uses, to protect those existing regions of the unincorporated County whose noise environments are deemed acceptable and also those locations throughout the community are deemed "noise sensitive", and to protect existing noise-producing commercial and industrial uses in the unincorporated County from encroachment by noise-sensitive land uses. Per Policy NO-8, *Construction Noise*, noise associated with construction activities must adhere to the County Code requirements, specifically Section 6.68.090(e) which addresses construction noise within the County. Per Table 2 [shown here as Table 4-4] of the County General Plan, the maximum allowable exterior Daytime/Nighttime median noise standard as experienced by residential land uses is 55/50 dBA,

respectively. The Policy NO-1 provides a not-to-be-exceeded standard of 60 dB L_{dn}/CNEL for new transportation noise sources at residential outdoor activity areas. However, if the best available noise-reduction technology cannot achieve the 60 dB L_{dn}/CNEL standard, then an exterior noise level of 65 dB L_{dn}/CNEL may be allowed in outdoor activity areas.

The Sacramento County General Plan Noise Element includes the following goals, policies, and actions regarding noise that are applicable to the Project vicinity:

Goal 1 To protect the existing and future citizens of Sacramento County from the harmful effects of exposure to excessive noise. More specifically, to protect existing noise-sensitive land uses from new uses that would generate noise levels which are incompatible with those uses, and to discourage new noise-sensitive land uses from being developed near sources of high noise levels.

Goal 2 To protect the economic base of Sacramento County by preventing the encroachment of noise-sensitive land uses into areas affected by existing noise-producing uses. More specifically, to recognize that noise is an inherent by-product of many land uses and to prevent new noise-sensitive land uses from being developed in areas affected by existing noise-producing uses.

Goal 4 To provide sufficient noise exposure information so that existing and potential future noise impacts may be effectively addressed in the land use planning and project review processes.

Traffic and Railroad Noise Sources

NO-1 The noise level standards for noise-sensitive areas of new uses affected by traffic or railroad noise sources in Sacramento County are shown by Table 1 (shown here as Table 4-4). Where the noise level standards of Table 1 (shown here as Table 4-4) are predicted to be exceeded at new uses proposed within Sacramento County which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 1 (shown here as Table 4-4) standards.

Table 4-4. County of Sacramento Noise Standards for New Uses Affected by Traffic and Railroad Noise

New Land Use	Sensitive[1] Outdoor Area - L_{dn}	Sensitive Interior[2] Area – L_{dn}	Notes
All Residential	65	45	5
Transient Lodging – Motels, Hotels	65	45	3, 5
Hospitals and Nursing Homes	65	45	3, 4, 5
Theaters and Auditoriums	NA	35	3
Churches, Meeting Halls, Schools, Libraries, etc.	65	40	3
Office Buildings	65	45	3
Commercial Buildings	NA	50	3
Playgrounds, Neighborhood Parks	70	NA	3
Industrial	65	50	3

Source: Sacramento County General Plan Noise Element
Notes:
NA: Not Applicable;
1. Sensitive areas are defined in acoustic terminology section.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. If this use is affected by railroad noise, a maximum (L_{max}) noise level standard of 70 dB shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

Non-Transportation Noise Sources

NO-5 The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing non-transportation noise sources in Sacramento County are shown by Table 2 [shown here as Table 4-5]. Where the noise level standards of Table 2 are predicted to be exceeded at a proposed noise-sensitive area due to existing non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 2 standards within sensitive areas.

NO-6 Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 [shown here as Table 4-5] at existing noise-sensitive areas in the project vicinity.

NO-7 The "last use there" shall be responsible for noise mitigation. However, if a noise-generating use is proposed adjacent to lands zoned for uses which may have sensitivity to noise, then the noise

generating use shall be responsible for mitigating its noise generation to a state of compliance with the Table 2 [shown here as Table 4-5] standards at the property line of the generating use in anticipation of the future neighboring development.

Table 4-5. County of Sacramento Non-Transportation Noise Standards

Receiving Land Use	Community Noise Exposure (Median L_{50}, or L_{eq} dB)		
	Outdoor Area[2]		Interior[3]
	Daytime	Nighttime	Day and Night
All Residential	55	50	35
Transient Lodging – Motels, Hotels	55	NA	35
Hospitals and Nursing Homes	55	NA	35
Theaters and Auditoriums	NA	NA	30
Churches, Meeting Halls, Schools, Libraries, etc.	55	NA	35
Office Buildings	60	NA	45
Commercial Buildings	NA	NA	45
Playgrounds, Neighborhood Parks	65	NA	NA
Industrial	60	NA	50

Source: Sacramento County General Plan Noise Element
Notes:
NA: Not Applicable;
1. The Table 2 [shown here as Table 4-5] standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2 [shown here as Table 4-5], then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
7. Where median (L_{50}) noise level data is not available for a particular noise source, average (L_{eq}) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

4.3.4 Sacramento County Municipal Code

The County's regulations with respect to noise are included in Chapter 6, Health and Sanitation, of the County Code. Section 6.68.090, *Noise Control - Exemptions*, of Chapter 6 states that exemptions from County noise standards include noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Fridays commencing at 8:00 p.m. through and

including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

For all construction activity conducted outside of the previously discussed exempted hours, the following standards apply:

Sec. 6.68.070. - Exterior Noise Standards.

The following noise standards, unless otherwise specifically indicated in this article, shall apply to all properties within a designated noise area:

Table 4-6. County of Sacramento Exterior Noise Standards

Noise Area	City Zoning Districts	Time Period	Exterior Noise Standard
1	RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, RD-20, R-3, RD-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5	7:00 a.m. to 10:00 p.m. (Daytime) 10:00 p.m. to 7:00 a.m. (Nighttime)	55 dBA (L_{eq}) 50 dBA (L_{eq})

5.0 IMPACT ASSESSMENT

5.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act Guidelines Appendix G thresholds of significance. The Project would result in a significant noise-related impact if it would meet any of the following criteria:

1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

2) Generation of excessive groundborne vibration or groundborne noise levels.

3) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would expose people residing or working in the project area to excessive noise levels.

For purposes of this analysis and where applicable, the City and County noise standards were used for evaluation of Project-related noise impacts. Both the City and County Municipal Codes state that noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property occurring between the hours of 6:00 a.m. to 8:00 p.m. Monday through Friday, and between 7:00 a.m. and 8:00 p.m. on weekends are exempt from City and County noise standards. Therefore, noise generated during construction activities, as long as conducted within the permitted hours, would not violate City or County noise standards. However, it is noted that although not anticipated, there is a potential for Project construction activities to be conducted outside of the City- and County-exempted hours. Construction noise generated during the hours when such noise is not exempt from City or County noise standards – 8:00 p.m. to 10:00 p.m. daily, and 10:00 p.m. to 6:00 a.m. on weekdays, and 10:00 p.m. to 7:00 a.m. on weekends – is compared to either the City and County standards (which are the same) of 55 dBA from 8:00 p.m. to 10:00 p.m. and 50 dBA from 10:00 p.m. to 7:00 a.m., as experienced at an affected receptor (see Tables 4-3 and 4-6 above).

In order to evaluate the potential health-related effects (physical damage to the ear and mental damage resulting from a lack of sleep or focus) from construction noise, such noise generated by the Project is calculated and compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by the National Institute for Occupational Safety and Health (NIOSH). A division of the US Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receptors. This methodology for evaluating potential health risk from construction noise is consistent with the California Court of Appeal decision found in *King and Gardiner Farms, LLC, v. County of Kern* (2020).

Predicted Project operational stationary noise sources are compared to both the City and County's exterior noise standards promulgated by Municipal Code Section 6.68.070 (see Tables 4-3 and 4-6 above [Municipal Code sections for both City and County are identical]). Furthermore, the increase in offsite transportation-related noise is compared against the City and County's recommendation for evaluating the impact of increased traffic noise, as described in Section 4.1.2 above (see Tables 4-2 and 4-4). Neither the City nor the County regulate traffic related noise levels for new Projects where the existing conditions already exceed the applicable standards. In the case that existing traffic noise already exceeds the applicable standard at a sensitive receptor, FICON's measure of substantial increase for transportation noise exposure will be employed, as described in Section 4.1.2 above.

5.2 Methodology

This analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. In order to estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, predicted construction noise levels were calculated

utilizing the FHWA's Roadway Construction Noise Model ([RCNM] 2006). Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from the Caltrans guidelines set forth above. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby land uses.

Offsite transportation noise was calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108), coupled with traffic levels calculated by Fehr Peers (2021). As previously described, the Highway Noise Prediction Model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The most intense Project land use scenario which could potentially occur at the site was modeled using the SoundPLAN 3D noise model, which accounts for the operation of eight warehouse buildings totalling 1,486,000 sf of total warehouse campus space and associated parking lot activities. The SoundPLAN 3D noise model predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers. Primary Project noise sources include semi-trucks idling and maneuvering, the use of backup beepers, and standard parking lot and warehouse campus activities. The actual future development on the site would likely be less intensive and therefore would generate less noise then presented in this analysis.

5.3 Impact Analysis

5.3.1 Project Construction Noise

Would the Project Result in Short-Term Construction-Generated Noise in Excess of Standards?

Onsite Construction Noise

Onsite construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways and those activities required in the offsite stormwater drainage and sewer connection infrastructure component of the Project. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During onsite construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

The nearest noise-sensitive receptors to the Project Site consist of the Comfort Inn and Suites, located approximately 140 feet north of the Project Site beyond the Gold Line Railway and Folsom Boulevard; and future residential buildings associated with the Glenborough and Easton Place Land Use Master Plan, which will be located approximately 98 feet east of the Project Site and beyond Hazel Avenue. As

previously discussed, the approved *Hazel Avenue/U.S. 50 Interchange Project* is anticipated to expand the vehicle access to the area, resulting in the widening of Hazel Avenue to either a 98 feet (4-lane arterial) or 176 feet (6-lane *Ultimate* thoroughfare [modified]) right-of-way. For conservative purposes, the closer distance of 98 feet was applied in this analysis. The next-nearest residence (existing) sits approximately 691 feet northeast of the Project Site across Folsom Boulevard at the Twilight RV and Mobile Home Park.

It is acknowledged that the majority of construction equipment is not situated at any one location during construction activities, but rather spread throughout the Project Site and at various distances from sensitive receptors. Therefore, this analysis employs FTA guidance for calculating construction noise, which recommends measuring construction noise produced by all construction equipment from the center of the Project site (FTA 2018), which in this case is located approximately 1,000 feet from the property line at the nearest noise-sensitive receptor (future residents of Glenborough and Easton Place) for the demolition and grading phases. For building construction, paving and architectural coating, the Project Site center varies between 375 and 2,600 feet distant for each phase (see Table 5-1 and Attachment A for individual phase distances to receptors). As previously described, the City and County Code exempts construction activities from noise standards when conducted during the hours of 6:00 a.m. and 8:00 p.m. on Mondays through Fridays, and between the hours of 7:00 a.m. and 8:00 p.m. on Saturdays and Sundays.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, the construction equipment noise levels were calculated using the RCNM for the construction process and compared against the NIOSH construction-related noise level threshold of 85 dBA and the City and County nighttime standards of 55 and 50 dBA for construction activities conducted outside of exempted hours.

Due to the anticipated phasing of building construction consisting of the construction of two buildings per phase and associated infrastructure and parking, each phase was modeled with a site center centralized between the two buildings and construction noise-generated is evaluated for each sensitive receptor distance closest to each individual Project construction phase site centers. Additionally, because noise associated with the offsite underground infrastructure work required during the stormwater drainage and sewage connection component of the Project would occur over 4,000 feet from the nearest noise sensitive receptor, impacts associated with this component are addressed qualitatively. The anticipated short-term construction noise levels generated for the necessary construction equipment are presented in Table 5-1.

Table 5-1. Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level @ Nearest Residence (dBA L_{eq})	NIOSH Construction Noise Standards (dBA L_{eq})	Exceeds NIOSH Standard at Nearest Sensitive Receptor?	City and County Nighttime Construction Noise Standards (dBA L_{eq})			
				8:00 p.m. – 10:00 p.m. Daily	Exceeds Standard?	10:00 p.m. – 6:00 a.m. Daily (10:00 p.m. – 7:00 a.m. Weekends)	Exceeds Standard?
Demolition @ 1,000 Feet Distant							
Combined Demolition Equipment (3 Excavators, 1 Concrete/Industrial Saw, 2 Rubber Tired Dozers)	**60.4**	*85*	**No**	*55*	**Yes**	*50*	**Yes**
Grading @ 1,000 Feet Distant							
Combined Grading Equipment (1 Grader, 1 Rubber Tired Dozer, 2 Tractor/Loader/Backhoes, 2 Scrapers)	**61.5**	*85*	**No**	*55*	**Yes**	*50*	**Yes**
Phase 1 – Building Construction, Paving, Architectural Coating @ 2,600 Feet Distant							
Combined Phase 1 Equipment (1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoes, 1 Welder Torch, 1 Roller, 1 Paving Equipment, 1 Air Compressor)	**55.1**	*85*	**No**	*55*	**Yes**	*50*	**Yes**
Phase 2 – Building Construction, Paving, Architectural Coating @ 1,486 Feet Distant							
Combined Phase 2 Equipment (1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoes, 1 Welder Torch, 1 Roller, 1 Paving Equipment, 1 Air Compressor)	**59.9**	*85*	**No**	*55*	**Yes**	*50*	**Yes**
Phase 3 – Building Construction, Paving, Architectural Coating @ 930 Feet Distant							

Combined Phase 3 Equipment (1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoes, 1 Welder Torch, 1 Roller, 1 Paving Equipment, 1 Air Compressor)	**64.0**	*85*	**No**	*55*	**Yes**	*50*	**Yes**
Phase 4 – Building Construction, Paving, Architectural Coating @375 Feet Distant							
Combined Phase 4 Equipment (1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoes, 1 Welder Torch, 1 Roller, 1 Paving Equipment, 1 Air Compressor)	**71.9**	*85*	**No**	*55*	**Yes**	*50*	**Yes**

Source: Construction noise levels were calculated by ECORP Consulting, Inc. using the FHWA RCNM (FHWA 2006). Refer to Attachment A for Model Data Outputs.

Notes: Construction equipment used during construction derived from CalEEMod 2016.3.2. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters. The distance to the nearest sensitive receptor was calculated from the center of the Project site (or center of Project phase) consistent with FTA (2018) recommendations. Building construction, paving and architectural coating are assumed to occur simultaneously.

As shown in Table 5-1, at no time would construction noise exceed the NIOSH standard of 85 dBA intended to prevent physical damage to the ear. However, construction, if conducted during the non-exempt nighttime hours, would exceed the City and County nighttime exterior noise thresholds of 55 dBA during the hours of 8:00 p.m. and 10:00 p.m. and 50 dBA during the hours of 10:00 p.m. and 6:00 a.m. at the nearest future residential receptors, located 176 feet from construction activities, and thus would result in an inconsistency with the applicable noise standard.

Mitigation is required to reduce construction noise as experienced by noise-sensitive receptors to levels below these thresholds. Noise barriers or enclosures can provide a sound reduction of 35 dBA or greater (WEAL 2000). To be effective, a noise enclosure/barrier must physically fit in the available space, must completely break the line of sight between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In the case of Project construction, an enclosure/barrier would only be necessary at the area of the construction site where noise producing activities are being performed.

As such, the following mitigation is required to reduce impacts to less than significant for construction activities conducted after 8:00 p.m. and before 6:00 a.m. on weekdays and between 8:00 p.m. and 7:00 a.m. on weekends.

NOI-1: In the case that construction occurs between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and between 8:00 p.m. and 7:00 a.m. on weekends, a temporary noise barrier or enclosure shall be

positioned between construction equipment and all residences within 2,600 feet of construction activities in a manner that breaks the line of sight between the construction equipment and these residences, to the extent feasible. The temporary noise barrier shall have a sound transmission class (STC) of 25 or greater in accordance with American Society for Testing and Materials Test Method E90, or at least 2 pounds per square foot to ensure adequate transmission loss characteristics. The temporary noise barrier can consist of a solid plywood fence at least 7/16-inch in thickness and/or flexible sound curtains, such as an 18-ounce tarp or a 2-inch-thick fiberglass blanket, attached to chain link fencing or some other support structure. The length, height, and location of the temporary noise barrier shall be adequate to assure proper acoustical performance. Specifically, the barrier must completely break the line of sight between construction equipment and all residential properties less than 2,600 feet of construction activity, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. All noise control barrier walls shall be designed to preclude structural failure due to such factors as winds, shear, shallow soil failure, earthquakes, and erosion.

In order to qualify as a noise-sensitive receptor at the time of construction, such residential dwellings would be required to physically house individuals during the time Project construction activities occur.

For construction activities associated with the offsite stormwater and sewage infrastructure component of the Project, individual construction equipment would not exceed City or County nighttime standards given its distance from sensitive receptors being over 4,000 feet.

Implementation of mitigation measure NOI-1 would substantially reduce physical and mental health impacts associated with high levels of construction-generated noise. As previously described, noise barriers or enclosures, such as those recommended in mitigation measure NOI-1, can provide a sound reduction of 35 dBA or greater (WEAL 2000). This would be a reduction robust enough to maintain construction noise levels below the City/County nighttime exterior noise standards of 55 dBA during the hours of 8:00 p.m. and 10:00 p.m. and 50 dBA during the hours of 10:00 p.m. and 6:00 a.m. Therefore, Project construction activities conducted outside of City- or County-exempt hours would not expose persons to and generate noise levels in excess of City or County standards with the imposition of NOI-1, and no negative health effects from construction noise would occur.

Offsite Construction Worker and Material Haul Truck Traffic Noise

Project construction would result in additional traffic on adjacent roadways over the time period that construction occurs. The Project is expected to generate approximately 4,534 trips (worker, vendor, and material hauling trips combined) over the course of the Project's anticipated buildout period. According to the California Department of Transportation (Caltrans) Technical Noise Supplement to the Traffic Noise Analysis Protocol (2013), doubling of traffic on a roadway is required to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference). As stated in the *Local Transportation Analysis* (Fehr & Peers 2021), 100 percent of Project construction traffic is expected to exit onto Nimbus Road and head north towards Folsom Boulevard. The roadway segment of Folsom Boulevard, west of Hazel Avenue (Proposed Project roadway segment), experiences approximately 18,400 vehicles per day, while the roadway section of Folsom Boulevard east of Hazel Avenue to Aerojet Road experiences approximately 16,600 vehicles per day. The majority of Project traffic is expected to also use

US 50 to and from the Project Site. According to the Caltrans 2019 Traffic Counts (Caltrans 2020), the roadway segment of US 50 traversing near the Project Area experiences traffic counts between 130,600 to 139,000 trips daily. Project construction would not instigate traffic trips at rates great enough to consistently double traffic on Project vicinity roadways, like Folsom Boulevard, and therefore generate a perceptible noise level increase.

Would the Project Result in a Substantial Permanent Increase in Ambient Noise Levels in Excess of City Standards During Operations?

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise sensitive and may warrant unique measures for protection from intruding noise.

The nearest noise-sensitive receptors to the Project Site include the Comfort Inn and Suites (existing) located immediately north of the Project Site beyond Folsom Boulevard and the Gold Line light rail; and future residential receptors included in the approved Easton Place/Glenborough & Easton Place Land Use Master Plan, located approximately 98 feet east of the Project Site beyond Nimbus Road/Hazel Avenue (or 176 feet distant in areas designed as the future Hazel Avenue *Ultimate* [modified] roadway scenario [MacKay and Somps 2021]).

Project Operational Offsite Traffic Noise

Project operations would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the Project area. The Project's contribution to traffic noise levels throughout the Project vicinity (i.e., vicinity roadway segments that traverse noise sensitive residential land uses) were calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108) and based on the traffic volumes identified by Fehr & Peers (2021). The total number of operational trips generated by the Project are expected to reach 2,080 daily. Table 5-2 shows the calculated offsite roadway noise levels under existing traffic levels compared to existing traffic levels plus the Project. The calculated noise levels as a result of the Project at affected sensitive land uses are compared to the noise standards promulgated by the City and County (see Tables 4-2 and 4-4 above).

Specifically, for all residences within the City limits (Twilight Mobile Home Park), the following exterior noise standard shall apply:

- Where it is not possible to reduce noise in outdoor activity areas to the 60 dB Ldn/CNEL standard or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with Table 4-2 in Section 4.3.1 of this analysis.

For all transient lodging (Comfort Inn and Suites north of the Project Site beyond Folsom Boulevard) within the City limits, the following interior noise standard shall apply:

- In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion of 45 dB L_{dn}/CNEL shall apply.

For all residences (existing and future) located within County limits, the following exterior noise standard shall apply:

- For all residential land uses affected by traffic and railroad noise, an exterior noise level of 65 dBA L_{dn}/CNEL shall apply.

As previously described, neither the City nor the County regulate traffic related noise levels for new Projects where the existing conditions already exceed the applicable standards. In the case that existing traffic noise already exceeds the applicable standard at a sensitive receptor under existing conditions, FICON's measure of substantial increase for transportation noise exposure will be employed, as described in Section 4.1.2 above. FICON's measure of substantial increase for transportation noise exposure is as follows:

- If the existing ambient noise levels at existing noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL

Table 5-2 shows the calculated offsite roadway noise levels under existing traffic levels compared to existing traffic levels plus the Project.

Table 5-2. Existing Plus Project Conditions - Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway		dBA Increase	Noise Standard (dBA CNEL)	Exceed Standard?
		Existing Conditions	Existing + Project Conditions			
Hazel Avenue						
North of Tributary Point Drive	Residential	64.4	**64.5**	+0.1	65	**No**
South of Folsom Boulevard	Residential	43.1	**49.6**	+6.5	60	**No**
Highway 50						
East of Hazel Avenue	Residential	67.4	**67.4**	0.0	>1.5	**No**
West of Hazel Avenue	Residential	65.9	**65.9**	0.0	65	**No**
Folsom Boulevard						
East of Hazel Avenue	Residential	59.8	**59.8**	0.0	60 (City) 65 (County)	**No**
West of Hazel Avenue	Residential/ Transient Lodging	57.6 (37.6 interior)	**57.6** **(37.6 interior)**	0.0	65 / 45 (interior)	**No**
Tributary Point Drive						
East of Hazel Avenue	Residential	54.2	**54.2**	0.0	60	**No**

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels in conjunction with the trip generation rate identified by Fehr Peers 2021. Refer to Attachment B for traffic noise modeling assumptions and results.

Notes: A total of 3 intersections were analyzed in the Local Transportation Analysis; however, all roadway segments that impact sensitive receptors were included for the purposes of this analysis.

As shown in Table 5-2, no roadway segment would experience traffic noise beyond the City or County significance standards as a result of the Project. In the case for residences located along US 50, which are already experiencing noise levels exceeding the 65 dBA threshold, FICON's significance threshold of a maximum 1.5 dBA CNEL increase over existing conditions is applied. With regards to the Comfort Inn and Suites located adjacent to the Project's northern boundary beyond Folsom Boulevard, only the interior noise levels are addressed as hotel parking lots are not considered sensitive land uses. The manner in which older structures in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). The exterior-to-interior reduction of newer structures is generally 30 dBA or more (HMMH 2006). Thus, the interior noise experienced within the adjacent hotel would be at least 20 dBA less than that experienced outside, resulting in interior noise levels well below the 40 dBA interior noise standard for transient lodging land uses [57.6 dBA – 20 = 37.6 dBA].

Operational Stationary Noise

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Warehouse campuses, such as that proposed by the Project, are typically associated with excessive, ongoing operations-related noise that would lead to substantial permanent increases in ambient noise levels. Specifically, the sound of idling trucks and backup beepers would be a substantial source of noise in the Project vicinity. Additional operational stationary noise generated by the Project would come from voices and warehouse truck activities as drivers and employees move in and out of the parking lot. Parking lot noise will be the focus of the operational noise analysis due to their proximity to the existing residences.

The City of Rancho Cordova's stationary source noise regulations are contained in Policy N.1.1 and presented in Table N-1 [shown here as Table 4-1] *Noise Level Performance Standards for Stationary Noise Exposure*. Table N-1 shows a typical hourly L_{eq} standard of 55 dB for daytime noise levels, and a nighttime standard of 45 dB for new projects that are affected by or include non-transportation noise sources. Noise-sensitive receptors affected by these standards include the Twilight RV and Mobile Home Park residences.

The County of Sacramento's stationary source noise regulations are contained in Table 2 [shown here as Table 4-3] *Non-Transportation Noise Standards* of the County General Plan. Table 2 shows an exterior Daytime/Nighttime median noise standard of 55/50 dBA, respectively, as experienced by residential land uses. Noise-sensitive receptors affected by these County stationary noise source standards include the future residences to be located at the Easton/Glenborough development site.

As previously described, the nearest noise sensitive land use considered in this analysis would be the future residences of Easton/Glenborough Place, to be located adjacent to the Project Site beyond the future Hazel Avenue roadway expansion project. There are also noise-sensitive receptors within the mobile home park, located 687 feet northeast of the Project Site boundary. Thus, the Project would be subject to a 55 dBA exterior noise standard during daytime operations for both City- and County- affected land uses; and a 50 dBA exterior standard during Project nighttime operations at the future adjacent residential land uses of Easton/Glenborough Place; and a 45 dB nighttime noise standard for the mobile home park residential land use.

