Appendix A

Air Quality and Greenhouse Gas Assessment

AIR QUALITY & GREENHOUSE GAS IMPACT ASSESSMENT

FOR

HUNTER RANCH RESORT PROJECT

PASO ROBLES, CA

APRIL 2025

PREPARED BY:

AMBIENT
AIR QUALITY & NOISE CONSULTING

75 HIGUERA STREET, SUITE 105
SAN LUIS OBISPO, CA 93401

TABLE OF CONTENTS

Introduction 1
Proposed Project Summary 1
Air Quality 1
Existing Setting 1
Regulatory Framework 10
Impact Analysis 13
Greenhouse Gases and Climate Change 31
Existing Setting 31
Regulatory Framework 35
Impact Analysis 40
References 46

LIST OF TABLES

Table 1. Common Pollutants & Adverse Effects 5
Table 2. Summary of Ambient Air Quality Monitoring Data 7
Table 3. Air Quality Index Summary for Ozone & Related Health Effects 8
Table 4. Air Quality Index Summary for Fine Particulate Matter & Related Health Effects 9
Table 5. Air Quality Index Annual Historical Summary 9
Table 6. Summary of Ambient Air Quality Standards & Attainment Designations 12
Table 7. SLOAPCD Thresholds of Significance for Project-Level Construction Impacts 13
Table 8. SLOAPCD Thresholds of Significance for Project-Level Operational Impacts 14
Table 9. Daily Construction Emissions without Mitigation 18
Table 10. Quarterly Construction Emissions without Mitigation 19
Table 11. Summary of Construction Emissions without Mitigation 19
Table 12. Daily Construction Emissions with Mitigation 22
Table 13. Quarterly Construction Emissions with Mitigation 23
Table 14. Summary of Construction Emissions with Mitigation 23
Table 15. Operational Emissions without Mitigation 25
Table 16. Operational Emissions with Mitigation 28
Table 17. Global Warming Potential for Greenhouse Gases 32
Table 18. City of Paso Robles GHG Emissions Inventories 33
Table 19. Construction-Generated GHG Emissions 41
Table 20. Operational GHG Emissions 42
Table 21. Project Consistency with the City's Climate Action Plan 43

LIST OF FIGURES

Figure 1. Proposed Site Plan 2
Figure 2. Paso Robles Municipal Airport Wind Rose Plot 4
Figure 3. California GHG Emissions Inventory by Sector & Subsector (2019) 33
Figure 4. California Black Carbon Emissions Inventory (Year 2013) 34

APPENDICES

Appendix A: Emissions Modeling

LIST OF COMMON TERMS & ACRONYMS

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
APS	Alternative Planning Strategy
AQI	Air Quality Index
ARB	California Air Resources Board
ATCM	Air Toxics Control Measure
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BSC	Building Standards Commission
C_2F_6	Perfluoroethane
C_3F_8	Perfluoropropane
C_4F_{10}	Perfluorobutane
C_4F_8	Perfluorocyclobutane
C_5F_{12}	Perfluoropentane
C_6F_{14}	Perfluorohexane
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAMP	Construction Activity Management Plan
CAPCOA	California Air Pollution Control Officers Association
CBC	California Building Code
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CF_4	Perfluoromethane
CH4	Methane
City	City of Paso Robles
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CVC	California Vehicle Code
DPM	Diesel-Exhaust Particulate Matter or Diesel-Exhaust PM
EV	Electric Vehicle
FCAA	Federal Clean Air Act
GHG	Greenhouse Gases
GWP	Global Warming Potential
HAP	Hazardous Air Pollutant
HFC	Hydrofluorocarbons
hp	Horsepower
LNG	Liquified Natural Gas
LOS	Level of Service
MMT	Million Metric Tons
mph	Miles per Hour
MPO	Metropolitan Planning Organization

MT	Metric Tons
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NESHAPs	National Emission Standards for HAPs
NF_3	Nitrogen Trifluoride
NHTSA	National Highway Traffic Safety Administration
NO_2	Nitrogen Dioxide
NOA	Naturally-Occurring Asbestos
NO_X	Oxides of Nitrogen
O_3	Ozone
OPR	Office of Planning and Research
Pb	Lead
PFC	Perfluorocarbons
PM	Particulate Matter
PM_{10}	Fugitive Particulate Matter (less than 10 micrometers)
$PM_{2.5}$	Fine Particulate Matter (less than 2.5 micrometers)
ppb	Parts per Billion
ppm	Parts per Million
Project	Paso Robles Hunter Ranch
PV	Photovoltaic
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
SB	Senate Bill
SCCAB	South Central Coast Air Basin
SCS	Sustainable Communities Strategy
SF_6	Sulfur Hexafluoride
SLCP	Short-lived Climate Pollutant
SLOAPCD	San Luis Obispo Air Pollution Control District
SLOCOG	San Luis Obispo Council of Governments
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	Sulfur Dioxide
SP	Service Population
TAC	Toxic Air Contaminant
U.S. EPA	United State Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
ZNE	Zero Net Energy
$\mu g/m^3$	Micrograms per cubic meter
µm	Micrometer

INTRODUCTION

This report provides an analysis of air quality and greenhouse gas (GHG) impacts associated with the development of the proposed Hunter Ranch Resort Project (project). This report also provides a summary of existing conditions in the project area and the applicable regulatory framework pertaining to air quality and climate change.