The most intense land use which could potentially occur at the site was modeled using the SoundPLAN 3D noise model, which accounts for the operation of eight warehouse buildings, with 1,486,000 sf of total warehouse campus space and associated parking lot activities. As previously stated, The SoundPLAN 3D noise model predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers. Primary Project noise sources include semi-trucks idling and maneuvering, the use of backup beepers, and standard parking lot and warehouse campus activities. The actual future development on the site would likely be less intensive and therefore would generate less noise then presented in this analysis.

The results of this model can be found in Attachment C. The most dominant noise sources for these locations would consist of backup beepers, trucks maneuvering within the designated internal parking

areas, trucks leaving the warehouse campus, and any idling vehicles during drop-off or pickup waiting periods. Additional noise sources anticipated for these locations are the employee parking areas and their associated activities (car doors opening and closing, music, people talking, internal circulation, etc.). A reference measurement was taken, on June 23, 2021 by ECORP Consulting, Inc., of a food distribution warehouse for noise levels associated with truck maneuvering activities near loading docks (see Attachment C for all reference measurements inputted into the SoundPLAN model to represent the noise sources within the Project Site). Placement of all noise sources, for modeling purposes, were based off the proposed Project Site plan and the Easton/Glenborough Place Land Use Master Plan.

Table 5-4 shows the predicted Project noise levels at five locations in the Project vicinity, as predicted by SoundPLAN. Also, see Figure 4 for a visual representation of Project noise propagation. Locations 1 and 2 represent noise levels at the Project-side of the hotel and the residences located at the mobile home park, respectively. Locations 3-5 represents the future residences of the approved Easton/Glenborough Place development site, located approximately 100 feet east of the Project Site beyond the future Hazel Avenue.

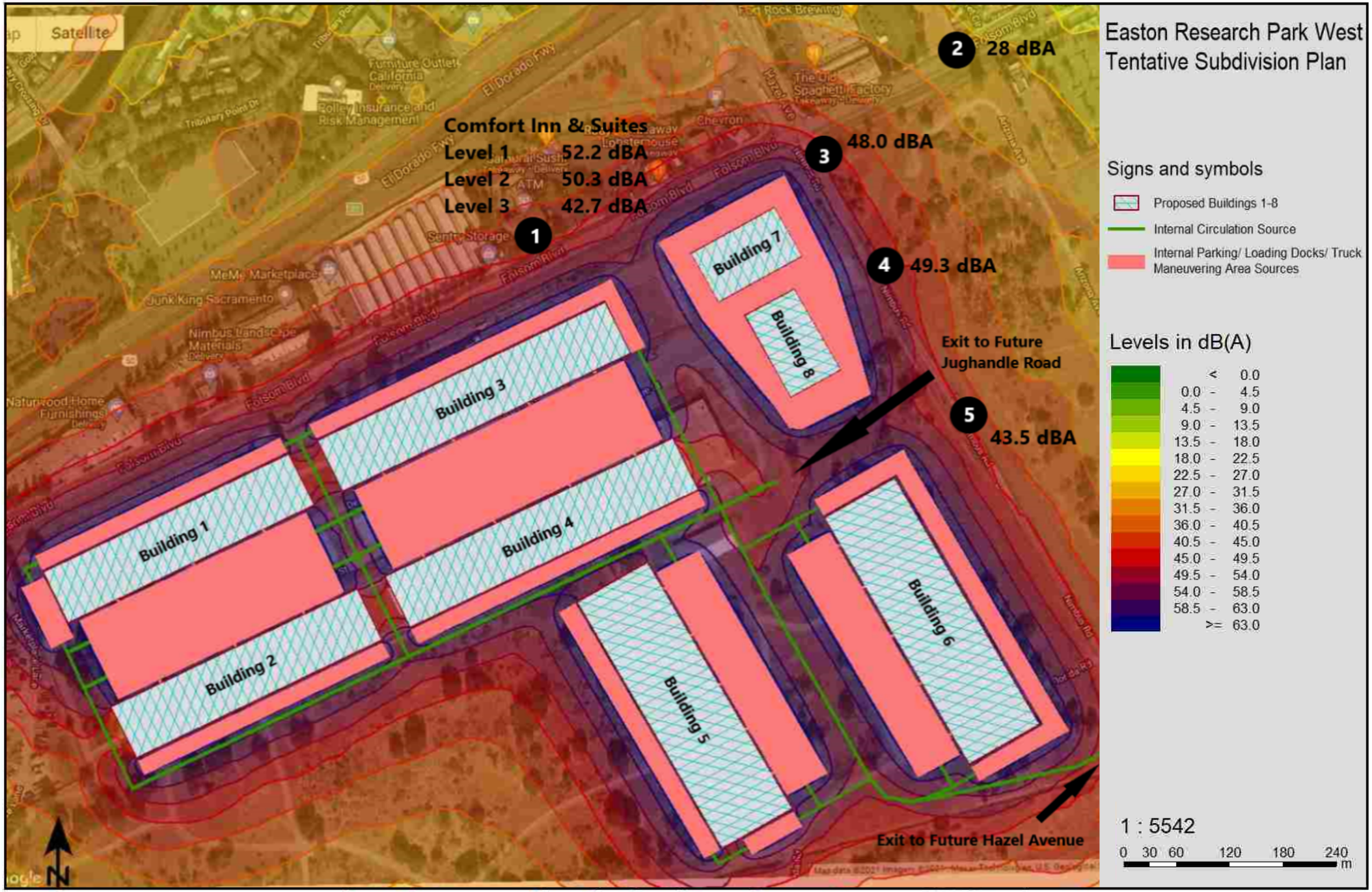
Table 5-4. Modeled Operational Noise Levels

Site Location	Location	Modeled Operational Noise Attributed to the Project (L_{eq} dBA)	City and County Daytime Standards (dBA L_{eq})
1	**Comfort Inn & Suites –** Directly North of Project Site Across Folsom Boulevard Level 1 Level 2 Level 3	 52.2 dBA 50.3 dBA 42.7 dBA	*55 dBA*
2	**Nearest Existing Sensitive Receptor** – Residences to the northeast at the Twilight Mobile Home Park, Beyond Folsom Boulevard	28.0 dBA	*55 dBA*
3	**Future Sensitive Receptors -** Residences of Easton/Glenborough Place, Across Future Hazel Avenue at the Folsom Boulevard/Hazel Avenue Intersection	48.0 dBA	*55 dBA*
4	**Future Nearest Sensitive Receptor -** Residences of Easton/Glenborough Place, Across Future Hazel Avenue between Folsom Boulevard and the future Hazel Avenue/Jughandle Road Intersection	49.3 dBA	*55 dBA*
5	**Future Sensitive Receptors -** Residences of Easton/Glenborough Place, Across Future Hazel Avenue at the Hazel Avenue/Jughandle Road Intersection	43.5 dBA	*55 dBA*

Source: Stationary source noise levels were modeled by ECORP using SoundPLAN 3D noise model. Refer to Attachment C for noise modeling assumptions and results.

As shown in Table 5-4, Project noise generated onsite would propagate to 28.0 dBA at the nearest existing residential receptors and to 49.3 dBA at the nearest future noise-sensitive receptors included in

the approved Easton/Glenborough Place development project. Therefore, the Project would not surpass the City or County noise standards at these nearest sensitive receptors. With regard to noise-sensitive receptors located at the transient lodging north of the Project Site (Comfort Inn & Suites), only interior noise is considered as this may have a potential negative impact on the sleep of individuals residing within the hotel. As previously mentioned, the manner in which older buildings in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer strucutures is generally 30 dBA or more. Thus, the interior noise experienced within the adjacent hotel would be at least 20 dBA less than that experienced outside, resulting in interior noise levels of 32.2 dBA, 30.3 dBA, and 22.7 dBA for levels 1, 2 and 3 respectively. It is noted that SoundPLAN was used to model noise as a result of onsite activities on a worst-case basis. All noise producing sources on the Project Site were modeled for noise as if occurring at the same time and at the highest activity level to produce noise levels at the level as those predicted.



Map Date: *6/23/2021*
Photo (or Base) Source: *SoundPLAN*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3. SoundPLAN

2020-161 Easton Research Park West

As shown in Figure 4, onsite noise generated on the Project Site diminishes in power as it propagates outward from the site, generally reducing to less than 60 dBA before reaching the surrounding commercial, industrial, transient lodging, and residential land uses.

No roadway segment would experience an increase of noise beyond the City or County significance standards and no aspect of Project onsite operations would surpass the City or County noise standards at the nearest existing or future sensitive receptors. Therefore, the Proposed Project would not result in noise levels in excess of City or County noise standards. The Project would have a less than significant impact in this area.

Would the Project Expose Structures to Substantial Groundborne Vibration During Construction?

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Once operational, the Project would not be a source of groundborne vibration. Increases in groundborne vibration levels attributable to the Proposed Project would be primarily associated with short-term, construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Pile drivers are not anticipated to be necessary for Project construction in the case of the Proposed Project. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with typical construction equipment are summarized in Table 5-5.

The City does not regulate construction vibration. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020b) recommended standard of 0.2 inch per second PPV with respect to the prevention of structural damage for normal buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

Table 5-5. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 20 Feet (inches per second)
Vibratory Roller	0.210
Large Bulldozer/Caisson Drilling	0.124
Loaded Trucks	0.106
Rock Breaker	0.115
Jackhammer	0.049
Small Bulldozer/Tractor	0.004

Source: FTA 2018; Caltrans 2020b

It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structure of concern to the construction site would be the residences to be located east of and adjacent to the Project Site, beyond future Hazel Avenue, with the closest physical building to be located approximately 98 feet away from the Project site boundary.

Based on the representative vibration levels presented for various construction equipment types in Table 5-5 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential Project construction vibration levels at the nearest offsite structure, located 188 feet distant from the center of the Project site. The FTA provides the following equation:

$$[PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}].$$

Table 5-6 presents the expected Project related vibration levels at a distance of 98 feet.

Table 5-6. Project Construction Vibration Levels at 98 Feet

Receiver PPV Levels (in/sec)[1]					Peak Vibration	Threshold	Exceed Threshold
Large Bulldozer/Caisson Drilling/Hoe Ram	Loaded Trucks	Jack Hammer	Small Bulldozer / Tractor	Vibratory Roller			
0.016	0.014	0.008	0.000	0.027	**0.027**	*0.20*	**No**

Notes: [1]Based on the Vibration Source Levels of Construction Equipment included on Table 5-5 (FTA 2018). Distance to the nearest structure of concern is approximately 98 feet measured from Project Site boundary.

As shown, groundborne vibrations attenuate rapidly from the source due to geometric spreading and material damping. Geometric spreading occurs because the energy is radiated from the source and spreads over an increasingly large distance while material damping is a property of the friction loss which occurs during the passage of a vibration wave. As shown in Table 5-5, the nearest structures at 98 feet

distant from the center of the construction site would not experience groundborne levels in exceedance of the recommended standard, even in the rare case that vibratory roller equipment is used.

Would the Project Expose Structures to Substantial Groundborne Vibration During Operations?

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels.

Would the Project Expose People Residing or Working in the Project Area to Excessive Airport Noise?

The Project site is located approximately 6.12 miles northeast of the Mather Air Force Base, located in the City of Mather; and 9.60 miles east of the Sacramento McClellan Airport, located in McClellan Park. Although aircraft flight patterns may cover the Project site, noise from aircrafts is not a significant issue in the City. The Project Site is well outside of the airports' noise contours (Airport Land Use Commission 1992). Aircraft noise does not significantly impact the City and the Proposed Project would not expose people visiting or working on the Project site to excess airport noise levels.

Would the Project Contribute to Cumulatively Considerable Noise During Construction?

Construction activities associated with the Proposed Project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise for the Project was determined to be less than significant following compliance with the City and County Municipal Codes and General Plan Noise Elements. Cumulative development in the vicinity of the Project Site could result in elevated construction noise levels at sensitive receptors in the Project area. However, each project would be required to comply with the applicable Municipal Code limitations on construction. Therefore, the Project would not contribute to cumulative impacts during construction.

Would the Project Contribute to Cumulatively Considerable Noise from Traffic?

Cumulative traffic noise levels throughout the Project vicinity (i.e., vicinity roadway segments that traverse noise sensitive land uses) for all approved projects were modeled based on the traffic volumes identified by Fehr & Peers (2021) to determine the noise levels along Project vicinity roadways under future cumulative conditions. As previously stated, the total number of operational trips generated by the Project are expected to reach 2,080 trips daily. Table 5-7 shows the calculated offsite roadway noise levels under future cumulative conditions for all approved project's traffic levels without the Project, compared to future build-out of the Project and including all approved projects. The calculated noise levels as a result of the Project at affected sensitive land uses are compared to the noise standards promulgated in the City and County, along with significance thresholds recommended by FICON for all roadway segments where the cumulative traffic noise levels without the inclusion of the Project were projected to exceed City or County standards.

For all residences within City limits (Twilight Mobile Home Park), the following exterior noise standard shall apply:

- Where it is not possible to reduce noise in outdoor activity areas to the 60 dB L_{dn}/CNEL standard or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with Table 4-2 in section 4.3.1 of this analysis.

For all transient lodging (Comfort Inn and Suites north of the Project Site beyond Folsom Boulevard) within the City limits, the following interior noise standard shall apply:

- In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion of 45 dB L_{dn}/CNEL shall apply.

For all residences (existing and future) located within County limits, the following exterior noise standard shall apply:

- For all residential land uses affected by traffic and railroad noise, an exterior noise level of 65 dB L_{dn}/CNEL shall apply.

Because neither the City nor the County regulate traffic-related noise levels for new Projects where the existing conditions already exceed the applicable standards, FICON's measure of substantial increase for transportation noise exposure is employed:

- If the existing ambient noise levels at existing noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or

- If the existing noise levels range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or

- If the existing noise levels already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL.

Table 5-7. Cumulative Plus Project Conditions - Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway		dBA Increase	Noise Standard (dBA CNEL)	Exceed Standard?
		Cumulative Conditions	Cumulative + Project Conditions			
Hazel Avenue						
North of Tributary Point Drive	Residential	65.4	65.4	0.0	>1.5	**No**
North of Jughandle	Residential	63.2	63.3	+0.1	65	**No**
South of Jughandle	Residential	56.9	57.5	+0.6	65	**No**
Highway 50						
East of Hazel Avenue	Residential	69.7	69.8	+0.1	>1.5	**No**
West of Hazel Avenue	Residential	67.8	68.3	+0.5	>1.5	**No**
Folsom Boulevard						
East of Jughandle	Residential	58.4	58.5	+0.1	60 (city) / 65 (county)	**No**
West of Jughandle	Residential	60.1	60.2	+0.1	>3	**No**
Tributary Point Drive						
East of Hazel Avenue	Residential	54.4	54.4	0.0	60	**No**

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels in conjunction with the trip generation rate identified by Fehr & Peers 2021. Refer to Attachment B for traffic noise modeling assumptions and results.

Notes: A total of 3 intersections were analyzed in the Local Transportation Analysis; however, all roadway segments that impact sensitive receptors were included for the purposes of this analysis.

As shown in Table 5-7, no roadway segment would experience an increase of noise beyond the City, County or FICON significance standards as a result of the Project when compared against future development of approved plans within the Project vicinity, such as the *Easton Place/Glenborough & Easton Place Land Use Master Plan*. Therefore, no mobile-source cumulative impacts would occur.

Cumulative Stationary Source Noise Impacts

Long-term stationary noise sources associated with the development of the Proposed Project, combined with other cumulative projects, could cause local noise level increases. Noise levels associated with the Project and related cumulative projects together could result in higher noise levels than considered separately. As previously described, onsite noise sources associated with the Project was found to be acceptable. Therefore, the Project would not contribute to cumulative impacts during operations.

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Attachment A – Roadway Construction Noise Model Outputs – Project Construction Noise

Attachment B – Federal Highway Administration Roadway Traffic Noise Model Outputs – Project Traffic Noise

Attachment C – SoundPLAN Outputs – Onsite Project Noise

ATTACHMENT A

Roadway Construction Noise Model Outputs – Project Construction Noise

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/16/2021
Case Description: Demolition

Description	**Affected Land Use**
Demolition	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Excavator	No	40		80.7	1000
Excavator	No	40		80.7	1000
Excavator	No	40		80.7	1000
Industrial/Concrete Saw	No	20		89.6	1000
Rubber Tired Dozer	No	40		81.7	1000
Rubber Tired Dozer	No	40		81.7	1000

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Excavator	54.7	50.7
Excavator	54.7	50.7
Excavator	54.7	50.7
Industrial/Concrete Saw	63.6	56.6
Rubber Tired Dozer	55.6	51.7
Rubber Tired Dozer	55.6	51.7
Total	**63.6**	**60.4**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/16/2021
Case Description: Grading

Description	**Affected Land Use**
Grading	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**
Grader	No	40	85	
Rubber Tired Dozer	No	40		81.7
Tractor/Loader/Backhoe	No	40	84	
Tractor/Loader/Backhoe	No	40	84	
Scraper	No	40		83.6
Scraper	No	40		83.6

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Grader	59	55
Rubber Tired Dozer	55.6	51.7
Tractor/Loader/Backhoe	58	54
Tractor/Loader/Backhoe	58	54
Scraper	57.6	53.6
Scraper	57.6	53.6
Total	**59**	**61.5**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/16/2021
Case Description: Phase 1

Description	**Affected Land Use**
Construction, Paving, Architectural Coating	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Crane	No	16		80.6	2600
Forklift	No	40		83.4	2600
Forklift	No	40		83.4	2600
Forklift	No	40		83.4	2600
Generator Set	No	50		80.6	2600
Tractor/Loader/Backhoe	No	40	84		2600
Tractor/Loader/Backhoe	No	40	84		2600
Tractor/Loader/Backhoe	No	40	84		2600
Welder	No	40		74	2600
Roller	No	20		80	2600
Paving Equipment	No	20		89.5	2600
Air compressor	No	40		77.7	2600

Calculated (dBA)

Equipment		*Lmax	Leq
Crane		46.2	38.3
Forklift		49.1	45.1
Forklift		49.1	45.1
Forklift		49.1	45.1
Generator Set		46.3	43.3
Tractor/Loader/Backhoe		49.7	45.7
Tractor/Loader/Backhoe		49.7	45.7
Tractor/Loader/Backhoe		49.7	45.7
Welder		39.7	35.7
Roller		45.7	38.7
Paving Equipment		55.2	48.2
Air compressor		43.3	39.4
	Total	**55.2**	**55.1**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/16/2021
Case Description: Phase 2

Description	**Affected Land Use**
Construction, Paving, Architectural Coating	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Crane	No	16		80.6	1486
Forklift	No	40		83.4	1486
Forklift	No	40		83.4	1486
Forklift	No	40		83.4	1486
Generator Set	No	50		80.6	1486
Tractor/Loader/Backhoe	No	40	84		1486
Tractor/Loader/Backhoe	No	40	84		1486
Tractor/Loader/Backhoe	No	40	84		1486
Welder	No	40		74	1486
Roller	No	20		80	1486
Paving Equipment	No	20		89.5	1486
Air compressor	No	40		77.7	1486

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Crane		51.1	43.1
Forklift		53.9	50
Forklift		53.9	50
Forklift		53.9	50
Generator Set		51.2	48.2
Tractor/Loader/Backhoe		54.5	50.6
Tractor/Loader/Backhoe		54.5	50.6
Tractor/Loader/Backhoe		54.5	50.6
Welder		44.5	40.6
Roller		50.5	43.5
Paving Equipment		60	53
Air compressor		48.2	44.2
	Total	**60**	**59.9**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/16/2021
Case Description: Phase 3

Description	**Affected Land Use**
Construction, Paving, Architectural Coating	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Crane	No	16		80.6	930
Forklift	No	40		83.4	930
Forklift	No	40		83.4	930
Forklift	No	40		83.4	930
Generator Set	No	50		80.6	930
Tractor/Loader/Backhoe	No	40	84		930
Tractor/Loader/Backhoe	No	40	84		930
Tractor/Loader/Backhoe	No	40	84		930
Welder	No	40		74	930
Roller	No	20		80	930
Paving Equipment	No	20		89.5	930
Air compressor	No	40		77.7	930

Calculated (dBA)

Equipment		*Lmax	Leq
Crane		55.2	47.2
Forklift		58	54
Forklift		58	54
Forklift		58	54
Generator Set		55.2	52.2
Tractor/Loader/Backhoe		58.6	54.6
Tractor/Loader/Backhoe		58.6	54.6
Tractor/Loader/Backhoe		58.6	54.6
Welder		48.6	44.6
Roller		54.6	47.6
Paving Equipment		64.1	57.1
Air compressor		52.3	48.3
	Total	**64.1**	**64**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/16/2021
Case Description: Phase 4

Description	**Affected Land Use**
Construction, Paving, Architectural Coating	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Crane	No	16		80.6	375
Forklift	No	40		83.4	375
Forklift	No	40		83.4	375
Forklift	No	40		83.4	375
Generator Set	No	50		80.6	375
Tractor/Loader/Backhoe	No	40	84		375
Tractor/Loader/Backhoe	No	40	84		375
Tractor/Loader/Backhoe	No	40	84		375
Welder	No	40		74	375
Roller	No	20		80	375
Paving Equipment	No	20		89.5	375
Air compressor	No	40		77.7	375

Calculated (dBA)

Equipment		*Lmax	Leq
Crane		63	55.1
Forklift		65.9	61.9
Forklift		65.9	61.9
Forklift		65.9	61.9
Generator Set		63.1	60.1
Tractor/Loader/Backhoe		66.5	62.5
Tractor/Loader/Backhoe		66.5	62.5
Tractor/Loader/Backhoe		66.5	62.5
Welder		56.5	52.5
Roller		62.5	55.5
Paving Equipment		72	65
Air compressor		60.2	56.2
	Total	**72**	**71.9**

*Calculated Lmax is the Loudest value.