PROPOSED PROJECT SUMMARY

The proposed project would add a 402-unit resort hotel, a 300-person event center, and supporting facilities to the existing 18-hole golf course. The proposed project's site plan is depicted in Figure 1.

AIR QUALITY

Existing Setting

The project is located in the City of Paso Robles (City), within the South Central Coast Air Basin (SCCAB), and within the jurisdiction of the San Luis Obispo County Air Pollution Control District (SLOAPCD). Air quality in the SCCAB is influenced by a variety of factors, including topography, and local and regional meteorology.

Topography

The City sits on the rolling hills of the eastern side of the Santa Lucia Mountain Range. It is bounded from the northwest by the Santa Lucia Mountain Range, which extends almost the entire length of the county. Rising sharply to about 3,000 feet at its northern boundary, the Santa Lucia Range gradually winds southward away from the coast, finally merging into a mass of rugged features on the north side of Cuyama Canyon. Point Buchon juts into the Pacific just south of Morro Bay to form the protective harbor of San Luis Obispo Bay. The Irish Hills are the dominant feature on this knob of land, rising abruptly from the shore to form steep cliffs and generally complex terrain from the Los Osos/Montana de Oro State Park area to Pismo Beach. These headlands have a pronounced influence on local wind flow patterns.

Estuaries are also a notable feature of the coastal areas, occurring wherever flowing streams meet the ocean. Morro Bay contains the region's largest estuary, with a saltwater marsh located on the east side where Chorro and Los Osos creeks enter the bay. This is one of the most significant wetlands remaining on the California coast and has been designated part of the National Estuary Program. It provides nesting habitat for blue herons, cranes, and other important types of woodland birds and wildlife. Smaller coastal lagoons and marshes are also scattered along the county's shoreline.

Local and Regional Meteorology

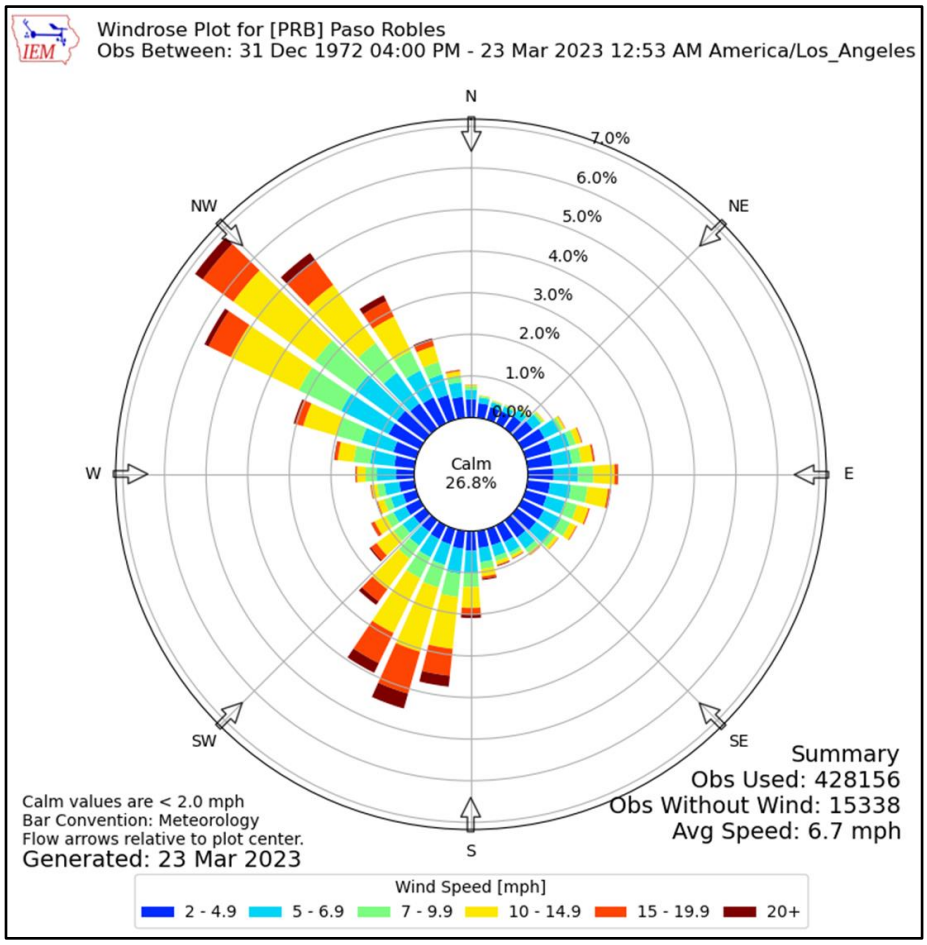
The climate of the county can be generally characterized as Mediterranean, with warm, dry summers and cooler, relatively damp winters. Along the coast, mild temperatures are the rule throughout the year due to the moderating influence of the Pacific Ocean. This effect is diminished inland in proportion to the distance from the ocean or by major intervening terrain features, such as the coastal mountain ranges. As a result, inland areas are characterized by a considerably wider range of temperature conditions. Maximum summer temperatures average about 70 degrees Fahrenheit near the coast, while inland valleys are often in the high 90s. Minimum winter temperatures average from the low 30s along the coast to the low 20s inland (SLOAPCD 2001).

Figure 1. Proposed Site Plan

Source: Watson Planning Consultants 2024

base and the top of the inversion. The strength of the inversion determines how easily it can be broken by wind or solar heating (SLOAPCD 2001).

Figure 2. Paso Robles Municipal Airport Wind Rose Plot



Source: Iowa Environmental Mesonet 2023

Several types of inversions are common to this area. Weak, surface inversions are caused by radiational cooling of air in contact with the cold surface of the earth at night. In valleys and low-lying areas, this condition is intensified by the addition of cold air flowing downslope from the hills and pooling on the valley floor. Surface inversions are a common occurrence throughout the county during the winter, particularly on cold mornings when the inversion is strongest. As the morning sun warms the earth and the air near the ground, the inversion lifts, gradually dissipating as the day progresses. During the late spring and early summer months, cool air over the ocean can intrude under the relatively warmer air over land, causing a marine inversion. These inversions can restrict dispersion along the coast, but they are typically shallow and will dissipate with surface heating (SLOAPCD 2001).

In contrast, in the summertime, the presence of the Pacific high-pressure cell can cause the air mass aloft to sink. As the air descends, compressional heating warms it to a temperature higher than the air below. This highly stable atmospheric condition, termed a subsidence inversion, is common to all of coastal California and can act as a nearly impenetrable lid to the vertical mixing of pollutants. The base of the inversion typically ranges from 1,000 to 2,500 feet above sea level; however, levels as low as 250 feet, among the lowest anywhere in the state, have been recorded on the coastal plateau in San Luis Obispo County. The strength of these inversions makes them difficult to disrupt. Consequently, they can persist for one or more days, causing air stagnation and the buildup of pollutants. Highest or worst-case ozone levels are often associated with the presence of this type of inversion (SLOAPCD 2001).

Regional meteorology is largely dominated by a persistent high-pressure area that commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause seasonal changes in the weather patterns of the area. The Pacific High remains generally fixed several hundred miles offshore from May through September, enhancing onshore winds and opposing offshore winds.

During spring and early summer, as the onshore breezes pass over the cool water of the ocean, fog, and low clouds often form in the marine air layer along the coast. Surface heating in the interior valleys dissipates the marine layer as it moves inland (SLOAPCD 2001).

From November through April the Pacific High tends to migrate southward, allowing northern storms to move across the county. About 90 percent of the total annual rainfall is received during this period. Winter conditions are usually mild, with intermittent periods of precipitation followed by mostly clear days. Rainfall amounts can vary considerably among different regions in the county. In the Coastal Plain, annual rainfall averages 16 to 28 inches, while the Upper Salinas River Valley generally receives about 12 to 20 inches of rain. The Carrizo Plain is the driest area of the county with less than 12 inches of rain in a typical year (SLOAPCD 2001).

Airflow around the county plays an important role in the movement and dispersion of pollutants. The speed and direction of local winds are controlled by the location and strength of the Pacific High-pressure system and other global patterns, by topographical factors, and by circulation patterns resulting from temperature differences between the land and sea. In spring and summer months, when the Pacific High attains its greatest strength, onshore winds from the northwest generally prevail during the day. At night, as the sea breeze dies, weak drainage winds flow down the coastal mountains and valleys to form a light, easterly land breeze (SLOAPCD 2001).