ATTACHMENT B

Federal Highway Administration Roadway Traffic Noise Model Outputs – Project Traffic Noise

TRAFFIC NOISE LEVELS

Project Number: 2020-161
Project Name: Easton Research Park West

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): **Cumulative No Project**
Source of Traffic Volumes: Fehr Peers 2021
Community Noise Descriptor: L_{dn}: ____ CNEL: X

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Traffic Noise Levels

Analysis Condition Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor[1]	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Peak Hour dB(A) L_{eq}	24-Hour dB(A) CNEL
Hazel Avenue													
North of Tributary Point Drive	Residential	6	8	3385	30,465	35	100	0.5	0	1.8%	0.7%	**66.6**	**65.4**
North of Jughandle	Residential	6	14	1974	17,766	35	100	0.5	0	1.8%	0.7%	**64.4**	**63.2**
South of Jughandle	Residential	6	14	466	4,194	35	100	0.5	0	1.8%	0.7%	**58.1**	**56.9**
Highway 50													
East of Hazel Avenue	Residential	8	8	1675	15,075	65	100	0.5	0	1.8%	0.7%	**70.9**	**69.7**
West of Hazel Avenue	Residential	8	8	1076	9,684	65	100	0.5	0	1.8%	0.7%	**69.0**	**67.8**
Folsom Boulevard													
East of Jughandle	Residential	4	0	725	6,525	35	100	0.5	0	1.8%	0.7%	**59.7**	**58.4**
West of Jughandle	Residential	4	0	1071	9,639	35	100	0.5	0	1.8%	0.7%	**61.4**	**60.1**
Tributary Point Drive													
East of Hazel Avenue	Residential	2	0	584	5,256	25	100	0.5	0	1.8%	0.7%	**55.6**	**54.4**

TRAFFIC NOISE LEVELS

Project Number: 2020-161
Project Name: Easton Research Park West

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): **Existing Plus Project**
Source of Traffic Volumes: Fehr Peers 2021
Community Noise Descriptor: L_{dn}: ____ CNEL: X

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Traffic Noise Levels

Analysis Condition Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor[1]	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Peak Hour dB(A) L_{eq}	24-Hour dB(A) CNEL
Hazel Avenue													
North of Tributary Point Drive	Residential	6	8	2705	24,345	35	100	0.5	0	1.8%	0.7%	**65.7**	**64.5**
South of Folsom Boulevard	Residential	4	0	95	855	35	100	0.5	0	1.8%	0.7%	**50.8**	**49.6**
Highway 50													
East of Hazel Avenue	Residential	8	8	992	8,928	65	100	0.5	0	1.8%	0.7%	**68.6**	**67.4**
West of Hazel Avenue	Residential	8	8	701	6,309	65	100	0.5	0	1.8%	0.7%	**67.1**	**65.9**
Folsom Boulevard													
East of Hazel Avenue	Residential	4	0	989	8,901	35	100	0.5	0	1.8%	0.7%	**61.0**	**59.8**
West of Hazel Avenue	Residential	4	0	597	5,373	35	100	0.5	0	1.8%	0.7%	**58.8**	**57.6**
Tributary Point Drive													
East of Hazel Avenue	Residential	2	0	563	5,067	25	100	0.5	0	1.8%	0.7%	**55.5**	**54.2**

TRAFFIC NOISE LEVELS

Project Number: 2020-161
Project Name: Easton Research Park West

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): **Cumulative No Project**
Source of Traffic Volumes: Fehr Peers 2021
Community Noise Descriptor: L_{dn}: ____ CNEL: X

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Traffic Noise Levels

Analysis Condition Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor[1]	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Peak Hour dB(A) L_{eq}	24-Hour dB(A) CNEL
Hazel Avenue													
North of Tributary Point Drive	Residential	6	8	3385	30,465	35	100	0.5	0	1.8%	0.7%	**66.6**	**65.4**
North of Jughandle	Residential	6	14	1974	17,766	35	100	0.5	0	1.8%	0.7%	**64.4**	**63.2**
South of Jughandle	Residential	6	14	466	4,194	35	100	0.5	0	1.8%	0.7%	**58.1**	**56.9**
Highway 50													
East of Hazel Avenue	Residential	8	8	1675	15,075	65	100	0.5	0	1.8%	0.7%	**70.9**	**69.7**
West of Hazel Avenue	Residential	8	8	1076	9,684	65	100	0.5	0	1.8%	0.7%	**69.0**	**67.8**
Folsom Boulevard													
East of Jughandle	Residential	4	0	725	6,525	35	100	0.5	0	1.8%	0.7%	**59.7**	**58.4**
West of Jughandle	Residential	4	0	1071	9,639	35	100	0.5	0	1.8%	0.7%	**61.4**	**60.1**
Tributary Point Drive													
East of Hazel Avenue	Residential	2	0	584	5,256	25	100	0.5	0	1.8%	0.7%	**55.6**	**54.4**

ATTACHMENT C

SoundPLAN Outputs – Onsite Project Noise

SoundPLAN
Output Source Information

Number	Reciever Name	Floor	Level at Receiver
1	Comfort Inn & Suites – Directly North of Project Site Across Folsom Boulevard	Ground Floor	39.4 dBA
1	Comfort Inn & Suites – Directly North of Project Site Across Folsom Boulevard	Second Floor	39.3 dBA
1	Comfort Inn & Suites – Directly North of Project Site Across Folsom Boulevard	Third Floor	42.0 dBA
2	Nearest Existing Sensitive Receptor – Residences to the northeast at the Twilight Mobile Home Park, Beyond Folsom Boulevard	Ground Floor	38.9 dBA
3	Future Sensitive Receptors - Residences of Easton/Glenborough Place, Across Future Hazel Avenue at the Folsom Boulevard/Hazel Avenue Intersection	Ground Floor	52.6 dBA
4	Future Nearest Sensitive Receptor - Residences of Easton/Glenborough Place, Across Future Hazel Avenue between Folsom Boulevard and the future Hazel Avenue/Jughandle Road Intersection	Ground Floor	54.5 dBA
5	Future Sensitive Receptors - Residences of Easton/Glenborough Place, Across Future Hazel Avenue at the Hazel Avenue/Jughandle Road Intersection	Ground Floor	50.4 dBA

Number	Noise Source Information	Citation	Level at Source
1	Truck Loading Dock	City of San Jose 2014 Midpoint at 237 Loading Dock Noise Study	79.0 dBA
2	Truck Maneuvering Areas	Reference measurement taken by ECORP Consulting at a food distribution warehouse	64.6 dBA
2	Internal Circulation	FHWA Highway Noise Prediction Model	59.4 dBA

APPENDIX E

Preliminary Drainage Plans

September 27, 2021

STORM DRAINAGE EVALUATION

Easton Research Park West

Tentative Map

PREPARED FOR:

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SUBMITTED TO:

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PREPARED BY:

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1. Introduction & Overview

This Technical Memorandum (TM) is a technical drainage assessment for the Easton Research Park West (ERPW) tentative map application. This TM provides a tentative map level of analysis to support the land use designation of the site and focuses on the regional drainage infrastructure and detention basins required to serve the project. This TM does not provide an analysis of on-site storm drain sizing within the industrial area. Neither the size nor alignment of the on-site storm drain system serving the industrial area are determined since there is no known building configuration at this time.

1.1. Purpose

The purpose of this technical memo is to:

- Present a technical storm drainage evaluation for the proposed project development.
- Size the basins required to mitigate the 100-year 24-hour event in the Admin Channel.

1.2. Previous Studies

The Easton Place Phase A Technical Memorandum for the Easton Place Project prepared by Mackay & Somps dated September 23, 2015 (Easton Place PhA SDMP) was used in the preparation of this report. The Easton Place PhA SDMP was prepared to further refine the findings of the Master Plan done for Easton Place and Glenborough as it related to Phase A of Easton Place. It includes the preliminary analysis for the detention and storm water quality mitigation necessary for the development upstream of ERPW. The Admin Channel hydrology and hydraulic models are used in this study.

1.3. Topography

The ERPW development utilizes LiDAR flown in 2007 and is based on the National Geodetic Vertical Datum of 1929 (NVGD29). All modeling is done in NGVD29 and the results presented in this TM are in NGVD29 unless noted otherwise.

2. Project Description

The ERPW development is located south of Folsom Blvd. and west of Nimbus Road in the City of Rancho Cordova in Sacramento County, California (Figure 1). ERPW is located west of the western most portion of the Easton Project. The Easton Project was approved by the Sacramento County Board of Supervisors for a General Plan Amendment (GPA), Special Planning Area Amendment, Large lot tentative map, and small lot tentative map in January 2009. The study area for the ERPW project consists of approximately 295 acres south of Folsom Blvd extending to the man-made conveyance channel referred to by Aerojet maintenance personnel as the Administration Channel (referred to as "Admin Channel") which is a tributary to Buffalo Creek. Upstream of the study area is the Easton project which contributes flow to the Admin Channel. This study assumes the worst-case upstream conditions for the Admin Channel which is when Easton is under current (existing) conditions.

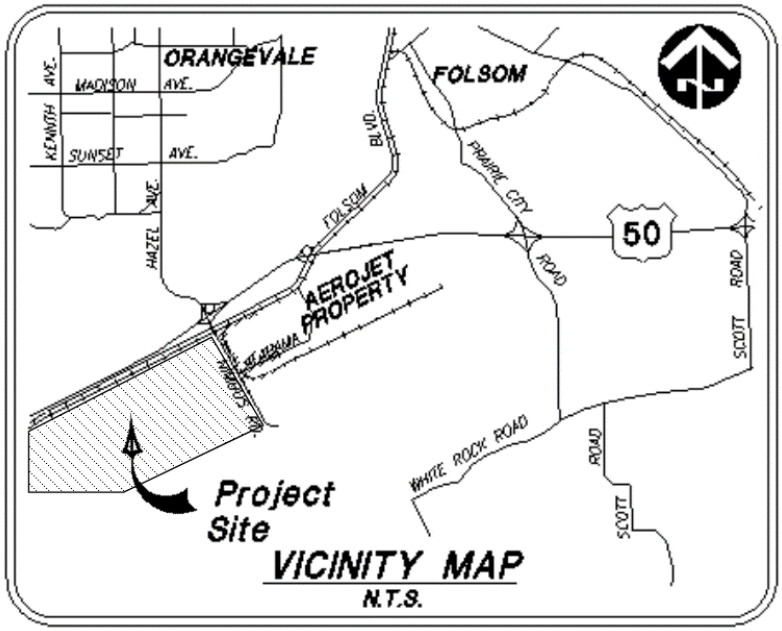


Figure 1. Easton Research Park West Property Vicinity Map

3. Modeling Parameters

The analysis of the hydrology of the Admin Channel uses Sacramento County Hydrologic Calculator, SacCalc to derive the hydrographs for existing and developed conditions. The hydraulic analysis of the Admin Channel was created in HEC-RAS version 5.0.7.

3.1. Hydrologic Parameters

Existing Watershed Conditions

The existing watersheds were taken from the Easton Place PhA SDMP project which is based on the approved Storm Drainage Master Plan for Easton and were not modified for the existing conditions hydrology. These watersheds encompass the study area west of Nimbus Road to the location where the Admin Channel is bound between by the grading of the lakes and Folsom South Canal. These sheds were designated under the previous study as shed 'Downstream' and 'AS' and consists of 4 watersheds. The upstream watersheds from the previous analysis were studied under three conditions: Existing, Phase A, and Ultimate. The Storm Drainage Master Plan for Easton provides a hydrograph for each of these three conditions which can be seen in Figure 2.

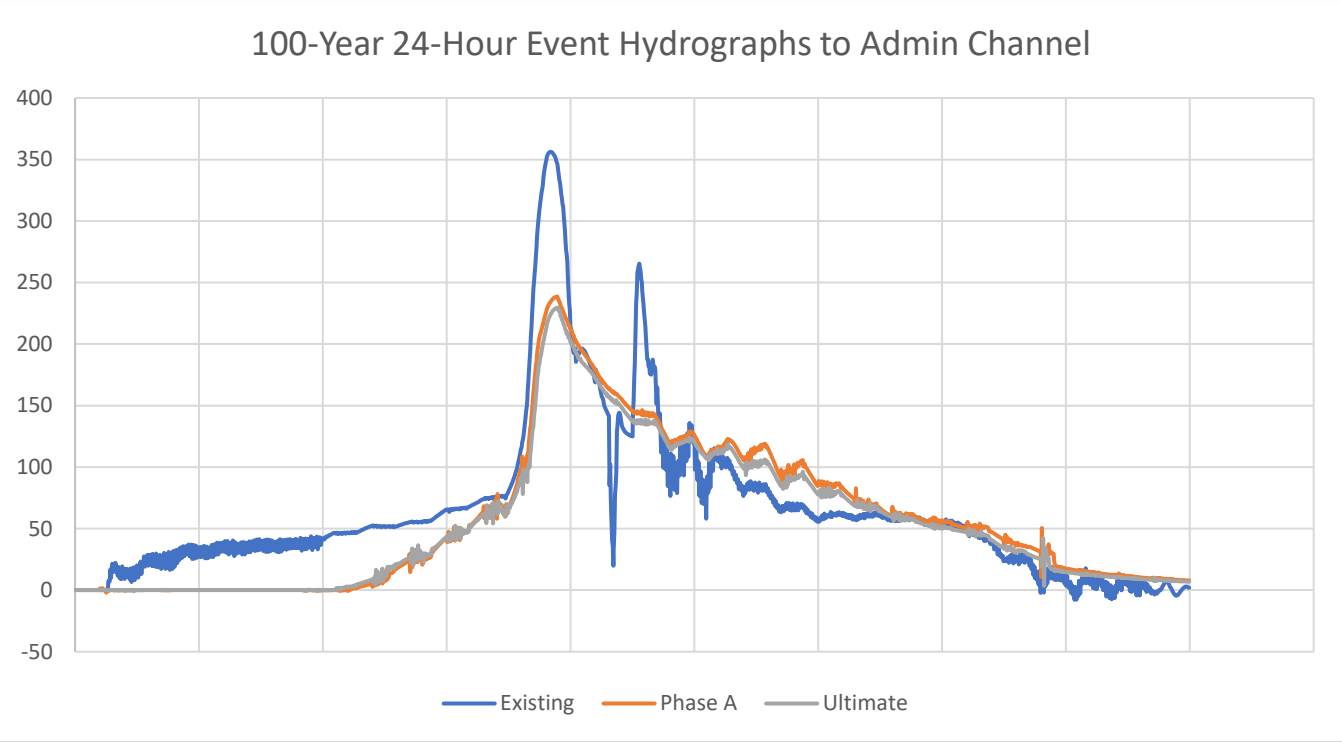


Figure 2. Flow Hydrograph to Admin Channel

The hydrographs clearly show that the existing conditions for the upstream 451.6 acres of the Aerojet facility result in the greatest flows in the Admin Channel. It is the existing conditions which ERPW uses in this study as the flow hydrograph at the upstream boundary. The hydrographs within the ERPW study area, shown on Exhibit 5 in Appendix A as existing 'AS' sheds, encompasses 267.2 acres with a composite imperviousness of 22% and are developed in SacCalc. The existing conditions SacCalc model is provided with this study.

Proposed Watershed Conditions

The proposed watersheds modify the existing AS sheds to incorporate the ERPW project. It is assumed that the developed area will be graded above the floodplain conditions and will generally drain South and West.

The AS and AS3 sheds were modified to remove areas of ERPW development. These two sheds were reduced in size and three additional sheds were added to represent the developed conditions. The overall shed area draining to the Admin Channel was increased by approximately 8.3 acres due to the site capturing a portion of the shed that previously drained to Folsom Boulevard. The proposed changes to the AS shed areas results in a new shed area of 275.5 acres with an overall imperviousness of 47%, an increase over existing conditions. The new sheds included in the SacCalc model were labeled WSP. Sheds WSP-01 and WSP-02 will drain to the West Basin and South Basin, respectively, while WSP-03 will drain directly to the upstream portion of the Admin Channel near Nimbus Road. The proposed watersheds can be seen on Exhibit 6 in Appendix A.

Drainage Runoff Models

Hydrologic analysis was prepared in accordance with the Sacramento County Improvement standards and Hydrology standards. Hydrology input parameters for longest watercourse, centroid length, watercourse slope, basin "n" value and impervious cover have been derived for each subshed within SacCalc and were used to produce hydrographs to be used in the HEC-RAS hydraulic analysis. The watershed characteristics for existing and proposed conditions can be seen on Exhibit 5 and Exhibit 6 respectively in Appendix A.

The existing conditions SacCalc model was copied from the previous modeling efforts for Easton. The existing SacCalc model remains unchanged and is the basis of the hydrographs entered into HEC-RAS. The SacCalc model contains 4 watersheds with all pertinent information as listed above. The following are a list of modeled criteria:

- Precipitation Zone: Set to Sacramento Zone 3
- Lag Time: Computed with basin 'n'
- Infiltration Rate: Computed
- Impervious Area: Specified
- Soil Type: A combination of B (dredger tailings), C, and D type soil.

The proposed conditions SacCalc model was created by copying the existing conditions SacCalc file and modifying the AS and creating the WSP sheds as mentioned in the Proposed Watershed Conditions section of this TM. The proposed conditions SacCalc is modeled to have consistent input criteria as the existing conditions SacCalc. The hydrographs produced by the proposed conditions SacCalc were input into HEC-RAS at the appropriate cross section or detention basin.

3.2. Hydraulic Parameters

Existing Drainage System

The existing privately maintained Aerojet drainage system consists of drain inlets, storm drainpipes, unlined ditches with culverts, which flow to the primary collection system referred to as the Admin Channel. Drainage from the Aerojet office complex, east of Nimbus Road to the upstream Buffalo Creek shed limit, is conveyed towards and into the Admin Channel. Ponding areas that are located west of Nimbus Road (future ERPW) provide storage and peak flow attenuation tributary to the Admin Channel during the larger storm events. The existing ponding areas are shown on Exhibit 8.1.

Drainage flows within the Admin Channel east to west and is intercepted at the series of water quality ponds, referred to by Aerojet maintenance personnel as "West Lakes". The existing Admin Channel is generally triangular with depths ranging from 5 to 6 feet. The West Lake ponds are approximately 3,500 feet downstream of Nimbus Road (future Hazel Ave). The West Lakes treatment facility is currently maintained and operated by Aerojet maintenance personnel.

The Admin Channel has limited capacity in the 100-year storm event for existing conditions. A description of the constrictions is described below in the Admin Channel-Downstream Facilities section. The channel cannot contain the flows and they override the constriction points as they continue west. Flows spill to an area north of the channel before they re-enter the channel or continue their drainage release to the north and west, refer to Exhibit 7.1. The flows in the channel ultimately merge with flows from Buffalo Creek before crossing the Folsom South Canal at the flume.

The flume at the Folsom South Canal does not impact the Admin Channel upstream of Elevation 128.4, as that is the release point into the canal. Elevation 128.4 is just west of the downstream most section in the HEC-RAS model, therefore the HEC-RAS model was set to a normal depth.

Admin Channel – Facilities

Downstream of Nimbus Road are several culverts along the channel alignment that contribute to the resulting constraints. Refer to Exhibit 7.1 in Appendix A for structure locations. The structures are described as follows:

The culvert at Location #1 consists of a 72" CMP. Headwater backed-up above this culvert is discharged north through the overbanks and eventually re-enters the Admin Channel downstream. The access road is modeled as a culvert but the hydraulic grade line never exceeds the top of access road since it has available discharge to the north.

The culvert at Location #2 consists of a headwall and trash rack with one 42" outlet pipe. The pipe is controlled by a manually operated gate providing a lateral diversion from the ditch. The 42" culvert constrains the flow rate in the Admin Channel until it backs-up behind the bank/road. If a large rain event is expected, the gate is manually operated into the open position. The HEC-RAS model assumes the gate is open for the existing and proposed condition for the 10-year and 100-year events. Results indicates that the 100-year event flows overtop the structure and return to the channel downstream.

Location #3 consists of twin 6'x 4' box culverts that allow all drainage exiting the upstream culvert to flow freely through the culverts. Culvert 3 is located approximately 900' downstream of the culvert at Location #2.

At Location #4, or approximately 570' downstream of Location #3, is a weir and wet well structure that are used for pumping channel flows into the adjacent retention ponds. Flows for the 100-year event overtop the structures and continue downstream. The pumps are conservatively not assumed to operate during a large event.

All of the above structures remain modeled in HEC-RAS as they were in the Easton Place PhA SDMP with the exception of the culvert at location #2. That culvert was previously assumed to be closed but it is understood now to be open during large events.

Admin Channel - Operation and Permit Requirements

This section re-iterates the understanding of the Admin Channel as discussed in the Storm Drain Master Plan for Easton as well as the Easton Place PhA SDMP. As discussed in the previous master plans, this section will address the NPDES spill containment program currently in place and overseen by Aerojet personnel. A description of the Aerojet discharge permit requirements as well as the Admin Channel and existing "West Lakes" basin operations as summarized by Aerojet maintenance personnel is detailed below, and it should be noted that the information provided is based on normal operating conditions. Please reference Exhibit 7.1 for structure locations described below.

Runoff is discharged to the Admin Channel from the Aerojet site and the administration area. The water flows westerly in the channel, through the 72" diameter culvert at Location #1 to the structure that includes a 42" diameter pipe at Location #2, which is a headwall with a manually operated gate. Runoff backs up in the Admin. Channel and the existing ditch to the south of the structure. The gate is typically closed and is only opened when needed to allow the drainage to continue flowing westerly, which will be the case during large events.

When the gate is opened, water drains through the twin 6' x 4' box culverts at Location #3 to the lift station at Location #4 in the channel between ponds 1 and 2. The drainage then flows into a wet well. When the water level at Location #4 reaches a predetermined elevation, the pumps kick on and initially lifts the water into pond 2, with pond 1 held in reserve for additional storage as needed. The ponds are connected by a gate valve and culverts, at Location #5, within the berm separating the two ponds. If waters draining to ponds 1 and 2 are of questionable quality, they will initially be pumped into pond 1 for testing purposes.

A gate valve is located on the west end of pond 2. This gate is typically left open, which allows water to drain into cell #1 at Location #6. Buffalo Creek, which intercepts flows from other areas of the Aerojet site typically drains into cell # 1 but can be pumped into ponds 1 and 2 if needed by means of a lift station at Location #11. There is a gate valve located in the berm that separates cells 1 and 2 at Location #7. All drainage from Aerojet is directed generally from cell #1 then into cell # 2. If necessary, water is discharged back to the Admin Channel/Buffalo Creek from cells #1 and #2. The ponds also have direct discharges back to the channel if they must be drained directly back to it.

Before water is released back to the Admin Channel, it is sampled and tested. The water is tested in accordance with the monitoring and reporting program that is part of Aerojet's existing NPDES permit (number CA000411), that was issued on August 8, 2008. Items tested for are consistent with Aerojet's use as a rocket manufacturing and

testing facility and includes such items as perchlorate, copper, suspended solids, total dissolved solids, turbidity, dissolved oxygen, and pH. The discharged water then drains west into Buffalo Creek. If discharges to the ponds or cells are such that they don't fill to capacity, then no water is released back into the Admin Channel. The ponds and cells act as retention ponds under these conditions, and the water is allowed to percolate back into the ground and/or evaporate. Aerojet personnel have indicated that this is typically the case. Runoff is rarely discharged back into the Admin. Channel and out towards Buffalo Creek.

Aerojet currently performs routine yearly maintenance on the Channel between Nimbus Road and the pump at Location #4.

Existing Conditions HEC-RAS Model

The existing conditions HEC-RAS model was copied from the previous studies and modified to provide georeferencing of the Admin Channel and a 2D analysis of the overbank area which will be the location of the future ERPW project. The HEC-RAS model limits extend from future Hazel Avenue (upstream) to just downstream of the pumping facilities where the Admin Channel is constricted by the West Lakes and Folsom South Canal. Other than the 2D area and associated lateral structures, the only changes are the condition of Location #2 (Exhibit 7.1), an additional set of cross sections were added downstream to extend the model to the end of the floodplain, and sections were modified to not overlap with the 2D area.

The downstream condition in the model is set to a normal depth of 0.00206 ft/ft which was achieved by measuring the average slope of the Admin Channel downstream to the Folsom South Canal flume. The upstream condition is the existing hydrograph at future Hazel Avenue as discussed in section 3.1 of this TM.

Along the north side of the Admin Channel lateral weirs were inserted into the model to connect the 1D Admin Channel to the 2D Admin North floodplain area. These lateral weirs allow water to freely pass between the 1D and 2D sections of the model at the existing ground elevation.

The following are the model parameters used in the HEC-RAS model:

- Manning's 'n' values:
    - The Admin Channel 'n' values remain unchanged from previous modeling
        - Range from 0.03 to 0.04.
    - The Admin North 2D area 'n' values are set to 0.06 to represent rougher floodplain conditions
- 2D Area Cell Sizing:
    - Existing conditions use a cell sizing of 20'
    - Proposed conditions use a cell sizing of 10'
- Lateral structures modeled as weirs

The model results in a profile through the Admin Channel and a downstream hydrograph that can proposed conditions can be compared against.

Proposed Conditions HEC-RAS Model

The existing conditions model was copied, and modifications were made to the model to reflect the proposed conditions. The two major changes were the removal of the ERPW area from the 2D section of the model and the addition of three detention basins and their associated outlet works to provide mitigation for the ERPW improvements.

To determine the facilities required to serve the ERPW site, the findings of the existing model were studied. The Admin Channel has a limited flow capacity of approximately 100cfs through the channel and culverts due to its constrictions, which corresponds to less than a 10-yr storm event. In existing conditions, the excess flow spills to the north through the AS3 shed. The proposed conditions block the overland release path through the AS3 shed to the north of the Admin Channel which prevents flow from ponding and bypasses the constrictions. To compensate for

this, weir structures are used to divert flow into two new basins just downstream of Nimbus Road (the South Basin and Triangle Basin). An additional basin (West Basin) will discharge flow to a new drainage channel which routes to the downstream section of the Admin Channel, below the constrictions. The South and West basins will be connected to via a 48" pipe which establishes a route to convey flows downstream of the Admin Channel constrictions. The basins and pipe provide the storage and conveyance necessary to mitigate for the project's impact on the existing floodplain. The South and West basins also provide the required capacity to mitigate for increased runoff due to the impervious percentage of the proposed development.

Flow in the Admin Channel was analyzed with an unsteady flow model. It was determined that the existing peak flow of 189cfs is discharged into the downstream section of the Admin Channel leaving the study area during a 100-yr 24-hr storm event at cross section 64-00. Under proposed conditions, this peak flow was reduced to 173cfs at cross section 64-00.

Under the proposed conditions, the addition of the three basins and the downstream drainage channel act to mitigate for losses in storage capacity in the AS3 floodplain and increased developed condition imperviousness. Table 1 shows the stage-storage curve for each of the three basins. In the absence of a large storm event, the Admin Channel WSE remains below the weir elevations and flap gates prevent flows from entering the proposed basins. The operations of the Admin Channel remain the same as described in the previous section.

Table 1. Easton Research Park West Detention Basin Sizing

Triangle Basin				West Basin				South Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)		Elevation (ft)	Stage (ft)	Storage (Acre-Ft)		Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
140	0	0.0		139	0	0.0		140	0	0.0
141	1	4.0		140	1	3.1		141	1	5.1
142	2	8.1		141	2	6.2		142	2	10.3
143	3	12.4		142	3	9.5		143	3	15.6
144	4	16.8		143	4	12.8		144	4	21.0
145	5	21.4		144	5	16.3		145	5	26.6
146	6	26.1		145	6	19.9		146	6	32.4
147	7	31.0		146	7	23.5		147	7	38.2
148	8	36.0		147	8	27.3				

The model was run and the results were compared against the results of the existing conditions model. Figure 3 shows a profile of the Admin Channel with the 100-year water surface elevations shown for existing conditions in red and proposed conditions in blue. The upstream and downstream parts of the admin channel are all lower than existing with a short stretch of channel towards the middle where the proposed is approximately 0.05 ft higher. This is due to changes in the timing of the hydrograph through that stretch of channel. We deemed the 0.05 ft increase negligible since a majority of the channel sees lowered 100-year water surface elevations.

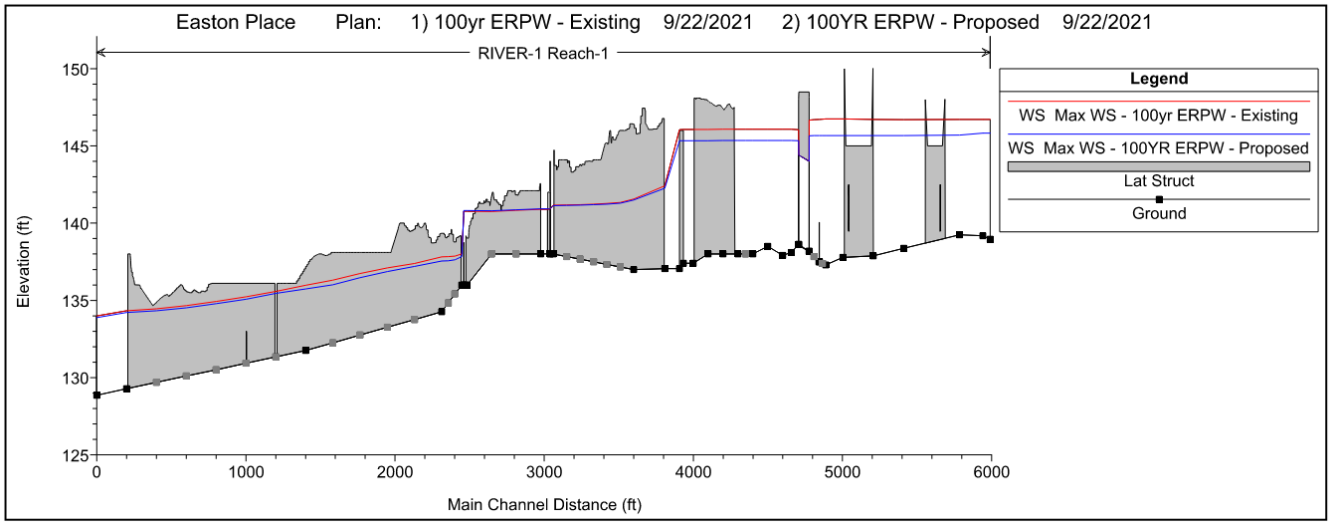


Figure 3. Existing and Proposed 100-Year Profile of the Admin Ditch

Figure 4 shows the 100-year hydrographs at the downstream limit of the model. The 100-year peak flow is reduced under proposed conditions. This is due to the recreation of the lost floodplain storage. The hydrograph peaks slightly earlier which is typical of development but the reduced peak flow will improve downstream conditions at the Folsom South Canal flume.

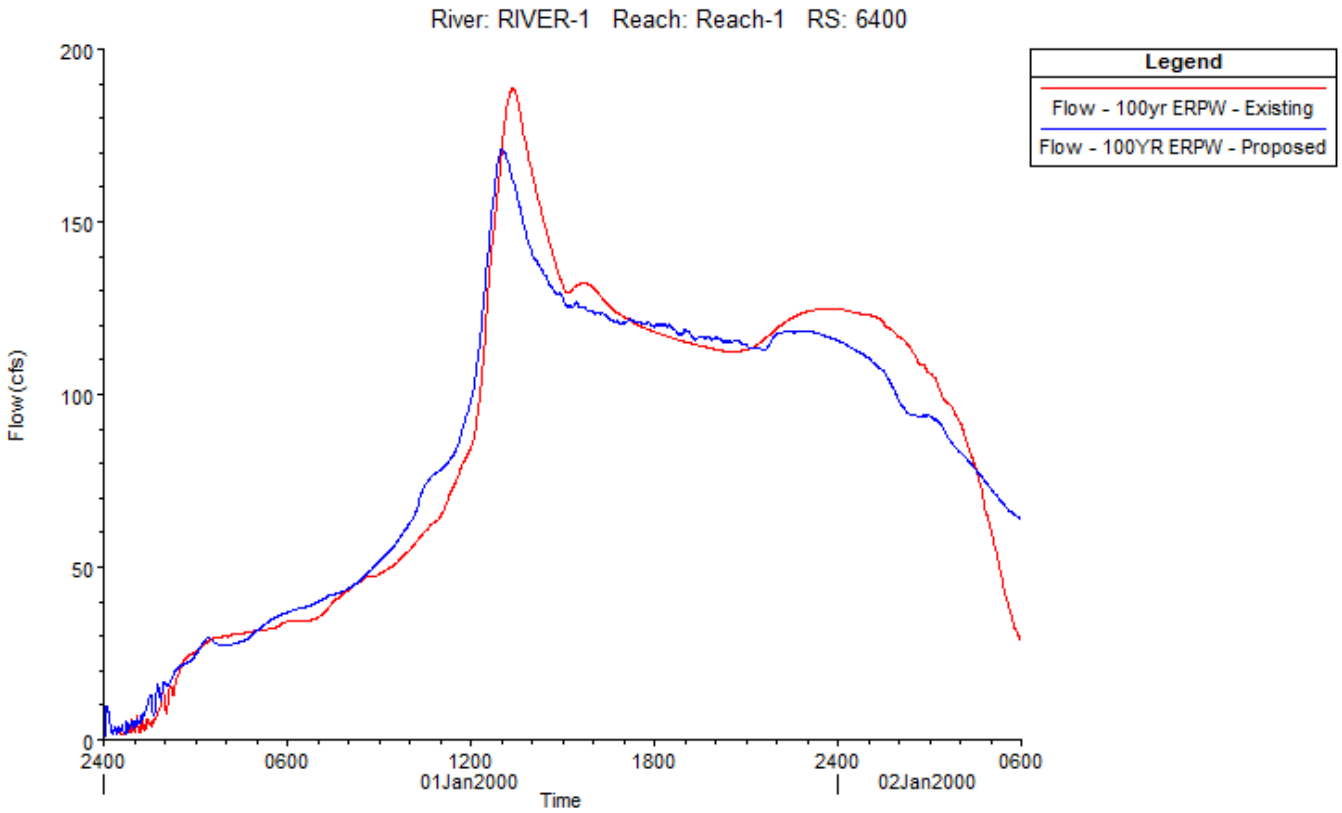


Figure 4. Existing and Proposed 100-Year Hydrograph at Downstream End of the Admin Ditch

The peak velocities in the Admin Channel were also compared. The peak velocity in the channel during a 100-year 24-hour event for existing conditions is 4.77 ft/s at cross section 10000. This is located just downstream of the structure at Location #2. The peak velocity in the proposed conditions model occurs at the same location and is 4.43 ft/s; a reduction. Although the peak velocity in the Admin Channel is reduced and most cross sections show a reduction in velocity, there are locations where the velocity increases. The two areas of larges increase are near the structure at Location #4 where velocities increase from 2.19 ft/s to 2.75 ft/s and at the very upstream end where velocities increase from 1.09 ft/s to 3.42 ft/s. The increase at the upstream end is due to the improved backwater condition in the Admin Channel. The lower water surface elevations throughout the upstream stretch increase the velocity (due to available conveyance) of the water under proposed conditions. Since the increased flows are all under the peak existing velocity of 4.77 ft/s no scour mitigation is proposed at these locations. Scour mitigation will be provided at all piped and weir connections to the Admin Channel.

4. Hydromodification Mitigation

Hydromodification Mitigation is not required for the Buffalo Creek watershed. Buffalo Creek is primarily a man-made or disturbed channel. The downstream reach of the creek from the American River to Folsom South Canal Flume is a man-made trapezoidal channel. The upstream reach through the Admin Channel is also a man-made trapezoidal channel. And the upstream reaches are heavily impacted by dredger tailings. It is not anticipated that any of the areas flowing to Buffalo Creek upstream of the Folsom South Canal will require hydromodification mitigation.

5. Low Impact Development and Storm Water Quality

The Easton Research Park West project is subject to low impact development (LID) standards per the Sacramento Region Stormwater Quality Design Manual. The development provides for LID on-site through disconnected pavement in the parking areas and disconnected roof drains for the buildings. The site is to be designed to convey flow into open green spaces provided along and within the parking areas as well as adjacent to buildings. Full LID and storm water quality credit will be achieved on-site through these features.

The common drainage plan area consists of all the AS and WSP developed sheds (from SacCalc). The elderberry preserve area is entered as a common drainage plan open space natural area. The project drainage shed is entered for each of the three watershed discharges to the Admin Channel (WSP-1 through WSP-3). These watershed areas were entered and mitigation was provided that results in compliance with LID and SWQ for the site. The site will be designed to disconnect much of the parking lot areas into vegetated or mulched areas within the parking lot and a small bioinfiltration basin is needed in each watershed. Appendix D contains the Sacramento County commercial spreadsheet calculator for LID. During the site plan development alternative LID methods may be implemented and the LID calculations will be re-done to verify the site provides LID and SWQ mitigation.

6. Conclusion

The results of the analysis performed for this Technical Memorandum demonstrate that the proposed Easton Research Park West development 100-year flows can be satisfactorily conveyed within the proposed drainage facilities. The on-site storm drain system is not modeled in this TM but all detention facilities required to fill the site above the 100-year floodplain and mitigate for on-site increase in impervious composition are calculated in this study. The three large basins and associated storm drain pipe re-create both the volume and conveyance necessary to allow the Admin Channel to pass the 100-year event as it would in existing conditions. Post-development 100-year peak flows are mitigated below pre-project conditions and the 100-year water surface elevations in the Admin Channel are generally at or below the existing elevations. SacCalc and HEC-RAS models are provided for review with this Technical Memorandum.

Appendix A: Exhibits

Exhibit 1: Vicinity Map

Exhibit 2: FEMA Map

Exhibit 3: Hydrologic Soil Group Map

Exhibit 4: Proposed Land Use

Exhibit 5: Existing Watershed Map

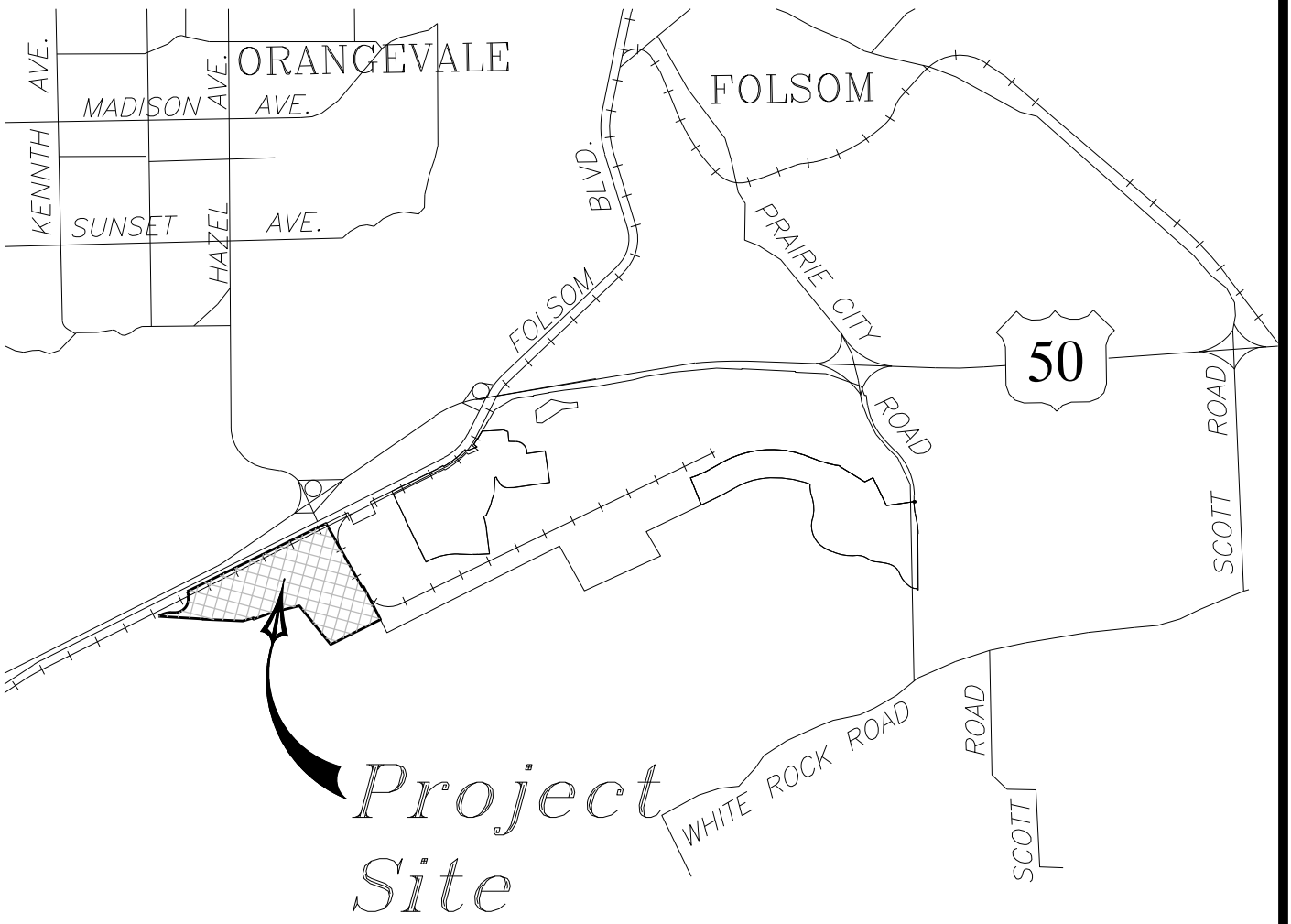
Exhibit 6: Proposed Watershed Map

Exhibit 7.1: Hydraulic Routing Map

Exhibit 7.2: Hydraulic Results

Exhibit 8.1: Existing 100-year Flood Limits

Exhibit 8.2: Proposed 100-year Flood Limits



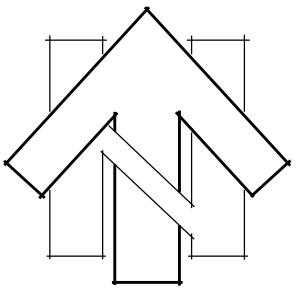


Exhibit 1

Vicinity Map

Aerojet / Easton

Easton Research Park West

City of Rancho Cordova, California

SCALE: NTS

September 20, 2021

9-20-2021 11:43:12 dbledsoe P:\27781_OA\MstrPln\SD\ERPW\SLTM\Exhibits\Exhibit 1 Vicinity Map.dwg
There are no xreferences in this drawing.

drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was California State Plane Zone II (FIPSZONE 0402). The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the County of Sacramento Water Resources Department. This information was derived from digital orthophotos produced with 6-inch pixel resolution and 3.3-foot horizontal accuracy from aerial photography dated March 2001.

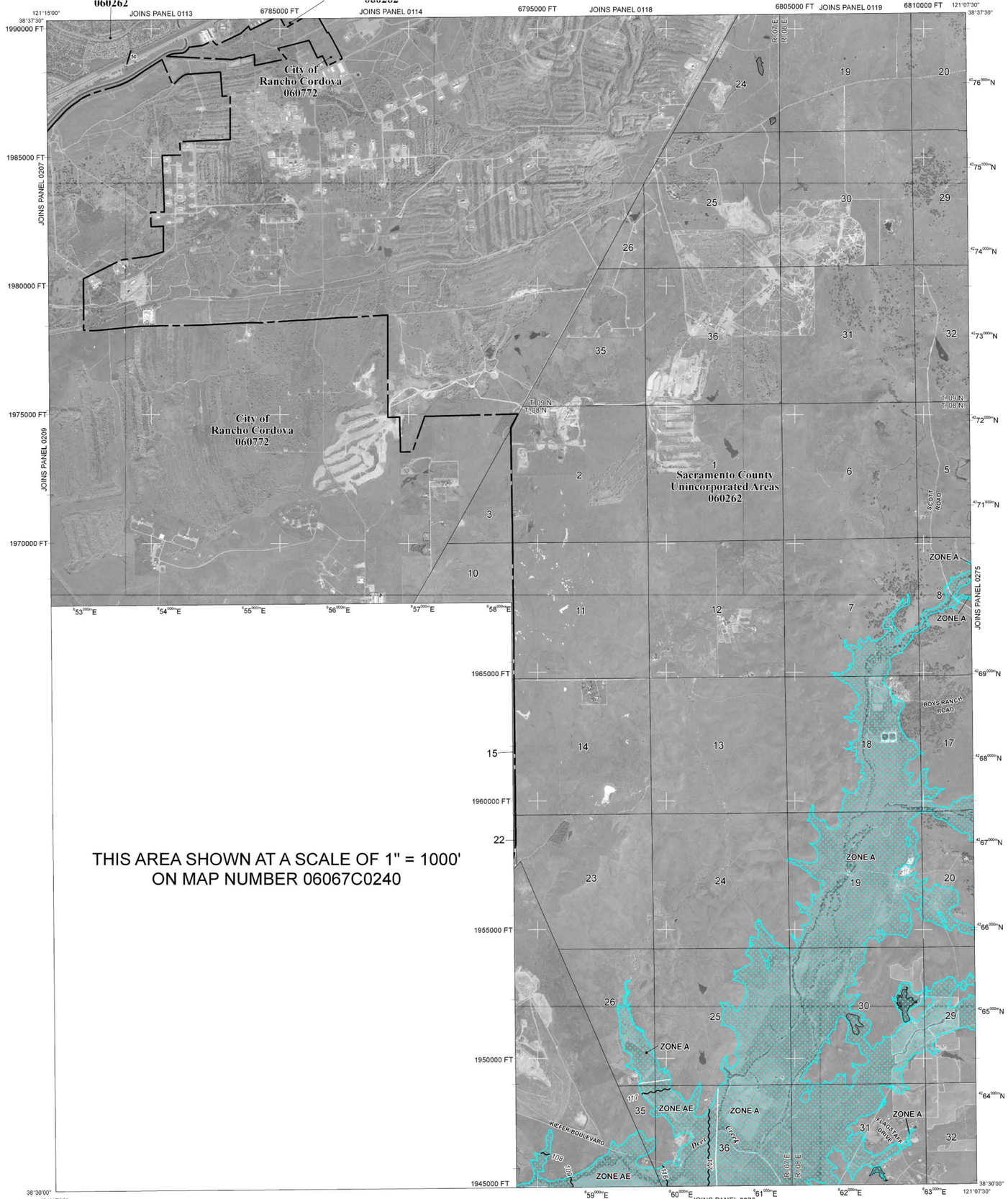
This map may reflect more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- Culvert, Flume, Penstock or Aqueduct
- Road or Railroad Bridge
- Footbridge
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4376000m N — 1000-meter Universal Transverse Mercator grid values, zone 10
- 600000 FT — 5000-foot grid values: California State Plane coordinate system, zone II (FIPSZONE 0402), Lambert Conformal Conic projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- ● M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
AUGUST 16, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
600 0 600 1200 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0250H

FIRM
FLOOD INSURANCE RATE MAP

SACRAMENTO COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 250 OF 705

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

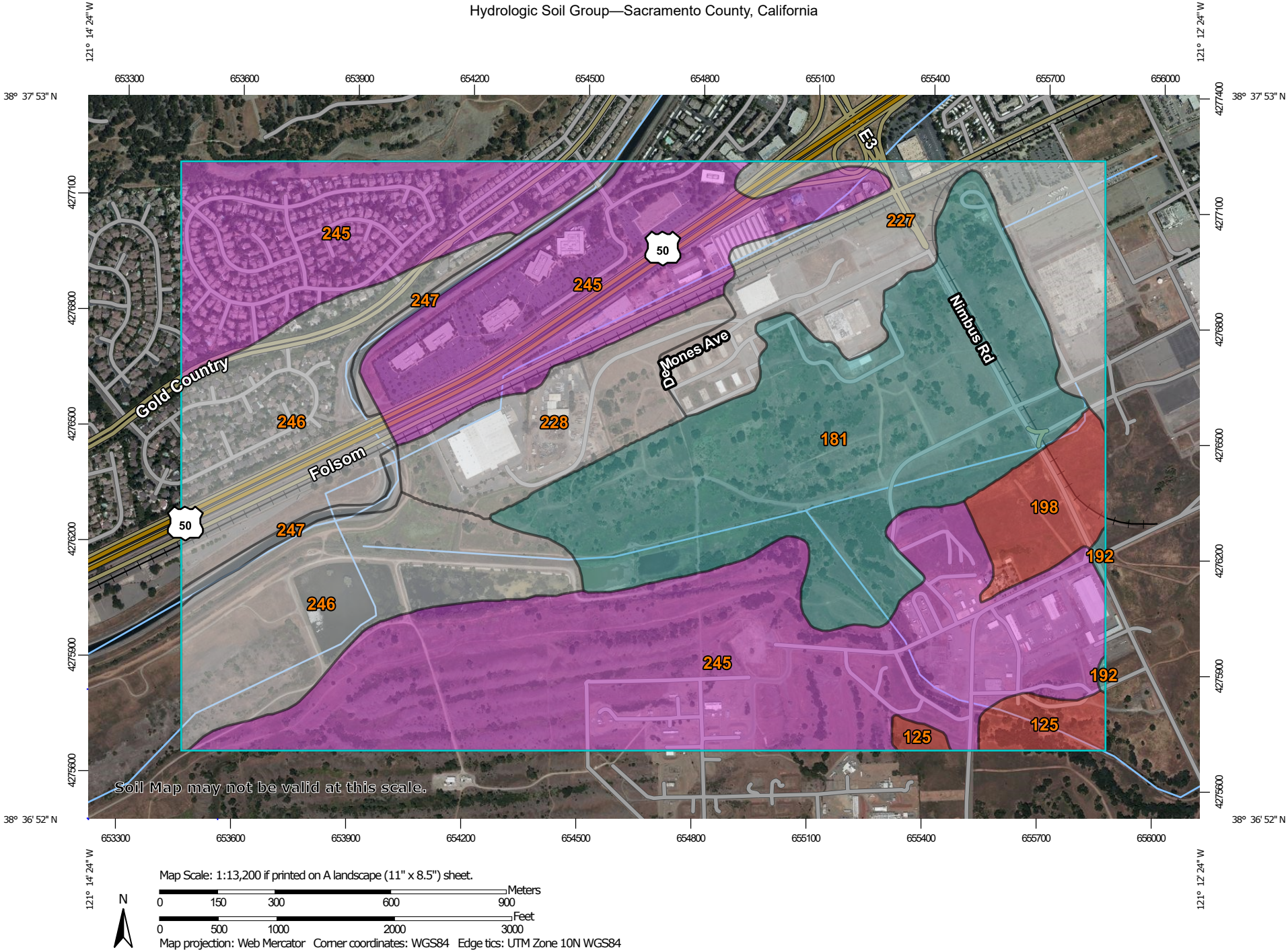
COMMUNITY	NUMBER	PANEL	SUFFIX
RANCHO CORDOVA, CITY OF	060772	0250	H
SACRAMENTO COUNTY	060262	0250	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06067C0250H

EFFECTIVE DATE

Hydrologic Soil Group—Sacramento County, California



Map Scale: 1:13,200 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sacramento County, California
Survey Area Data: Version 19, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 11, 2019—Jun 1, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
125	Corning complex, 0 to 8 percent slopes	D	13.5	1.5%
181	Natomas loam, 0 to 2 percent slopes	C	181.6	19.9%
192	Red Bluff loam, 2 to 5 percent slopes	C	1.3	0.1%
198	Redding gravelly loam, 0 to 8 percent slopes, MLRA 17	D	25.5	2.8%
227	Urban land		88.5	9.7%
228	Urban land-Natomas complex, 0 to 2 percent slopes		49.1	5.4%
245	Xerorthents, dredge tailings, 2 to 50 percent slopes	A	393.2	43.0%
246	Xerorthents, dredge tailings-Urban land complex, 0 to 2 percent slopes		150.8	16.5%
247	Water		11.2	1.2%
Totals for Area of Interest			**914.6**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

FOLSOM BOULEVARD

SAC REGIONAL TRANSIT

Lot 5

Lot 3

Lot 1

JUGHANDLE

STREET "A"

Lot 2

ROAD

Lot 6

STREET "A"

Lot 4

JUGHANDLE ROAD

STREET "A"

Lot 8

HAZEL AVENUE (FUTURE)

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

Lot 10 (Future Westborough)

Existing VELB Preserve

Lot 7

Lot 9

Lot A

CITY OF RANCHO CORDOVA
COUNTY OF SACRAMENTO

LEGEND

- MAJOR ROAD ROW (7.9± ACRES)
- LANDSCAPE CORRIDOR (4.5± ACRES)
- INDUSTRIAL/OFFICE PARK (104.1± ACRES)

Exhibit 4

Proposed Land Use

AEROJET/EASTON

Easton Research Park West

City of Rancho Cordova, *California*

SCALE: 1:300 September, 2021

N

0 300 600

SCALE: 1"=300'

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

P:\27781_OA\WstrPln\SD\ERPW\SLTM\Exhibits\Exhibit 4 Proposed Land Use.dwg jenriquez 13:29:13 9-23-2021

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

SAC REGIONAL TRANSIT

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

ATLANTA STREET

Existing VELB Preserve

DOWNSTREAM AS3
A= 152.2 Ac.
PI AVG = 2 %

Lc' 2526'
L=4987' S=0.28%

DOWNSTREAM AS4
A= 5.67 Ac.
PI AVG = 2 %

Lc' 961'
L=4171' S=0.28%

DOWNSTREAM AS2
A= 12.27 Ac.
PI AVG = 2 %

Lc' 279'
L=1658' S=0.85%

DOWNSTREAM AS
A= 97.1 Ac.
PI AVG = 29 %

Lc' 1115'
L=3399' S=0.94%

R3
A= 31.9 Ac.
PI AVG = 64.0 %

Lc' 743'
L=2112' S=0.38%

R4
A= 9.5 Ac.
PI AVG = 85.0 %

Lc' 860'
L=1728' S=0.28%

ST-4
A= 55.6 Ac.
PI AVG = 79.7 %

Lc' 970'
L=2356' S=0.71%

R17
A= 30.2 Ac.
PI AVG = 85.0 %

Lc' 876'
L=1844' S=0.50%

R9
A= 5.8 Ac.
PI AVG = 85.0 %

Lc' 678'
L=1275' S=0.66%

R7
A= 19.9 Ac.
PI AVG = 85.0 %

Lc' 1037'
L=2265' S=0.50%

ST-3
A= 27.7 Ac.
PI AVG = 75.5 %

Lc' 711'
L=2040' S=4.43%

ST-2
A= 36.6 Ac.
PI AVG = 15.4 %

Lc' 1790'
L=3826' S=1.99%

ST-5
A= 133.2 Ac.
PI AVG = 29.9 %

R11
A= 21.5 Ac.
PI AVG = 50.4 %

Lc' 1643'
L=2373' S=0.55%

R10
A= 26.8 Ac.
PI AVG = 85.0 %

Lc' 950'
L=2546' S=0.42%

Lc' 1158'
L=2945' S=0.87%

ST-1
A= 52.9 Ac.
PI AVG = 2 %

Lc' 2119'
L=4405' S=2.07%

ST-2
A= 36.6 Ac.
PI AVG = 15.4 %

Exhibit 5

Existing Watershed Map

AEROJET/EASTON

Easton Research Park West

City of Rancho Cordova, California
SCALE: 1:200
September, 2021

0 100 200 400
SCALE: 1"=200'

MacKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

LEGEND

- CULVERT
- WATERSHED LIMIT
- Lc' 1115' — LENGTH TO CENTROID
- L=3399' S=0.94% — LONGEST WATERCOURSE LENGTH
- UPSTREAM AREA MODELED IN MASTER PLAN

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U.S. HIGHWAY 50

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

FOLSOM BOULEVARD

SAC REGIONAL TRANSIT

HAZEL AVENUE (FUTURE)

HAZEL AVENUE

GOLD COUNTRY TRAIL

ARCHDALE ROAD

JUGHANDLE ROAD

STREET "A"

ALBANY AVENUE

Existing VELB Preserve

Existing Admin Channel

Lot 1
Lot 2
Lot 3
Lot 4
Lot 5
Lot 6
Lot 7
Lot 8
Lot 9

ERPW WSP-01 A= 30.5 Ac. PI AVG = 95 %
Lc' 686'
L=2261' S=0.2%

ERPW WSP-03 A= 23.0 Ac. PI AVG = 43 %
Lc' 1506'

ERPW WSP-02 A= 64.5 Ac. PI AVG = 95 %
Lc' 1437'
L=2606' S=0.2%
L=2867' S=0.2%

ERPW AS3 A= 67.9 Ac. PI AVG = 27 %
Lc' 1530'
L=2987' S=0.28%

DOWNSTREAM AS4 A= 5.67 Ac. PI AVG = 2 %
Lc' 961'
L=2177' S=0.28%

DOWNSTREAM AS2 A= 12.27 Ac. PI AVG = 2 %
Lc' 279'
L=1638' S=0.85%

ERPW AS A= 89.6 Ac. PI AVG = 29 %
Lc' 1115'
L=3399' S=0.94%

R3 A= 31.9 Ac. PI AVG = 64.0 %
Lc' 743'
L=2112' S=0.38%

R17 A= 30.2 Ac. PI AVG = 85.0 %
Lc' 876'
L=1844' S=0.50%

R11 A= 21.5 Ac. PI AVG = 50.4 %
Lc' 1643'
L=2373' S=0.55%

R9 A= 5.8 Ac. PI AVG = 85.0 %
L=1275' S=0.66%

R10 A= 26.8 Ac. PI AVG = 85.0 %
Lc' 678'

R4 A= 9.5 Ac. PI AVG = 85.0 %
Lc' 860'
L=1728' S=0.28%

R7 A= 19.9 Ac. PI AVG = 85.0 %
Lc' 1037'
L=2265' S=0.50%

ST-4 A= 55.6 Ac. PI AVG = 79.7 %
Lc' 970'
L=2356' S=0.71%

Lc' 950'
L=2548' S=0.42%

ST-3 A= 27.7 Ac. PI AVG = 75.5 %
Lc' 711'
L=2040' S=4.43%

Lc' 1158'
L=2945' S=0.87%

ST-1 A= 52.9 Ac. PI AVG = 2 %

ST-2 A= 36.6 Ac. PI AVG = 15.4 %
L=4405' S=2.07%

Lc' 1790'
L=3826' S=1.99%

ST-5 A= 133.2 Ac. PI AVG = 29.9 %

Lc' 2119'

Exhibit 6

Proposed Watershed Map

AEROJET/EASTON

Easton Research Park West

City of Rancho Cordova, California
SCALE: 1:200
September, 2021

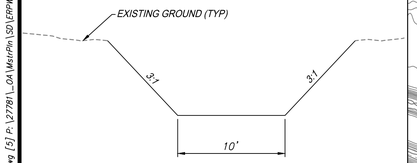
MacKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

SCALE: 1"=200'

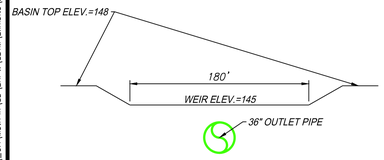
LEGEND

- CULVERT
- WATERSHED LIMIT
- Lc' 1115' — LENGTH TO CENTROID
- L=3399' S=0.94% — LONGEST WATERCOURSE LENGTH
- UPSTREAM AREA MODELED IN MASTER PLAN

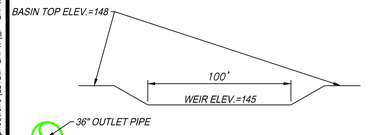
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A DRAINAGE DITCH
NTS



B SOUTH BASIN WEIR AND OUTFALL TO ADMIN. CHANNEL
NTS



C TRIANGLE BASIN WEIR AND OUTFALL TO ADMIN. CHANNEL
NTS

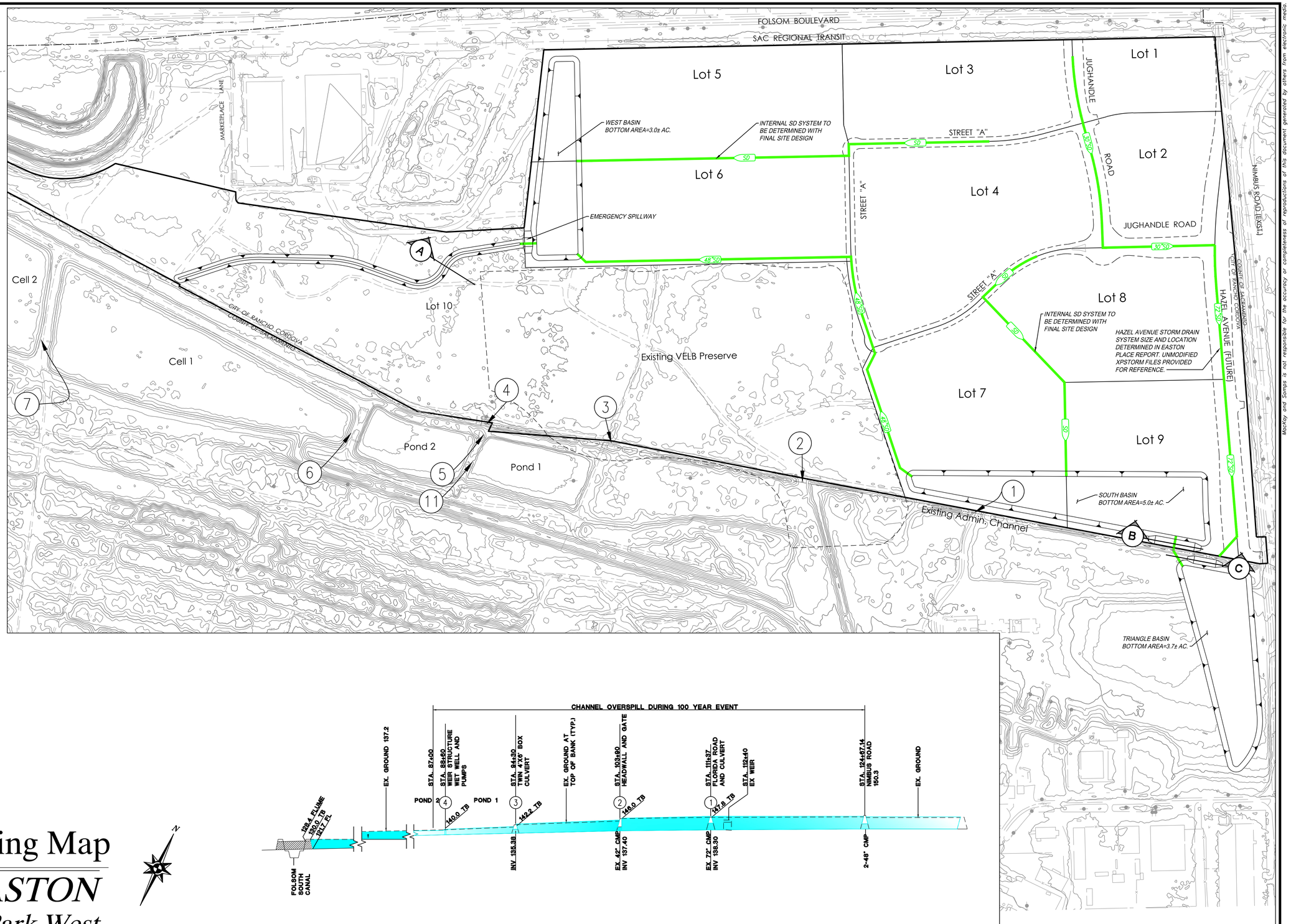


Exhibit 7.1

Hydraulic Routing Map

AEROJET/EASTON

Easton Research Park West

City of Rancho Cordova, *California*

SCALE: 1:200

September, 2021

0 100 200 400

SCALE: 1"=200'

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U.S. HIGHWAY 50

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

FOLSOM BOULEVARD
SAC REGIONAL TRANSIT

MARKEIPLACE LANE

Lot 1
Lot 2
Lot 3
Lot 4
Lot 5
Lot 6
Lot 7
Lot 8
Lot 10
Lot A
(ROW/Landscape)

JUGHANDLE ROAD

STREET "A"

STREET "A"

NIMBUS ROAD (EXIST.)

HAZEL AVENUE (FUTURE)

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

Existing VELB Preserve

CITY OF RANCHO CORDOVA
COUNTY OF SACRAMENTO

CITY OF RANCHO CORDOVA
COUNTY OF SACRAMENTO

RS 6400 - DOWNSTREAM
OUTFLOW PEAK

	EXISTING	PROPOSED
100-YR:	188.5 (CFS)	170.9 (CFS)
10-YR:	133.0 (CFS)	132.2 (CFS)

WEST BASIN PEAK STORAGE

	ELEV. (ft)	STAGE (ft)	STORAGE (acre-ft)
100-YR:	144.8	5.8	19.1
10-YR:	142.2	3.2	3.4

WEST BASIN OUTLET
PEAK FLOW
100-YR: 17.2 (CFS)
10-YR: 11.3 (CFS)

RS 8860 - DOWNSTREAM
WEIR STRUCTURE
PEAK FLOW

	EXISTING	PROPOSED
100-YR:	47.3 (CFS)	50.4 (CFS)
10-YR:	43.6 (CFS)	47.0 (CFS)

SOUTH BASIN OUTLET
PEAK FLOW
100-YR: 46.8 (CFS)
10-YR: 20.4 (CFS)

SOUTH BASIN PEAK STORAGE

	ELEV. (ft)	STAGE (ft)	STORAGE (acre-ft)
100-YR:	145.6	5.6	30.1
10-YR:	143.2	3.2	16.7

RS 11137 - FIRST LATERAL STRUCTURE
PEAK FLOW

	EXISTING	PROPOSED
100-YR:	110.4 (CFS)	105.5 (CFS)
10-YR:	101.6 (CFS)	107.8 (CFS)

SOUTH BASIN WEIR
PEAK FLOW
100-YR: 198.1 (CFS)
10-YR: 75.6 (CFS)

WSP-03 OUTLET
PEAK FLOW
100-YR: 46.8 (CFS)
10-YR: 20.4 (CFS)

UPSTREAM INFLOW
PEAK FLOW
100-YR: 356.2 (CFS)
10-YR: 204.0 (CFS)

TRIANGLE BASIN WEIR
PEAK FLOW
100-YR: 152.9 (CFS)
10-YR: 60.4 (CFS)

TRIANGLE BASIN PEAK STORAGE

	ELEV. (ft)	STAGE (ft)	STORAGE (acre-ft)
100-YR:	145.6	5.6	24.2
10-YR:	141.6	1.6	6.5

Exhibit 7.2

Hydraulic Results

AEROJET/EASTON

Easton Research Park West

City of Rancho Cordova, *California*

SCALE: 1:200

September, 2021

N

0 100 200 400
SCALE: 1"=200'

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ENGINEERS PLANNERS SURVEYORS

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CITY OF RANCHO CORDOVA

COUNTY OF SACRAMENTO

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

SAC-PLCRVLE TRANSPORTATION CORRIDOR JOINT POWERS AUTHORITY
069-0040-014

SAC-PLCRVLE TRANSPORTATION CORRIDOR JOINT POWERS AUTHORITY
072-0231-136

SAC REGIONAL TRANSIT

FOLSOM SOUTH CANAL

AEROJET ROCKETDYNE INC
072-0231-120

AEROJET ROCKETDYNE INC
072-0231-122

SCHNITZER STEEL INDS INC
072-0231-138

AEROJET GENERAL CORP
072-0231-124

SCHNITZER STEEL INDS INC
072-0231-139

AEROJET ROCKETDYNE INC
072-0231-141

CITY OF RANCHO CORDOVA
COUNTY OF SACRAMENTO

Existing VELB Preserve

EASTON DEVELOPMENT COMPANY LLC
072-3360-002

AEROJET ROCKETDYNE INC
072-0231-141

AEROJET ROCKETDYNE INC
072-0231-126

Existing Admin. Channel

AEROJET ROCKETDYNE INC
072-0231-141

AEROJET GENERAL CORP
072-0231-081

AEROJET ROCKETDYNE INC
072-3360-023

Exhibit 8.1

Existing 100-year Flood Limits

AEROJET/EASTON

Easton Research Park West

City of Rancho Cordova, *California*

SCALE: 1:200

September, 2021

N

0 100 200 400

SCALE: 1"=200'

LEGEND

100-YEAR 24-HOUR INUNDATION BOUNDARY

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

9-27-2021 17:35:44 jmrivez P:\2778_OA\GIS\V1\Topo\Westborough_2007 SacCoLidar83_29.dwg [2] P:\2778_OA\MstrPln\SD\ERPW\SLTM\Exhibits\Exhibit 8.1 Existing 100-year Flood Limits.dwg

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U.S. HIGHWAY 50

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

SAC-PLCRVLE TRANSPORTATION CORRIDOR JOINT POWERS AUTHORITY
069-0040-014

SAC-PLCRVLE TRANSPORTATION CORRIDOR JOINT POWERS AUTHORITY
072-0231-136

FOLSOM BOULEVARD
SAC REGIONAL TRANSIT

CITY OF RANCHO CORDOVA

COUNTY OF SACRAMENTO

FOLSOM SOUTH CANAL

MARKEITPLACE LANE

AEROJET ROCKETDYNE INC
072-0231-120

AEROJET ROCKETDYNE INC
072-0231-122

SCHNITZER STEEL INDS INC
072-0231-138

AEROJET GENERAL CORP
072-0231-124

SCHNITZER STEEL INDS INC
072-0231-139

AEROJET ROCKETDYNE INC
072-0231-141

CITY OF RANCHO CORDOVA
COUNTY OF SACRAMENTO

Lot 1
Lot 2
Lot 3
Lot 4
Lot 5
Lot 6
Lot 7
Lot 8
Lot 9
Lot 10

JUGHANDLE ROAD

NIMBUS ROAD (EXIST.)

HAZEL AVENUE (FUTURE)

COUNTY OF SACRAMENTO
CITY OF RANCHO CORDOVA

EASTON DEVELOPMENT COMPANY LLC
072-3360-002

Existing VELB Preserve

AEROJET ROCKETDYNE INC
072-0231-141

AEROJET ROCKETDYNE INC
072-0231-126

Existing Admin. Channel

AEROJET ROCKETDYNE INC
072-0231-141

AEROJET GENERAL CORP
072-0231-081

AEROJET ROCKETDYNE INC
072-3360-023

Exhibit 8.2

Proposed 100-year Flood Limits

AEROJET/EASTON

Easton Research Park West

City of Rancho Cordova, *California*

SCALE: 1:200

September, 2021

N

0 100 200 400

SCALE: 1"=200'

LEGEND

100-YEAR 24-HOUR INUNDATION BOUNDARY

MacKay & Somps
ENGINEERS PLANNERS SURVEYORS

9-27-2021 17:52:38 jmriquez P:\2778_OA\GIS\Topo\Westborough_2007 SacCoLidar83_28.dwg [1] P:\2778_OA\PLN\Applications\LL TSM-ERPW\SLTM\Exhibits\Exhibit 8.2 Proposed 100-year Flood Limits.dwg [2] P:\2778_OA\MasterPlan\Exh-AV\Area 49\ERPW Admin Channel Impact Exh.dwg [3] P:\2778_OA\PLN\Applications\LL TSM-ERPW\SLTM\Exhibits\Exhibit 8.2 Proposed 100-year Flood Limits.dwg [4] P:\2778_OA\MasterPlan\SD\ERPW\SLTM\Exhibits\Exhibit 8.2 Proposed 100-year Flood Limits.dwg [5] P:\2778_OA\MasterPlan\SD\ERPW\SLTM\Exhibits\Exhibit 8.2 Proposed 100-year Flood Limits.dwg

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Appendix B: Hydrology Data and Results

Sacramento Hydrologic Calculator Report

September 27, 2021 15:28

Project Title: Easton Place - Existing Admin subsheds
Method: Sacramento County HEC-1 method
Comments: Easton Place - Existing condtions Admin Channel tributaries Revised Shed AS3
Date: 8/6/2013
Prepared by: MDH

Watershed Hydrologic Summary Data

Watershed	Area (acres)	Mean Elevation (ft)	Lag Times		Basin "n"		Loss Rates		Percent Impervious	
			Method	Lag Time (min)	Method	Basin "n"	Method	Loss Rate (in/hr)	Method	Impervious Area (%)
AS	97.1	174	Basin "n"	-	Specified	0.09	Computed	-	Specified	32
AS2	12.27	145	Basin "n"	-	Specified	0.12	Computed	-	Specified	2
AS3	152.2	140.9	Basin "n"	-	Specified	0.12	Computed	-	Computed	-
AS4	5.67	137	Basin "n"	-	Specified	0.12	Computed	-	Specified	2

Basin "n" Method Data for Lag Time Computation

Watershed	Channel Length (ft)	Centroid Length (ft)	Slope (ft/ft)	Channelization	Land Use Impervious Area Percent (% or acres)																
					95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
AS	3399	1115	0.0094	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AS2	1638	279	0.0085	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AS3	4987	2528	0.0028	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AS4	2171	961	0.00276	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Refer to the Drainage manual for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Infiltration Loss Rate Data

Watershed	Soil Cover Group	Land Use Impervious Area Percent (% or acres)																	
		95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
AS	B																15.9		
	C																17.6		
	D																66.5		
AS2	B																87.2		
	C																		
	D																12.8		
AS3	B			24.7													107.9		
	C																		
	D			3.7													15.9		
AS4	B																71.8		
	C																		
	D																28.2		

Refer to the help file for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

View HEC-1 output

Sacramento method results
(Project: Easton Place - Existing Admin subsheds)
(100-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
AS	125.	12:30	.15			
AS2	19.	12:19	.02			
AS3	100.	13:14	.24			
AS4	5.6	12:40	.01			

(10-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
AS	76.	12:30	.15			
AS2	11.	12:19	.02			
AS3	58.	13:14	.24			
AS4	3.2	12:40	.01			

Sacramento Hydrologic Calculator Report

September 27, 2021 15:30

Project Title: ERPW - Proposed
Comments: ERPW - Developed
Prepared by: DA

Method: Sacramento County HEC-1 method
Date: 9/17/2021

Watershed Hydrologic Summary Data

Watershed	Area (acres)	Mean Elevation (ft)	Lag Times		Basin "n"		Loss Rates		Percent Impervious	
			Method	Lag Time (min)	Method	Basin "n"	Method	Loss Rate (in/hr)	Method	Impervious Area (%)
WSP-03	23	145	Basin "n"	-	Computed	-	Computed	-	Computed	-
WSP-02	64.47	150	Basin "n"	-	Computed	-	Computed	-	Computed	-
WSP-01	30.52	150	Basin "n"	-	Computed	-	Computed	-	Computed	-
AS3	67.9	140	Basin "n"	-	Specified	0.12	Computed	-	Computed	-
AS	89.6	174	Basin "n"	-	Specified	.09	Computed	-	Specified	29

Basin "n" Method Data for Lag Time Computation

Watershed	Channel Length (ft)	Centroid Length (ft)	Slope (ft/ft)	Channelization	Land Use Impervious Area Percent (% or acres)																
					95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
WSP-03	2867	1506	.002	Undeveloped	0															70		
				Developed	30															0		
WSP-02	2606	1437	.002	Undeveloped	0																	
				Developed	100																	
WSP-01	2261	686	.0028	Undeveloped	0																	
				Developed	100																	
AS3	2987	1530	.0028	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AS	3399	1115	0.0094	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Refer to the Drainage manual for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Infiltration Loss Rate Data

Watershed	Soil Cover Group	Land Use Impervious Area Percent (% or acres)																	
		95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
WSP-03	B																		
	C	30															70		
	D																		
WSP-02	B																		
	C	100																	
	D																		
WSP-01	B																		
	C	100																	
	D																		
AS3	B			8													85		
	C																		
	D			2													5		
AS	B																15.9		
	C																17.6		
	D																66.5		

Refer to the help file for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

View HEC-1 output

Sacramento method results
(Project: ERPW - Proposed)
(100-year, 1-day rainfall)

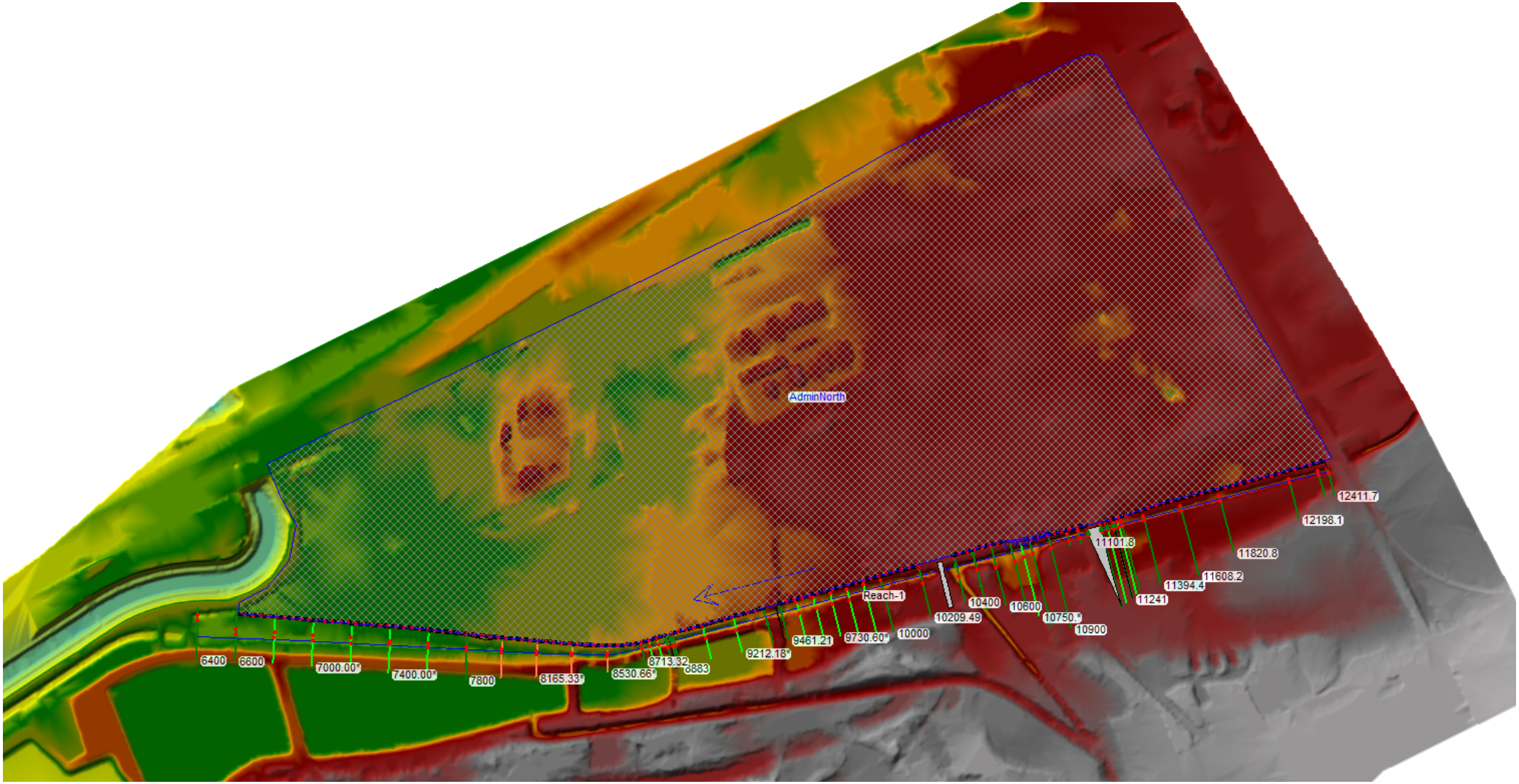
ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
WSP-03	24.	12:41	.04			
WSP-02	122.	12:16	.10			
WSP-01	70.	12:10	.05			
AS3	55.	12:52	.11			
AS	115.	12:30	.14			

(10-year, 1-day rainfall)

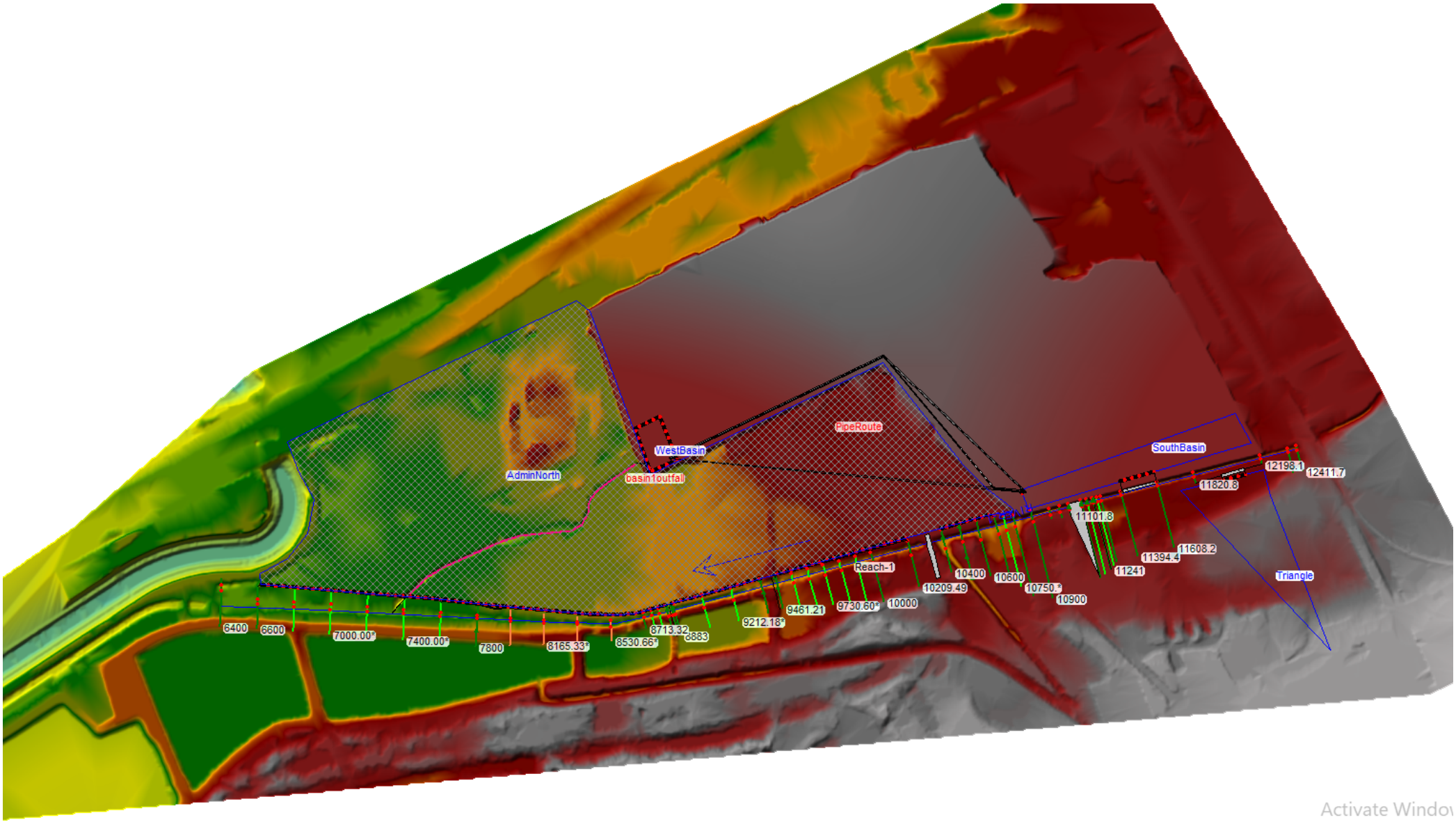
ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
WSP-03	15.	12:40	.04			
WSP-02	85.	12:11	.10			
WSP-01	47.	12:07	.05			
AS3	32.	12:53	.11			
AS	69.	12:30	.14			

Appendix C: Hydraulics Data and Results

HEC-RAS GEOMETRY AND TERRAIN
EXISTING CONDITIONS



HEC-RAS GEOMETRY AND TERRAIN
DEVELOPED CONDITIONS



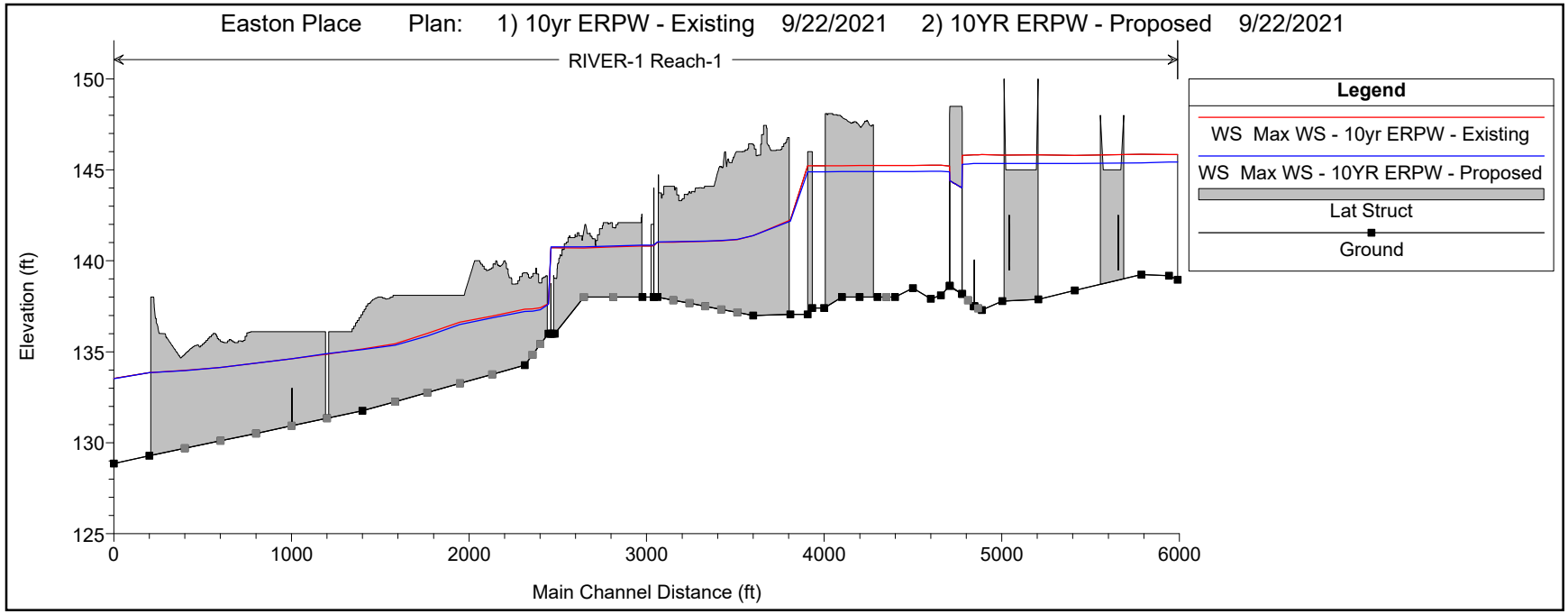
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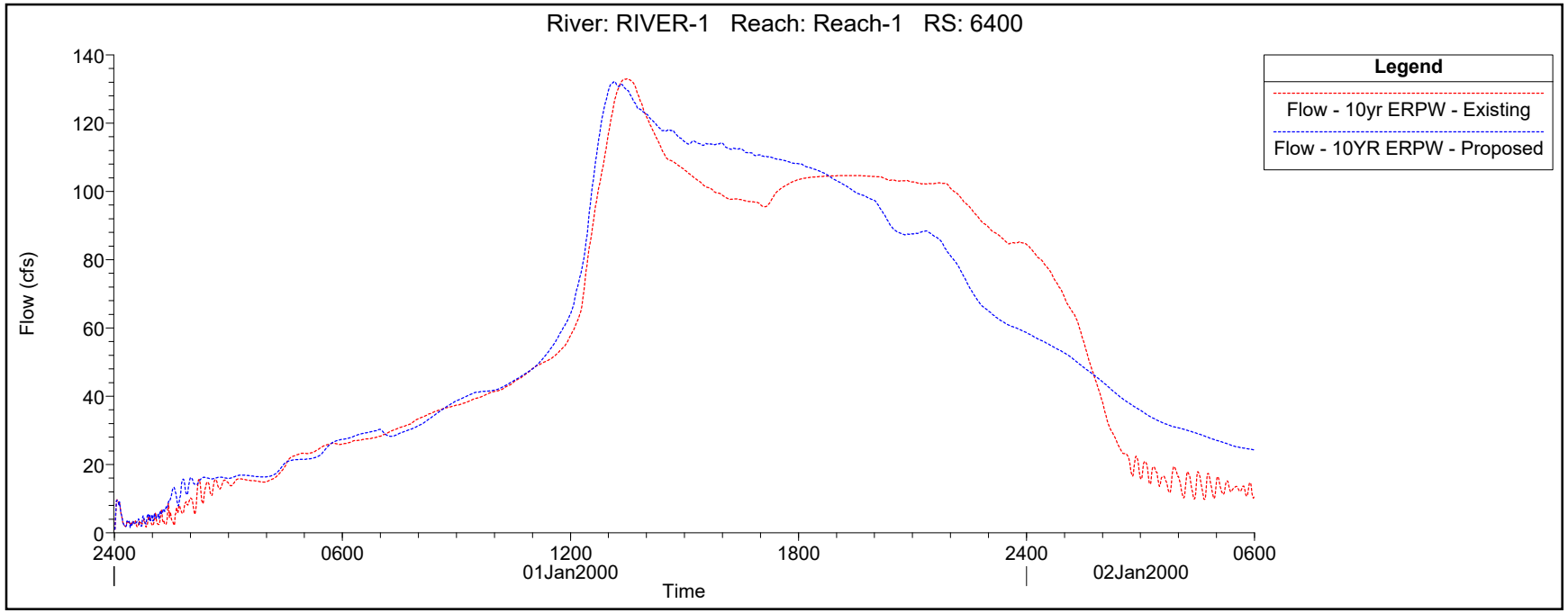
Easton Research Park West Basin Sizing

Triangle Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
140	0	0.0
141	1	4.0
142	2	8.1
143	3	12.4
144	4	16.8
145	5	21.4
146	6	26.1
147	7	31.0
148	8	36.0

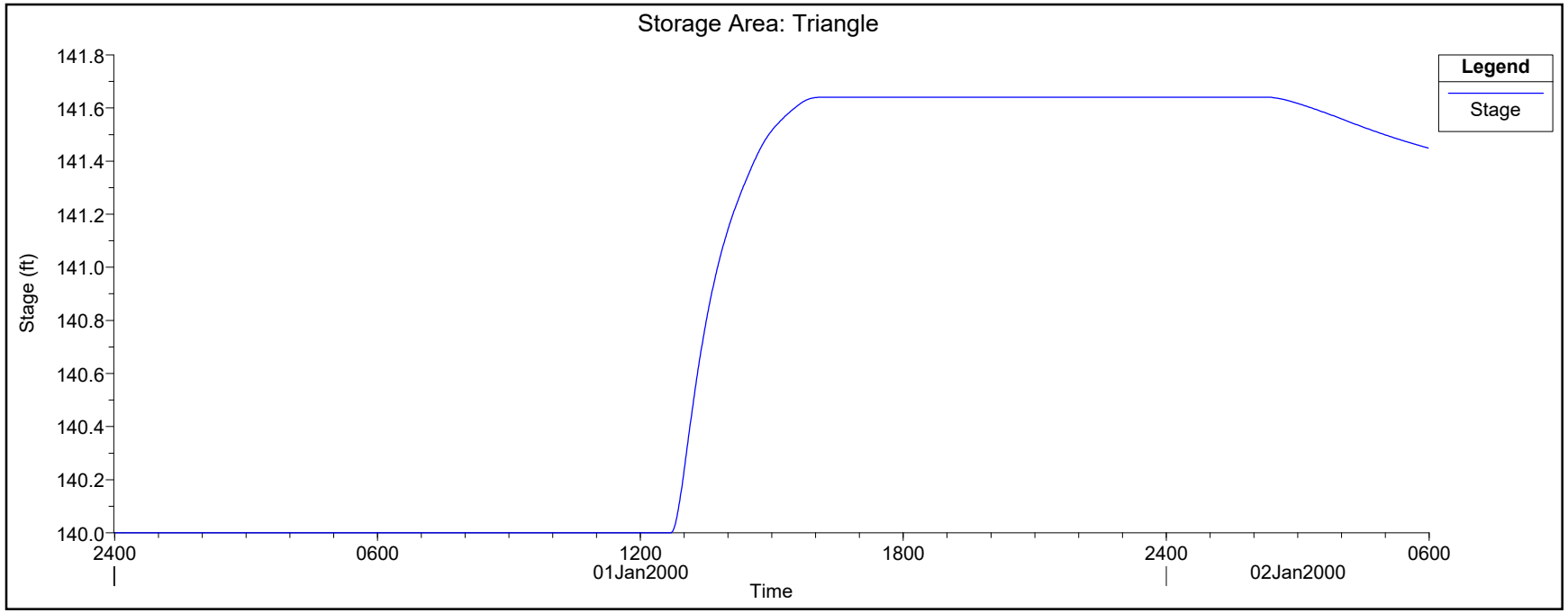
West Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
139	0	0.0
140	1	3.1
141	2	6.2
142	3	9.5
143	4	12.8
144	5	16.3
145	6	19.9
146	7	23.5
147	8	27.3

South Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
140	0	0.0
141	1	5.1
142	2	10.3
143	3	15.6
144	4	21.0
145	5	26.6
146	6	32.4
147	7	38.2


Easton Place Plan: 1) 10yr ERPW - Existing 9/22/2021 2) 10YR ERPW - Proposed 9/22/2021
RIVER-1 Reach-1
Elevation (ft)
150
145
140
135
130
125
0
1000
2000
3000
4000
5000
6000
Main Channel Distance (ft)
Legend
WS Max WS - 10yr ERPW - Existing
WS Max WS - 10YR ERPW - Proposed
Lat Struct
Ground

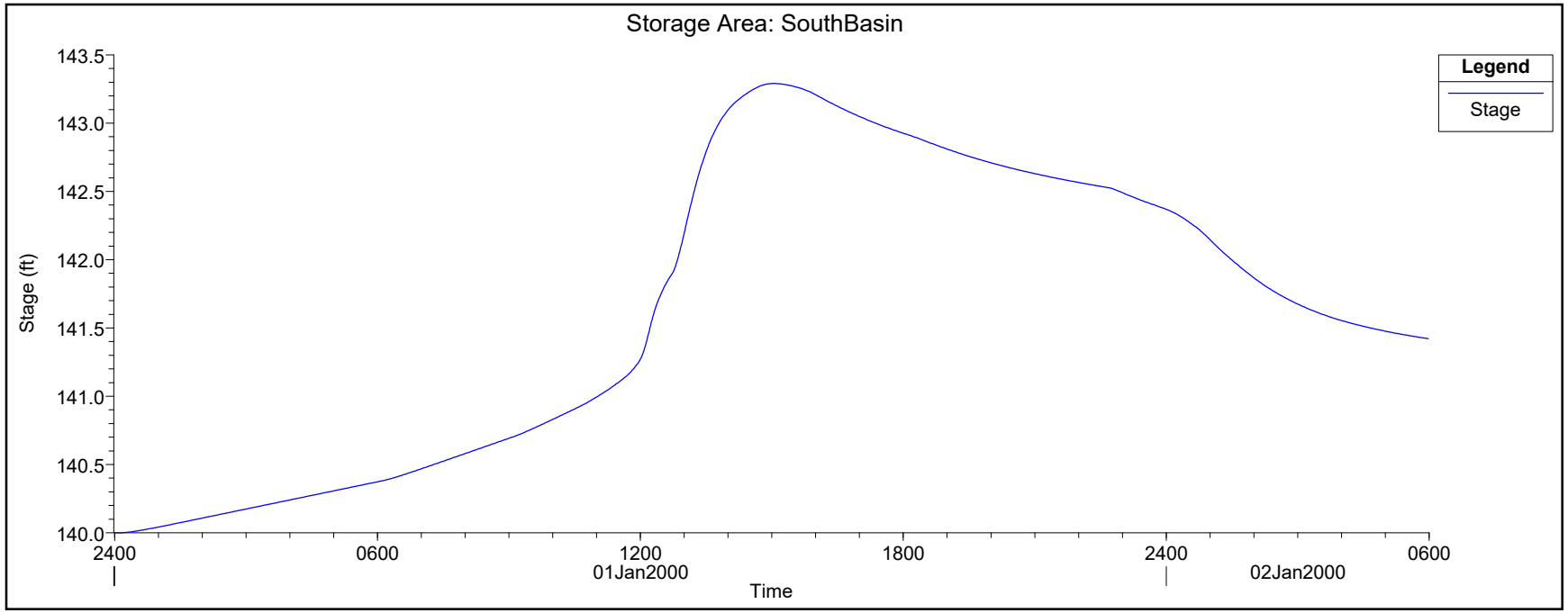

River: RIVER-1 Reach: Reach-1 RS: 6400
Legend
Flow - 10yr ERPW - Existing
Flow - 10YR ERPW - Proposed
Flow (cfs)
140
120
100
80
60
40
20
0
2400
0600
1200
01Jan2000
1800
2400
02Jan2000
0600
Time

10-YR Triangle Basin Results



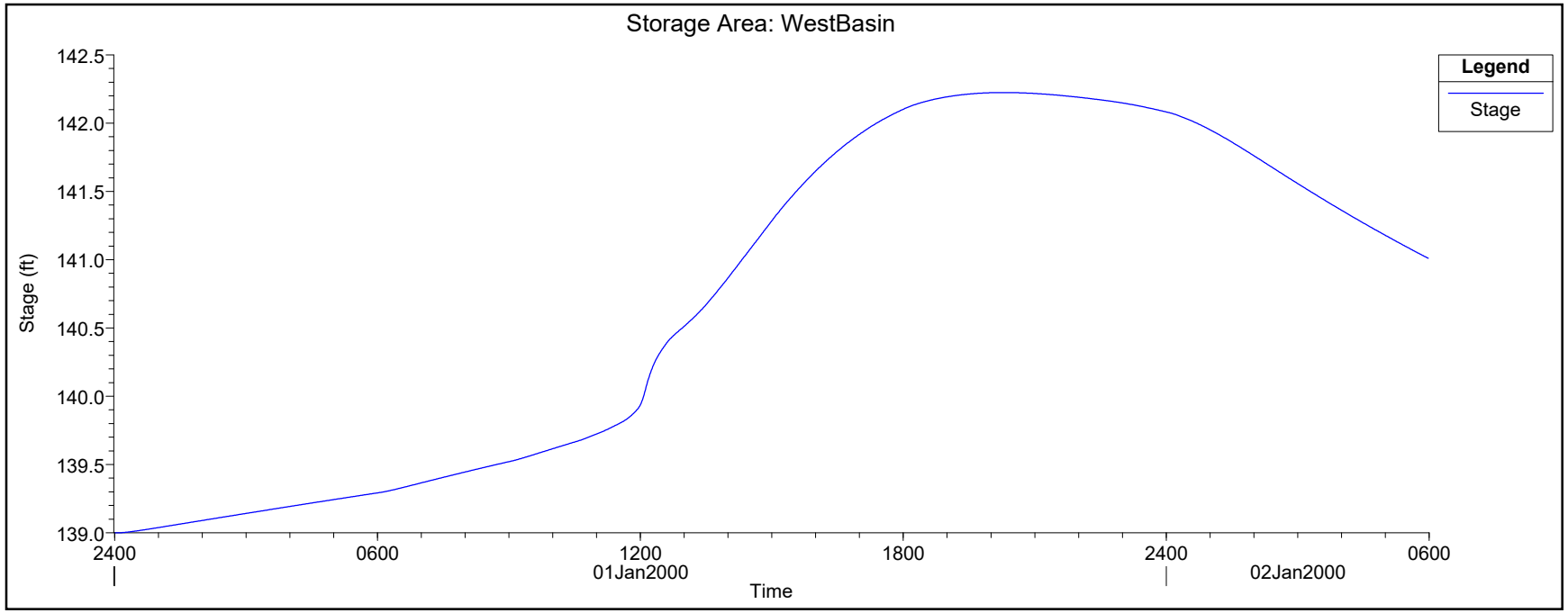
Triangle Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
140	0	0.0
141	1	4.0
142	2	8.1
143	3	12.4
144	4	16.8
145	5	21.4
146	6	26.1
147	7	31.0
148	8	36.0

10-YR South Basin Results



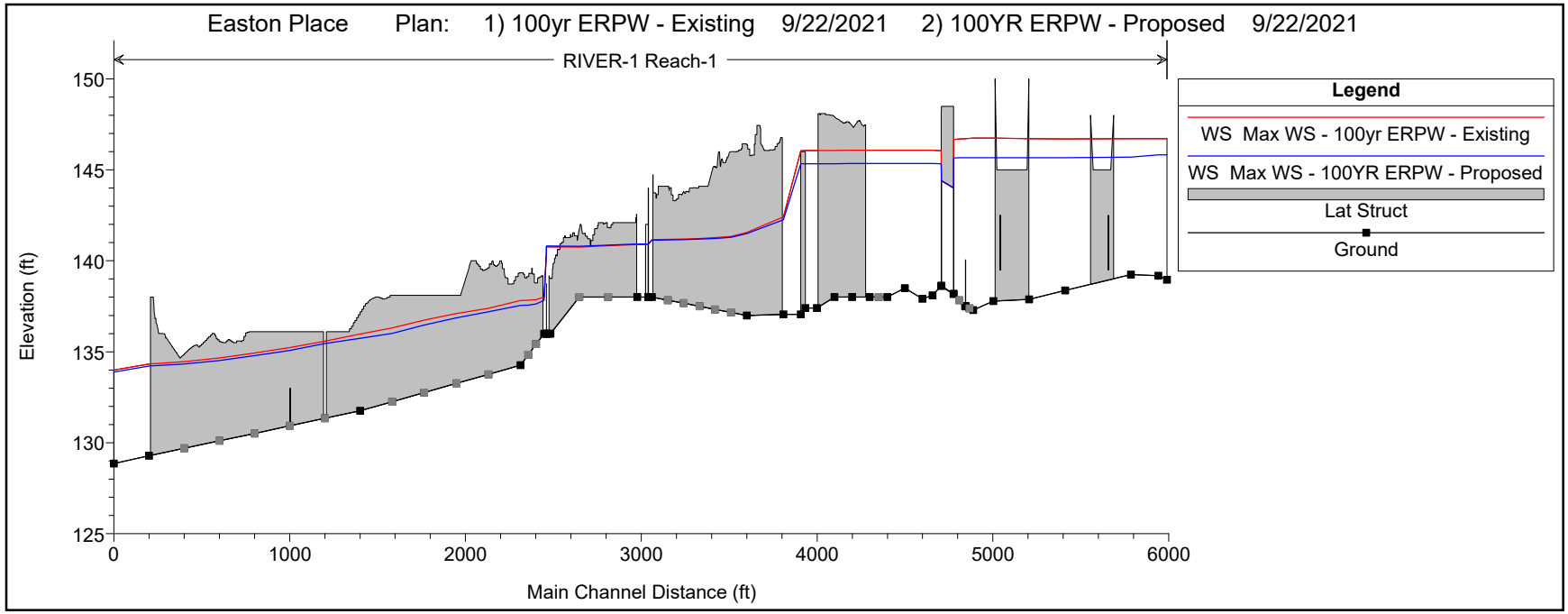
South Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
140	0	0.0
141	1	5.1
142	2	10.3
143	3	15.6
144	4	21.0
145	5	26.6
146	6	32.4
147	7	38.2

10-YR West Basin Results

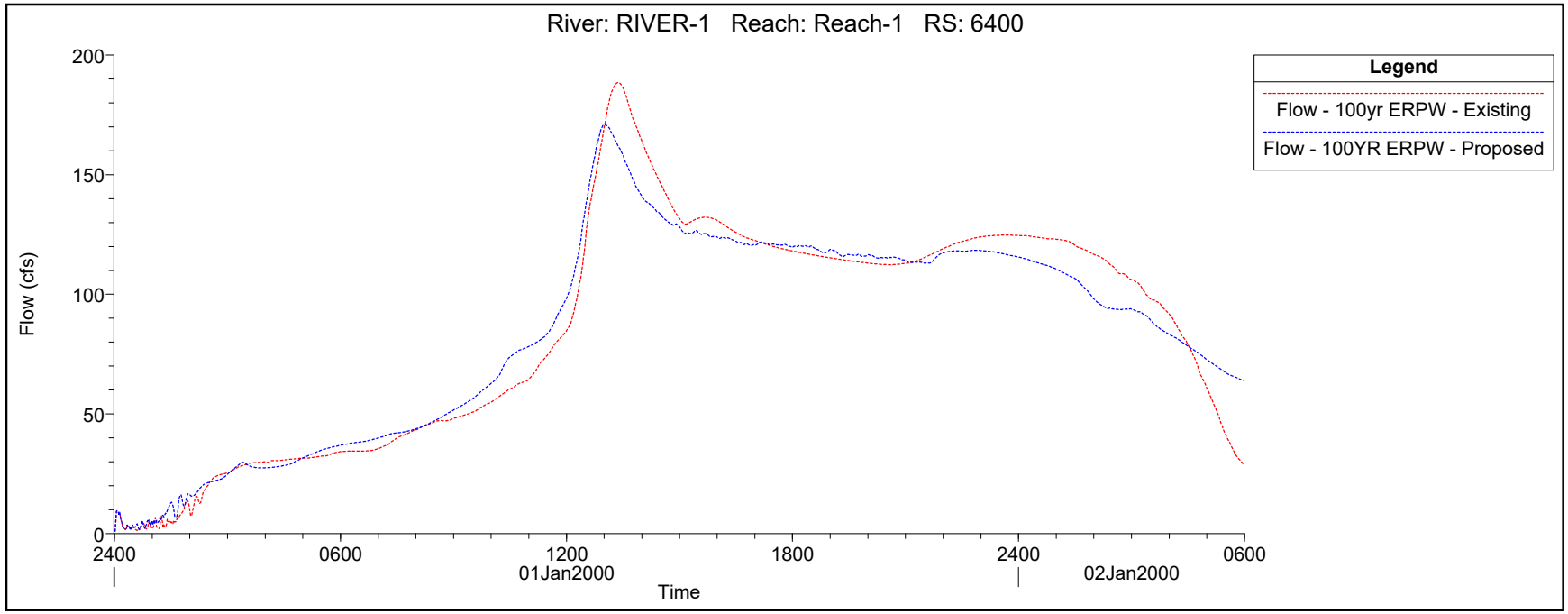


West Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
139	0	0.0
140	1	3.1
141	2	6.2
142	3	9.5
143	4	12.8
144	5	16.3
145	6	19.9
146	7	23.5
147	8	27.3

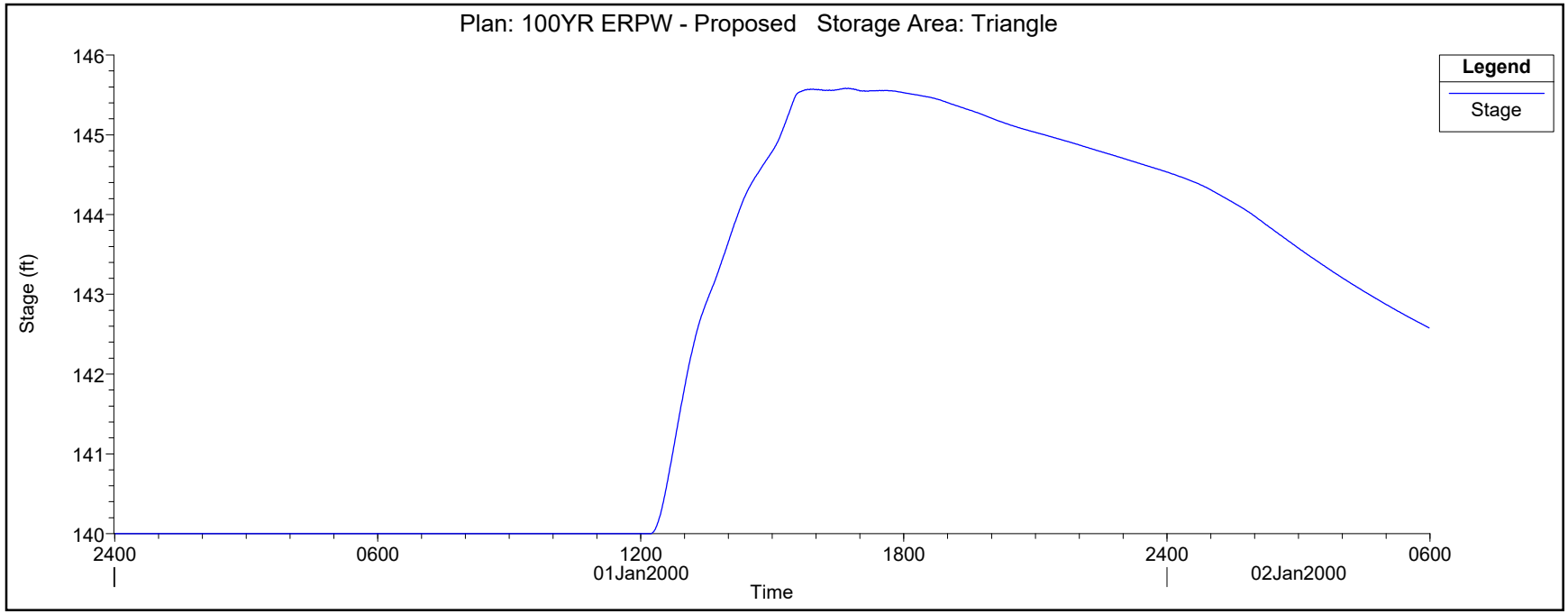
100-YR Admin Channel Profiles



100-YR Downstream Hydrograph

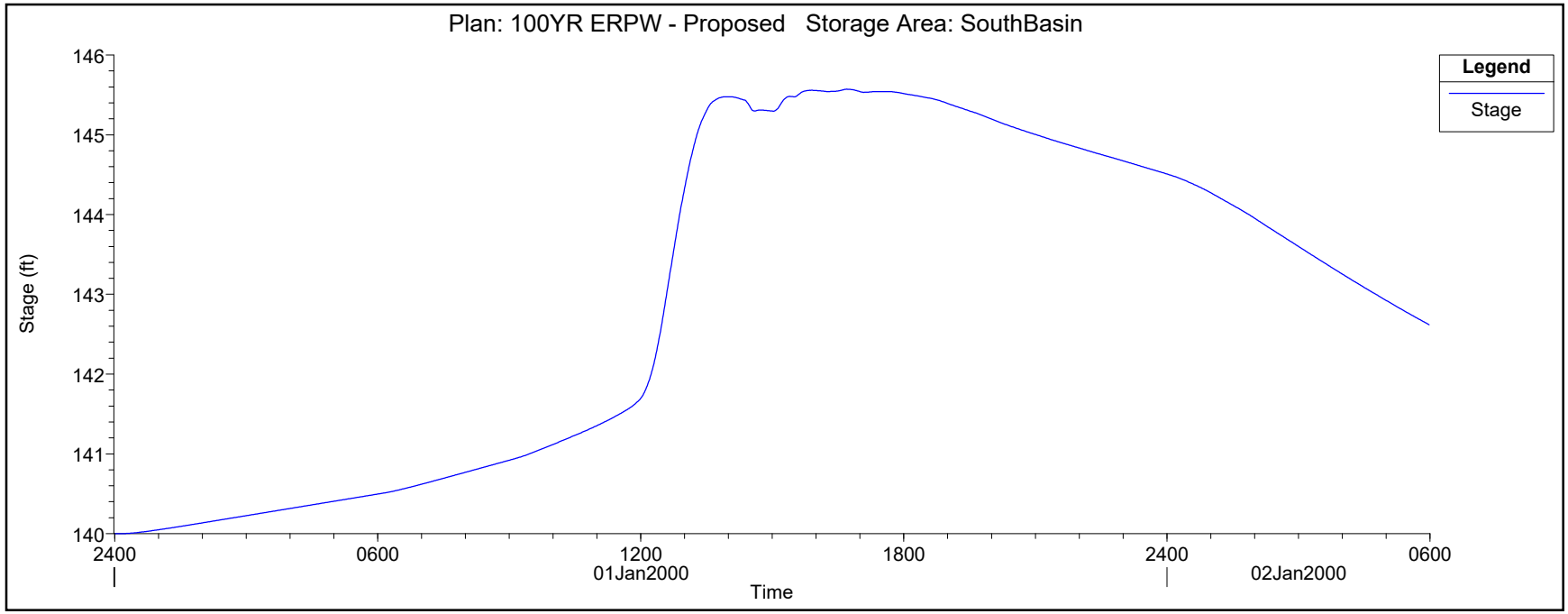


100-YR Triangle Basin Results



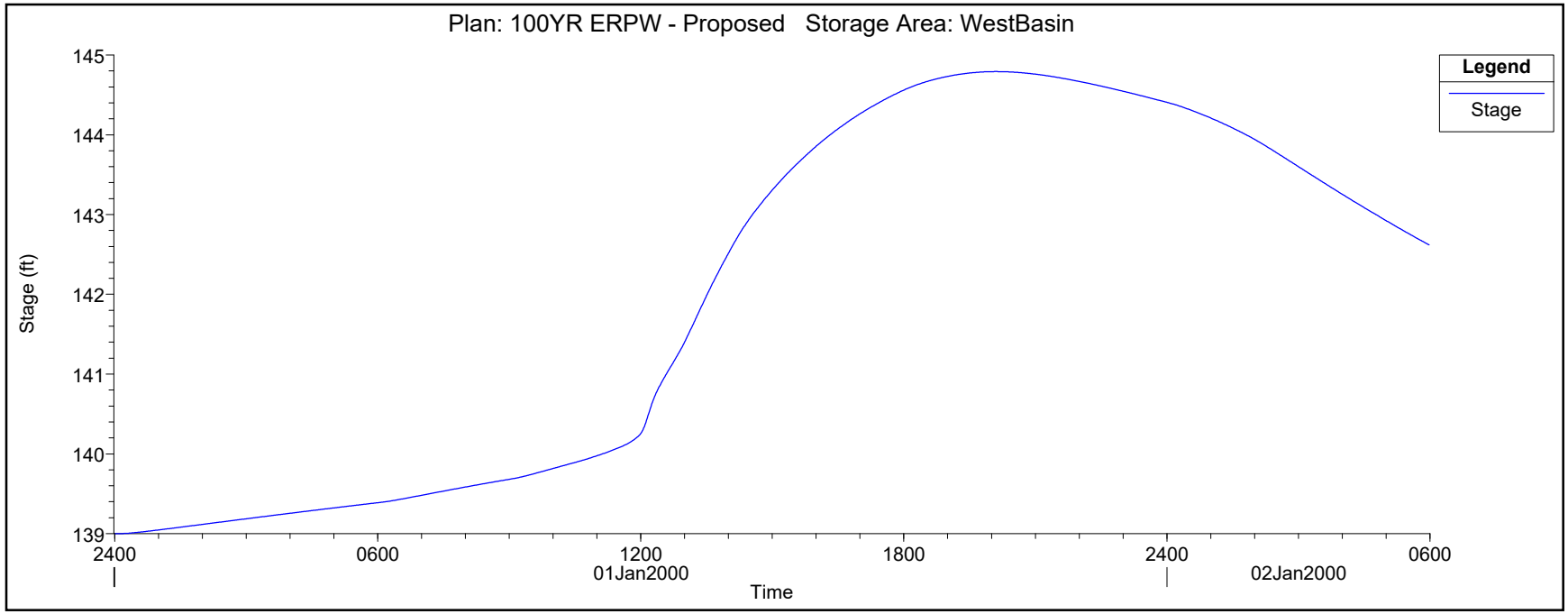
Triangle Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
140	0	0.0
141	1	4.0
142	2	8.1
143	3	12.4
144	4	16.8
145	5	21.4
146	6	26.1
147	7	31.0
148	8	36.0

100-YR South Basin Results



South Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
140	0	0.0
141	1	5.1
142	2	10.3
143	3	15.6
144	4	21.0
145	5	26.6
146	6	32.4
147	7	38.2

100-YR West Basin Results



West Basin		
Elevation (ft)	Stage (ft)	Storage (Acre-Ft)
139	0	0.0
140	1	3.1
141	2	6.2
142	3	9.5
143	4	12.8
144	5	16.3
145	6	19.9
146	7	23.5
147	8	27.3

Appendix D: LID/SWQ Results

Appendix D-2: Commercial Sites: Low Impact Development (LID) Credits and Treatment BMP Sizing Calculations

Name of Drainage Shed: WSP-01
Location of project: Sacramento

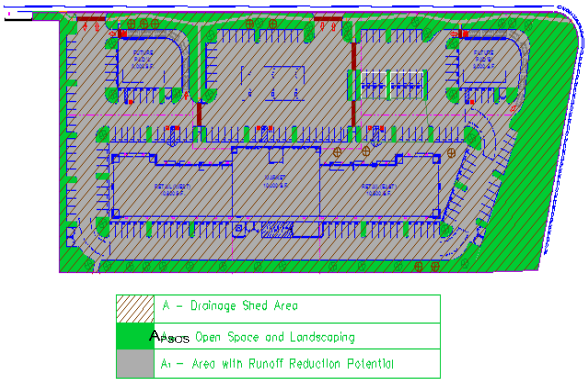
Fill in Blue Highlighted boxes

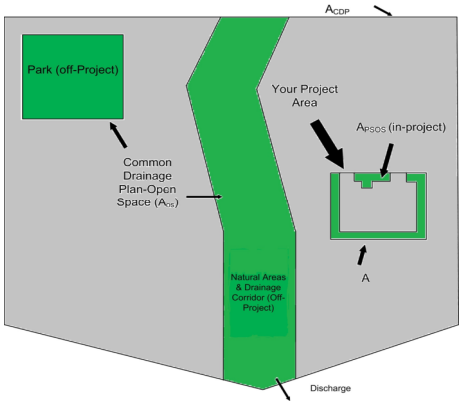
Step 1 - Open Space and Pervious Area Credits

Is your project within the drainage area of a common drainage plan that includes open space? If not, skip to 1 b.

1 a. Common Drainage Plan Area	275	acres	A_{CDP}	
Common Drainage Plan Open Space (Off-project)	37	acres	A_{OS}	**see area example below**
a. Natural storage reservoirs and drainage corridors	37	acres		
b. Buffer zones for natural water bodies	0	acres		
c. Natural areas including existing trees, other vegetation, and soil	0	acres		
d. Common landscape area/park	0	acres		
e. Regional Flood Control/Drainage basins	0	acres		
1 b. Project Drainage Shed Area (Total)	30.52	acres	A	
Project-Specific Open Space (In-project, communal)**	3.00	acres	A_{PSOS}	
a. Natural storage reservoirs and drainage corridors	0.00	acres		
b. Buffer zones for natural water bodies	0.00	acres		
c. Natural areas including existing trees, other vegetation, and soil	0.00	acres		**see area example below**
d. Landscape area/park	0.00	acres		
e. Flood Control/Drainage basins	3.00	acres		
Area with Runoff Reduction Potential ($A - A_{PSOS}$ =)	27.52	acres	A_T	
Assumed Initial Impervious Fraction (A_T / A =)	0.90		I	
Open Space & Pervious Area LID Credit (Step 1)				
$(A_{OS}/A_{CDP}+A_{PSOS}/A)x100$ =	23	pts		

** Doesn't include impervious areas within individual lots and surrounding individual units. That is accounted for below using Form D-1a in Step 2.





Step 2 - Runoff Reduction Credits

Runoff Reduction Treatments	Impervious Area Managed			Efficiency Factor		Effective Area Managed (A_C)	
Porous Pavement:							
Option 1: Porous Pavement (see Fact Sheet, excludes porous pavement used in Option 2)	0	acres	x		=	0.000	acres
Option 2: Disconnected Pavement (see Fact Sheet, excludes porous pavement used in Option 1)	use Form D-2a for credits →					0.00	acres
Landscaping used to Disconnect Pavement (see Fact Sheet)	8.0000	acres			=	8.00	acres
Disconnected Roof Drains (see Fact Sheet and/or Table D-2b for summary of requirements)	5.76	acres			=	5.76	acres
Ecoroof (see Fact Sheet)	0	acres			=	0.00	acres
Interceptor Trees (see Fact Sheet)	use Form D-2b for credits →					0.00	acres
Total Effective Area Managed by Runoff Reduction Measures				A_C		13.76	acres
Runoff Reduction Credit (Step 2)				$(A_C / A_T)*100$ =		50	pts

Table D-2a

Porous Pavement Type	Efficiency Multiplier
Cobblestone Block Pavement	0.40
Pervious Concrete/Asphalt	0.60
Modular Block Pavement &	0.75
Reinforced Grass Pavement	1.00

Table D-2b

Maximum roof size	Minimum travel distance
≤ 3,500 sq ft	21 ft
≤ 5,000 sq ft	24 ft
≤ 7,500 sq ft	28 ft
≤ 10,000 sq ft	32 ft

Form D-2a: Disconnected Pavement Worksheet

See Fact Sheet for more information regarding Disconnected Pavement credit guidelines

Effective Area Managed (A_C)

Pavement Draining to Porous Pavement

2. Enter area draining onto Porous Pavement	0.00	acres	Box K1
3. Enter area of Receiving Porous Pavement (excludes area entered in Step 2 under Porous Pavement)	0.00	acres	Box K2
4. Ratio of Areas (Box K1 / Box K2)	0.00		Box K3

5. Select multiplier using ratio from Box K3 and enter into Box K4

Ratio (Box D)	Multiplier
Ratio is ≤ 0.5	1.00
Ratio is > 0.5 and < 1.0	0.83
Ratio is > 1.0 and < 1.5	0.71
Ratio is > 1.5 and < 2.0	0.55

Box K4: 1

6. Enter Efficiency of Porous Pavement (see table below) — Box K5

Porous Pavement Type	Efficiency Multiplier
Cobblestone Block Pavement	0.40
Pervious Concrete Asphalt Pavement	0.60
Modular Block Pavement Porous Gravel Pavement	0.75
Reinforced Grass Pavement	1.00

7. Multiply Box K2 by Box K5 and enter into Box K6	0.00	acres	Box K6
8. Multiply Boxes K1,K4, and K5 and enter the result in Box K7	0.00	acres	Box K7
9. Add Box K6 to Box K7 and multiply by 60%, and enter the Result in Box K8 This is the amount of area credit to enter into the "Disconnected Pavement" Box of Form D-2			0.00 acres

Form D-2b: Interceptor Tree Worksheet

See Fact Sheet for more information regarding Interceptor Tree credit guidelines

New Evergreen Trees

1. Enter number of new evergreen trees that qualify as Interceptor Trees in Box L1.		trees	Box L1
2. Multiply Box L1 by 200 and enter result in Box L2	0	sq. ft.	Box L2

New Deciduous Trees

3. Enter number of new deciduous trees that qualify as Interceptor Trees in Box L3.		trees	Box L3
4. Multiply Box L3 by 100 and enter result in Box L4	0	sq. ft.	Box L4

Existing Tree Canopy

5. Enter square footage of existing tree canopy that qualifies as Existing Tree canopy in Box L5.	0	sq. ft.	Box L5
6. Multiply Box L5 by 0.5 and enter the result in Box L6	0	sq. ft.	Box L6

Total Interceptor Tree EAM Credits

Add Boxes L2, L4, and L6 and enter it into Box L7	0	sq. ft.	Box L7
Divide Box L7 by 43,560 and multiply by 20% to get effective area managed and enter result in Box L8 This is the amount of area credit to enter into the "Interceptor Trees" Box of Form D-2	0.00	acres	Box L8

Step 3 - Runoff Management Credits

Capture and Use Credits

Impervious Area Managed by Rain barrels, Cisterns, and automatically-emptied systems

(see Fact Sheet) | - enter gallons, for simple rain barrels | 0.00 acres

Automated-Control Capture and Use System

(see Fact Sheet, then enter impervious area managed by the system) | 0.00 acres

Bioretention/Infiltration Credits

Impervious Area Managed by Bioretention BMPs

(see Fact Sheet)

Bioretention Area ____ sq ft
Subdrain Elevation ____ inches
Ponding Depth, inches ____ inches

0.00 acres

Impervious Area Managed by Infiltration BMPs

(see Fact Sheet)

Drawdown Time, hrs 48 drawdown_hrs_inf
Soil Infiltration Rate, in/hr 0.50 soil_inf_rate

Sizing Option 1: Capture Volume, acre-ft 0.00 capture_vol_inf | 0.00 acres

Sizing Option 2: Infiltration BMP surface area, sq ft 24000 soil_surface_area | 13.73 acres

Basin or trench? ____ approximate BMP depth 2.00 ft

Impervious Area Managed by Amended Soil or Mulch Beds

(see Fact Sheet) | Mulched Infiltration Area, sq ft ____ mulch_area | 0.00 acres

Total Effective Area Managed by Capture-and-Use/Bioretention/Infiltration BMPs | 13.73 A_{LIDc}

Runoff Management Credit (Step 3) | A_{LIDC}/A_T*200 = 99.8 pts

Total LID Credits (Step 1+2+3) LID compliant, check for treatment sizing in Step 4 173.0

Does project require hydromodification management? If yes, proceed to using SacHM.

Adjusted Area for Flow-Based, Non-LID Treatment $A_T - A_C - A_{LIDC}$ = 0.03 A_{AT}

Adjusted Impervious Fraction of A for Volume-Based, Non-LID Treatment A_{AT} / A = 0.00 I_A

STOP: No additional treatment needed

Step 4a Treatment - Flow-Based (Rational Method)

Calculate treatment flow (cfs): Flow = Runoff Coefficient x Rainfall Intensity x Area

Look up value for i in Table D-2c (Rainfall Intensity): 0.18 i

Obtain A_{AT} from Step 3: 0.03 A_{AT}

Use C = 0.95: 0.95 C

Flow = 0.95 * i * A_{AT}: 0.01 cfs

Table D-2c

Rainfall Intensity			
Roseville	i =	0.20	in/hr
Sacramento	i =	0.18	in/hr
Folsom	i =	0.20	in/hr

Step 4b Treatment - Volume-Based (ASCE-WEF)

Calculate water quality volume (Acre-Feet): WQV = Area x Maximized Detention Volume (P_0)

Obtain A from Step 1: 30.52 A | 48 hrs Specified Draw Down time

Obtain P_0: Maximized Detention Volume from figures E-1 to E-4 in Appendix E of this manual using I_A from Step 2.: 0.00 P_0

Calculate treatment volume (acre-ft):

Treatment volume = A x (P_0 / 12): 0.00 Acre-Feet

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Appendix D-2: Commercial Sites: Low Impact Development (LID) Credits and Treatment BMP Sizing Calculations

Name of Drainage Shed: WSP-02
Location of project: Sacramento

Fill in Blue Highlighted boxes

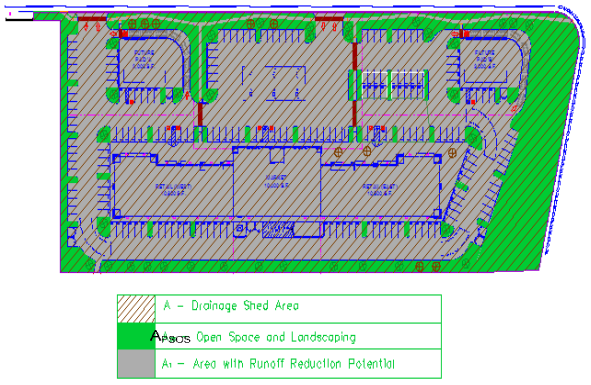
Step 1 - Open Space and Pervious Area Credits

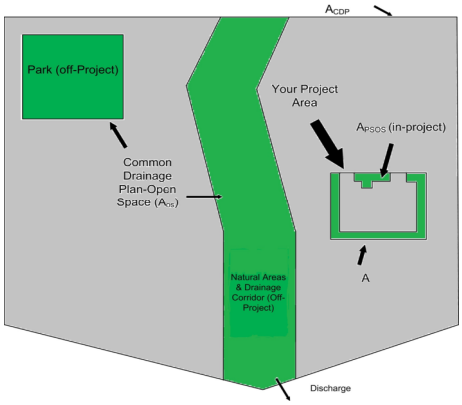
Is your project within the drainage area of a common drainage plan that includes open space? If not, skip to 1 b.

1 a. Common Drainage Plan Area	275	acres	A_{CDP}	
Common Drainage Plan Open Space (Off-project)	158	acres	A_{OS}	**see area example below**
a. Natural storage reservoirs and drainage corridors	158	acres		
b. Buffer zones for natural water bodies	0	acres		
c. Natural areas including existing trees, other vegetation, and soil	0	acres		
d. Common landscape area/park	0	acres		
e. Regional Flood Control/Drainage basins	0	acres		
1 b. Project Drainage Shed Area (Total)	64.47	acres	A	
Project-Specific Open Space (In-project, communal)**	5.00	acres	A_{PSOS}	
a. Natural storage reservoirs and drainage corridors	0.00	acres		
b. Buffer zones for natural water bodies	0.00	acres		
c. Natural areas including existing trees, other vegetation, and soil	0.00	acres		**see area example below**
d. Landscape area/park	0.00	acres		
e. Flood Control/Drainage basins	5.00	acres		

** Doesn't include impervious areas within individual lots and surrounding individual units. That is accounted for below using Form D-1a in Step 2.

Area with Runoff Reduction Potential	$A - A_{PSOS}$ =	59.47	acres	A_T
Assumed Initial Impervious Fraction	A_T / A =	0.92		I
Open Space & Pervious Area LID Credit (Step 1)	$(A_{OS}/A_{CDP}+A_{PSOS}/A)x100$ =	65	pts	





Step 2 - Runoff Reduction Credits

Runoff Reduction Treatments	Impervious Area Managed			Efficiency Factor		Effective Area Managed (A_C)	
Porous Pavement:							
Option 1: Porous Pavement (see Fact Sheet, excludes porous pavement used in Option 2)	0	acres	x		=	0.000	acres
Option 2: Disconnected Pavement (see Fact Sheet, excludes porous pavement used in Option 1)	use Form D-2a for credits →					0.00	acres
Landscaping used to Disconnect Pavement (see Fact Sheet)	20.8000	acres			=	20.80	acres
Disconnected Roof Drains (see Fact Sheet and/or Table D-2b for summary of requirements)	8.9	acres			=	8.90	acres
Ecoroof (see Fact Sheet)	0	acres			=	0.00	acres
Interceptor Trees (see Fact Sheet)	use Form D-2b for credits →					0.00	acres
Total Effective Area Managed by Runoff Reduction Measures				A_C		29.70	acres
Runoff Reduction Credit (Step 2)				$(A_C / A_T)*100$ =		50	pts

Table D-2a

Porous Pavement Type	Efficiency Multiplier
Cobblestone Block Pavement	0.40
Pervious Concrete/Asphalt	0.60
Modular Block Pavement &	0.75
Reinforced Grass Pavement	1.00

Table D-2b

Maximum roof size	Minimum travel distance
≤ 3,500 sq ft	21 ft
≤ 5,000 sq ft	24 ft
≤ 7,500 sq ft	28 ft
≤ 10,000 sq ft	32 ft

Form D-2a: Disconnected Pavement Worksheet

See Fact Sheet for more information regarding Disconnected Pavement credit guidelines

Effective Area Managed (A_C)

Pavement Draining to Porous Pavement

2. Enter area draining onto Porous Pavement	0.00	acres	Box K1
3. Enter area of Receiving Porous Pavement (excludes area entered in Step 2 under Porous Pavement)	0.00	acres	Box K2
4. Ratio of Areas (Box K1 / Box K2)	0.00		Box K3

5. Select multiplier using ratio from Box K3 and enter into Box K4

Ratio (Box D)	Multiplier
Ratio is ≤ 0.5	1.00
Ratio is > 0.5 and < 1.0	0.83
Ratio is > 1.0 and < 1.5	0.71
Ratio is > 1.5 and < 2.0	0.55

Box K4: 1

6. Enter Efficiency of Porous Pavement (see table below) — Box K5

Porous Pavement Type	Efficiency Multiplier
Cobblestone Block Pavement	0.40
Pervious Concrete Asphalt Pavement	0.60
Modular Block Pavement Porous Gravel Pavement	0.75
Reinforced Grass Pavement	1.00

7. Multiply Box K2 by Box K5 and enter into Box K6	0.00	acres	Box K6
8. Multiply Boxes K1,K4, and K5 and enter the result in Box K7	0.00	acres	Box K7
9. Add Box K6 to Box K7 and multiply by 60%, and enter the Result in Box K8 This is the amount of area credit to enter into the "Disconnected Pavement" Box of Form D-2			0.00 acres

Form D-2b: Interceptor Tree Worksheet

See Fact Sheet for more information regarding Interceptor Tree credit guidelines

New Evergreen Trees

1. Enter number of new evergreen trees that qualify as Interceptor Trees in Box L1.		trees	Box L1
2. Multiply Box L1 by 200 and enter result in Box L2	0	sq. ft.	Box L2

New Deciduous Trees

3. Enter number of new deciduous trees that qualify as Interceptor Trees in Box L3.		trees	Box L3
4. Multiply Box L3 by 100 and enter result in Box L4	0	sq. ft.	Box L4

Existing Tree Canopy

5. Enter square footage of existing tree canopy that qualifies as Existing Tree canopy in Box L5.	0	sq. ft.	Box L5
6. Multiply Box L5 by 0.5 and enter the result in Box L6	0	sq. ft.	Box L6

Total Interceptor Tree EAM Credits

Add Boxes L2, L4, and L6 and enter it into Box L7	0	sq. ft.	Box L7
Divide Box L7 by 43,560 and multiply by 20% to get effective area managed and enter result in Box L8 This is the amount of area credit to enter into the "Interceptor Trees" Box of Form D-2	0.00	acres	Box L8

Step 3 - Runoff Management Credits

Capture and Use Credits

Impervious Area Managed by Rain barrels, Cisterns, and automatically-emptied systems

(see Fact Sheet) | - enter gallons, for simple rain barrels | 0.00 acres

Automated-Control Capture and Use System

(see Fact Sheet, then enter impervious area managed by the system) | 0.00 acres

Bioretention/Infiltration Credits

Impervious Area Managed by Bioretention BMPs

(see Fact Sheet)

Bioretention Area ____ sq ft
Subdrain Elevation ____ inches
Ponding Depth, inches ____ inches

0.00 acres

Impervious Area Managed by Infiltration BMPs

(see Fact Sheet)

Drawdown Time, hrs 48 drawdown_hrs_inf
Soil Infiltration Rate, in/hr 0.50 soil_inf_rate

Sizing Option 1: Capture Volume, acre-ft 0.00 capture_vol_inf | 0.00 acres

Sizing Option 2: Infiltration BMP surface area, sq ft 51000 soil_surface_area | 29.18 acres

Basin or trench? ____ approximate BMP depth 2.00 ft

Impervious Area Managed by Amended Soil or Mulch Beds

(see Fact Sheet) | Mulched Infiltration Area, sq ft ____ mulch_area | 0.00 acres

Total Effective Area Managed by Capture-and-Use/Bioretention/Infiltration BMPs | 29.18 A_{LIDc}

Runoff Management Credit (Step 3) | A_{LIDC}/A_T*200 = 98.1 pts

Total LID Credits (Step 1+2+3) LID compliant, check for treatment sizing in Step 4 213.0

Does project require hydromodification management? If yes, proceed to using SacHM.

Adjusted Area for Flow-Based, Non-LID Treatment $A_T - A_C - A_{LIDC}$ = 0.59 A_{AT}

Adjusted Impervious Fraction of A for Volume-Based, Non-LID Treatment A_{AT} / A = 0.01 I_A

STOP: No additional treatment needed

Step 4a Treatment - Flow-Based (Rational Method)

Calculate treatment flow (cfs): Flow = Runoff Coefficient x Rainfall Intensity x Area

Look up value for i in Table D-2c (Rainfall Intensity): 0.18 i

Obtain A_{AT} from Step 3: 0.59 A_{AT}

Use C = 0.95: 0.95 C

Flow = 0.95 * i * A_{AT}: 0.10 cfs

Table D-2c

Rainfall Intensity			
Roseville	i =	0.20	in/hr
Sacramento	i =	0.18	in/hr
Folsom	i =	0.20	in/hr

Step 4b Treatment - Volume-Based (ASCE-WEF)

Calculate water quality volume (Acre-Feet): WQV = Area x Maximized Detention Volume (P_0)

Obtain A from Step 1: 64.47 A | 48 hrs Specified Draw Down time

Obtain P_0: Maximized Detention Volume from figures E-1 to E-4 in Appendix E of this manual using I_A from Step 2.: 0.00 P_0

Calculate treatment volume (acre-ft):

Treatment volume = A x (P_0 / 12): 0.00 Acre-Feet

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Appendix D-2: Commercial Sites: Low Impact Development (LID) Credits and Treatment BMP Sizing Calculations

Name of Drainage Shed: WSP-03
Location of project: Sacramento

Fill in Blue Highlighted boxes

Step 1 - Open Space and Pervious Area Credits

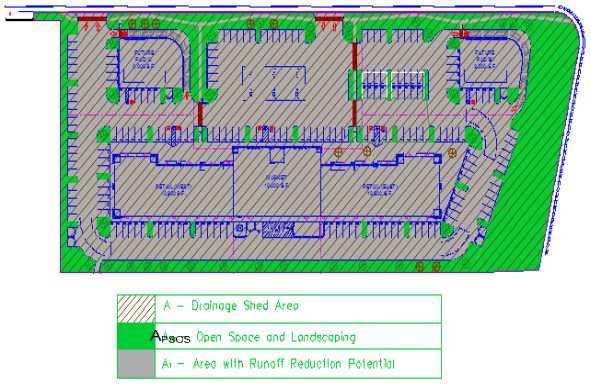
Is your project within the drainage area of a common drainage plan that includes open space? If not, skip to 1 b.

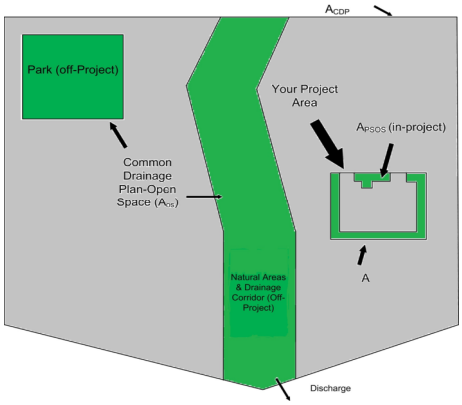
1 a. Common Drainage Plan Area	275	acres	A_{CDP}	
Common Drainage Plan Open Space (Off-project)	158	acres	A_{OS}	**see area example below**
a. Natural storage reservoirs and drainage corridors	158	acres		
b. Buffer zones for natural water bodies	0	acres		
c. Natural areas including existing trees, other vegetation, and soil	0	acres		
d. Common landscape area/park	0	acres		
e. Regional Flood Control/Drainage basins	0	acres		
1 b. Project Drainage Shed Area (Total)	23.00	acres	A	
Project-Specific Open Space (In-project, communal)**	16.10	acres	A_{PSOS}	
a. Natural storage reservoirs and drainage corridors	0.00	acres		
b. Buffer zones for natural water bodies	0.00	acres		
c. Natural areas including existing trees, other vegetation, and soil	16.10	acres		**see area example below**
d. Landscape area/park	0.00	acres		
e. Flood Control/Drainage basins	0.00	acres		

** Doesn't include impervious areas within individual lots and surrounding individual units. That is accounted for below using Form D-1a in Step 2.

Area with Runoff Reduction Potential	$A - A_{PSOS}$ =	6.90	acres	A_T
Assumed Initial Impervious Fraction	A_T / A =	0.30		I

Open Space & Pervious Area LID Credit (Step 1)
$(A_{OS}/A_{CDP}+A_{PSOS}/A)x100$ = 127 pts





Step 2 - Runoff Reduction Credits

Runoff Reduction Treatments	Impervious Area Managed			Efficiency Factor		Effective Area Managed (A_C)	
Porous Pavement:							
Option 1: Porous Pavement (see Fact Sheet, excludes porous pavement used in Option 2)	0	acres	x		=	0.000	acres
Option 2: Disconnected Pavement (see Fact Sheet, excludes porous pavement used in Option 1)	use Form D-2a for credits →					0.00	acres
Landscaping used to Disconnect Pavement (see Fact Sheet)	2.5000	acres			=	2.50	acres
Disconnected Roof Drains (see Fact Sheet and/or Table D-2b for summary of requirements)	1.4	acres			=	1.40	acres
Ecoroof (see Fact Sheet)	0	acres			=	0.00	acres
Interceptor Trees (see Fact Sheet)	use Form D-2b for credits →					0.00	acres
Total Effective Area Managed by Runoff Reduction Measures				A_C		3.90	acres
Runoff Reduction Credit (Step 2)				$(A_C / A_T)*100$ =		57	pts

Table D-2a

Porous Pavement Type	Efficiency Multiplier
Cobblestone Block Pavement	0.40
Pervious Concrete/Asphalt	0.60
Modular Block Pavement &	0.75
Reinforced Grass Pavement	1.00

Table D-2b

Maximum roof size	Minimum travel distance
≤ 3,500 sq ft	21 ft
≤ 5,000 sq ft	24 ft
≤ 7,500 sq ft	28 ft
≤ 10,000 sq ft	32 ft

Form D-2a: Disconnected Pavement Worksheet

See Fact Sheet for more information regarding Disconnected Pavement credit guidelines

Effective Area Managed (A_C)

Pavement Draining to Porous Pavement

2. Enter area draining onto Porous Pavement	0.00	acres	Box K1
3. Enter area of Receiving Porous Pavement (excludes area entered in Step 2 under Porous Pavement)	0.00	acres	Box K2
4. Ratio of Areas (Box K1 / Box K2)	0.00		Box K3

5. Select multiplier using ratio from Box K3 and enter into Box K4

Ratio (Box D)	Multiplier
Ratio is ≤ 0.5	1.00
Ratio is > 0.5 and < 1.0	0.83
Ratio is > 1.0 and < 1.5	0.71
Ratio is > 1.5 and < 2.0	0.55

Box K4: 1

6. Enter Efficiency of Porous Pavement (see table below) — Box K5

Porous Pavement Type	Efficiency Multiplier
Cobblestone Block Pavement	0.40
Pervious Concrete Asphalt Pavement	0.60
Modular Block Pavement Porous Gravel Pavement	0.75
Reinforced Grass Pavement	1.00

7. Multiply Box K2 by Box K5 and enter into Box K6	0.00	acres	Box K6
8. Multiply Boxes K1,K4, and K5 and enter the result in Box K7	0.00	acres	Box K7
9. Add Box K6 to Box K7 and multiply by 60%, and enter the Result in Box K8 This is the amount of area credit to enter into the "Disconnected Pavement" Box of Form D-2			0.00 acres

Form D-2b: Interceptor Tree Worksheet

See Fact Sheet for more information regarding Interceptor Tree credit guidelines

New Evergreen Trees

1. Enter number of new evergreen trees that qualify as Interceptor Trees in Box L1.		trees	Box L1
2. Multiply Box L1 by 200 and enter result in Box L2	0	sq. ft.	Box L2

New Deciduous Trees

3. Enter number of new deciduous trees that qualify as Interceptor Trees in Box L3.		trees	Box L3
4. Multiply Box L3 by 100 and enter result in Box L4	0	sq. ft.	Box L4

Existing Tree Canopy

5. Enter square footage of existing tree canopy that qualifies as Existing Tree canopy in Box L5.	0	sq. ft.	Box L5
6. Multiply Box L5 by 0.5 and enter the result in Box L6	0	sq. ft.	Box L6

Total Interceptor Tree EAM Credits

Add Boxes L2, L4, and L6 and enter it into Box L7	0	sq. ft.	Box L7
Divide Box L7 by 43,560 and multiply by 20% to get effective area managed and enter result in Box L8 This is the amount of area credit to enter into the "Interceptor Trees" Box of Form D-2	0.00	acres	Box L8

Step 3 - Runoff Management Credits

Capture and Use Credits

Impervious Area Managed by Rain barrels, Cisterns, and automatically-emptied systems

(see Fact Sheet) | - | enter gallons, for simple rain barrels | 0.00 | acres

Automated-Control Capture and Use System

(see Fact Sheet, then enter impervious area managed by the system) | 0.00 | acres

Bioretention/Infiltration Credits

Impervious Area Managed by Bioretention BMPs

(see Fact Sheet)

Bioretention Area | sq ft
Subdrain Elevation | inches
Ponding Depth, inches | inches | 0.00 | acres

Impervious Area Managed by Infiltration BMPs

(see Fact Sheet)

Drawdown Time, hrs | 48 | drawdown_hrs_inf
Soil Infiltration Rate, in/hr | 0.50 | soil_inf_rate

Sizing Option 1: Capture Volume, acre-ft | capture_vol_inf | 0.00 | acres

Sizing Option 2: Infiltration BMP surface area, sq ft | 5000 | soil_surface_area | 2.86 | acres

Basin or trench? | approximate BMP depth | 2.00 | ft

Impervious Area Managed by Amended Soil or Mulch Beds

(see Fact Sheet) | Mulched Infiltration Area, sq ft | mulch_area | 0.00 | acres

Total Effective Area Managed by Capture-and-Use/Bioretention/Infiltration BMPs | 2.86 | A_{LIDc}

Runoff Management Credit (Step 3) | A_{LIDC}/A_T*200 = | 82.9 | pts

Total LID Credits (Step 1+2+3) LID compliant, check for treatment sizing in Step 4 266.6

Does project require hydromodification management? If yes, proceed to using SacHM.

Adjusted Area for Flow-Based, Non-LID Treatment | $A_T - A_C - A_{LIDC}$ = | 0.14 | A_{AT}

Adjusted Impervious Fraction of A for Volume-Based, Non-LID Treatment | A_{AT} / A = | 0.01 | I_A

STOP: No additional treatment needed

Step 4a Treatment - Flow-Based (Rational Method)

Calculate treatment flow (cfs): Flow = Runoff Coefficient x Rainfall Intensity x Area

Look up value for i in Table D-2c (Rainfall Intensity) | 0.18 | i

Obtain A_{AT} from Step 3 | 0.14 | A_{AT}

Use C = 0.95 | 0.95 | C

Flow = 0.95 * i * A_{AT} | 0.02 | cfs

Table D-2c

Rainfall Intensity			
Roseville	i =	0.20	in/hr
Sacramento	i =	0.18	in/hr
Folsom	i =	0.20	in/hr

Step 4b Treatment - Volume-Based (ASCE-WEF)

Calculate water quality volume (Acre-Feet): WQV = Area x Maximized Detention Volume (P_0)

Obtain A from Step 1 | 23.00 | A | 48 | hrs | Specified Draw Down time

Obtain P_0: Maximized Detention Volume from figures E-1 to E-4 in Appendix E of this manual using I_A from Step 2. | 0.00 | P_0

Calculate treatment volume (acre-ft):

Treatment volume = A x (P_0 / 12) | 0.00 | Acre-Feet

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APPENDIX F

City of Folsom Will Serve Letter for Water Service

CITY OF
FOLSOM
DISTINCTIVE BY NATURE

September 3, 2021 - Via Email and Hand Delivery

Mr. David C. Hatch
Vic President & Chief Operating Officer
Easton Development Company, LLC
an Aerojet Rocketdyne Holdings, Inc. company
One Easton Place
P.O. Box 1209
Folsom, CA 95630

Re: Confirmation of Folsom Water Service Area – "Will Serve Letter"
107 Acre Parcel – Proposed Land Sale to NorthPoint
SW corner of Folsom Blvd / Hazel Avenue
City of Rancho Cordova Parcel Map Process

Dear Mr. Hatch:

This letter is to confirm the City of Folsom's (City) understanding on several items regarding the above referenced proposed project, including the water service area for the project, the remaining coordination and review steps anticipated with the City of Rancho Cordova Parcel Map process underway, as well as the future steps regarding review of future specific construction and development plans anticipated to be created in the future.

Water Service Area / Water Service

The City can confirm for Easton, Aerojet, and the City of Rancho Cordova that the above referenced property is within the current City of Folsom water service area. Pursuant to the agreement the City has with Aerojet[1], the City will be the water service provider for Lots 1 through 9 shown in Attachment 1. These lots are within the future development area of Westborough, which will be ultimately served water by Golden State Water Company (GSWC).

Golden State Water Company is required to submit the appropriate paperwork to the California Public Utility Commission for approval to serve the Westborough Development. As of the date of this letter, the CPUC has not approved GSWC's application to be the water service provide for Westborough. Per Article 5 of the City-Aerojet Agreement:

[1] Agreement between the City of Folsom and Aerojet-General Corporation with Respect to Water Service, dated June 29, 2007

" The City confirms the City's continuing obligation to provide potable water supplies for uses existing as of the Effective Date on the Aerojet Property, as the current water service provider to that property..."

Regarding any future transfer of CPUC water service territory over to GSWC, the City remains committed to working with GSWC, the CPUC, Aerojet, and the City Rancho Cordova, in the future for the ultimate CPUC service area transfer regarding the lands west of Hazel that are currently within the City's water service area and within the City of Rancho Cordova.

City of Rancho Cordova Map Process

The City understands there is a Tentative Map for Lots 1-9 as shown in Attachment 1 has been created, submitted, and has completed multiple rounds reviewed by City of Rancho Cordova and will be coming up for approval at City of Rancho Cordova soon. A Final Parcel Map process will follow. The City of Rancho Cordova can rely on this letter regarding Folsom water service for Lots 1-9 of Attachment 1.

Future Construction Plan Review / Appropriate Conditions of Approval

The City understands that detailed project construction plans for Lots 1-9 of Attachment 1 will be created and will be submitted to the City of Rancho Cordova and the City of Folsom for review. Prior to submitting any improvement plans for review, Easton Development LLC shall work with the City to determine that existing water infrastructure can deliver the necessary potable water service. Water supplies are available from the City of Folsom to serve Lots 1-9, but an analysis of the future water infrastructure construction plans is required to determine how the water will be delivered, and if the delivery of this water requires any system improvements to the City's existing water infrastructure.

The City looks forward to working with all parties involved moving forward. If you have any questions, please contact my office.

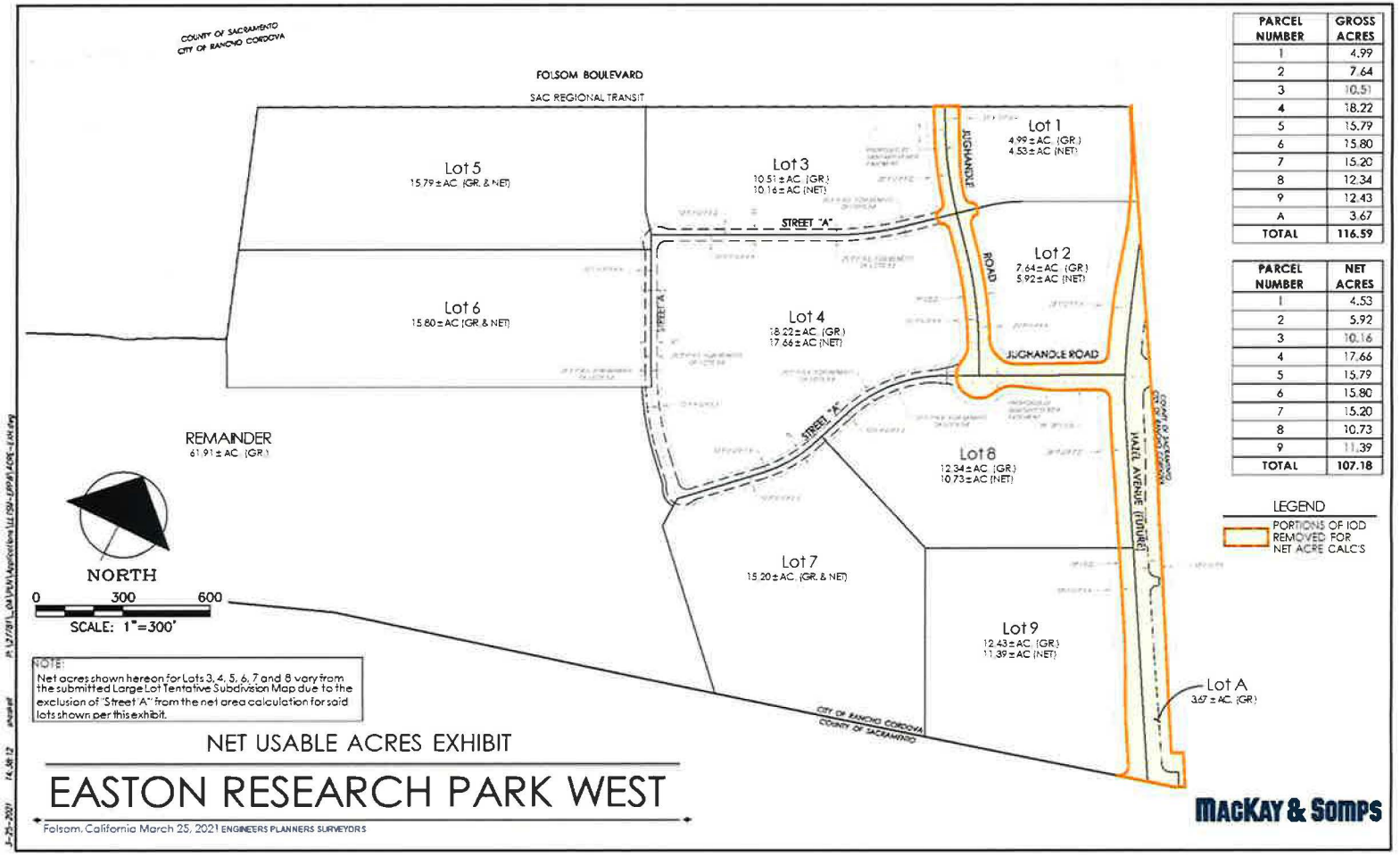
Sincerely,

Marcus Yasutake, PE
Environmental and Water Resources Director

CC: Darcy Goulart, City of Rancho Cordova
Mike Pavik, Easton

Attachment 1 – Property Site Description for Lots 1-9

Attachment 1 - Property Site Description



PARCEL NUMBER	GROSS ACRES
1	4.99
2	7.64
3	10.51
4	18.22
5	15.79
6	15.80
7	15.20
8	12.34
9	12.43
A	3.67
TOTAL	116.59

PARCEL NUMBER	NET ACRES
1	4.53
2	5.92
3	10.16
4	17.66
5	15.79
6	15.80
7	15.20
8	10.73
9	11.39
TOTAL	107.18