In the Fall, onshore surface winds decline, and the marine layer grows shallow, allowing an occasional reversal to a weak offshore flow. This, along with the diurnal alternation of land-sea breeze circulation, can sometimes produce a "sloshing" effect. Under these conditions, pollutants may accumulate over the ocean for a period of one or more days and are subsequently carried back onshore with the return of the sea breeze. Strong inversions can form at this time, "trapping" pollutants near the surface (SLOAPCD 2001).

This effect is intensified when the Pacific High weakens or moves inland to the east. This may produce a "Santa Ana" condition in which air, often pollutant-laden, is transported into the county from the east and southeast. This can occur over a period of several days until the high-pressure system returns to its normal location, breaking the pattern. The breakup of Santa Ana conditions may result in relatively stagnant conditions and a buildup of pollutants offshore. The onset of the typical daytime sea breeze can bring these pollutants back onshore, where they combine with local emissions to cause high pollutant concentrations. Not all occurrences of the "post-Santa Ana" conditions lead to high ambient pollutant levels, but it does play an important role in the air pollution meteorology of the county (SLOAPCD 2001).

Predominant wind flow in the project area, based on historical meteorological data from the Paso Robles Municipal Airport, is depicted in Figure 2. As depicted, wind flow in the project area is predominantly from the northwest, averaging approximately 6.7 miles per hour (mph). Calm winds are present an average of approximately 26.8 percent of the time.

Atmospheric Stability and Dispersion

Air pollutant concentrations are primarily determined by the amount of pollutant emissions in an area and the degree to which these pollutants are dispersed into the atmosphere. The stability of the atmosphere is one of the key factors affecting pollutant dispersion. Atmospheric stability regulates the amount of vertical and horizontal air exchange or mixing that can occur within a given air basin. Restricted mixing and low wind speeds are generally associated with a high degree of stability in the atmosphere. These conditions are characteristic of temperature inversions (SLOAPCD 2001).

In the atmosphere, air temperatures normally decrease as altitude increases. At varying distances above the earth's surface, however, a reversal of this gradient can occur. This condition termed an inversion, is simply a warm layer of air above a layer of cooler air, and it has the effect of limiting the vertical dispersion of pollutants. The height of the inversion determines the size of the mixing volume trapped below. Inversion strength or intensity is measured by the thickness of the layer and the difference in temperature between the

Criteria Air Pollutants

For the protection of public health and welfare, the Clean Air Act (CAA) required that the United States Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the U.S. EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air without harm to the public's health. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. The CAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail later in this report.

Human Health & Welfare Effects

Common air pollutants and associated adverse health and welfare effects are summarized in Table 1. Within the SCCAB, the air pollutants of primary concern, with regard to human health, include ozone, particulate matter (PM), and carbon monoxide (CO). As depicted in Table 1, exposure to increased pollutant concentrations of ozone, PM and CO can result in various heart and lung ailments, cardiovascular and nervous system impairment, and death.

Table 1. Common Pollutants & Adverse Effects

Pollutant	Human Health & Welfare Effects
Particulate Matter (PM_{10} & $PM_{2.5}$)	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).
Ozone (O_3)	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. Damages rubber, some textiles, and dyes.
Sulfur Dioxide (SO_2)	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel; damage crops and natural vegetation. Impairs visibility. A precursor to acid rain.
Carbon Monoxide (CO)	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.
Nitrogen Dioxide (NO_2)	Respiratory irritant; aggravates lung and heart problems. A precursor to ozone and acid rain. Contributes to global warming, and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.
Source: ARB 2018	

Odors

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

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. The SLOAPCD does not have an individual rule or regulation that specifically addresses odors; however, odors would be applicable to SLOAPCD's Rule 402, Nuisance. Any actions related to odors would be based on citizen complaints to local governments and the SLOAPCD. The SLOAPCD recommends that odor impacts be addressed in a qualitative manner. Such analysis shall determine if the project results in excessive nuisance odors, as defined under the California Code of Regulations, Health & Safety Code Section 41700, air quality public nuisance.

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the Federal Clean Air Act (FCAA) or the California Clean Air Act (CCAA) and are thus not subject to National or State ambient air quality standards (AAQS). TACs are not considered criteria pollutants in that the FCAA and CCAA do not address them specifically through the setting of National or State AAQS. Instead, the U.S. EPA and California Air Resources Board (ARB) regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with District rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national level, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act [Assembly Bill (AB) 1807] and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

At the state level, the ARB has authority for the regulation of emissions from motor vehicles, fuels, and consumer products. Most recently, diesel-exhaust particulate matter (DPM) was added to the ARB list of TACs. DPM is the primary TACs of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. The ARB has made the reduction of the public's exposure to DPM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (ARB 2005).

At the local level, air districts have authority over stationary or industrial sources. All projects that require air quality permits from the SLOAPCD are evaluated for TAC emissions. The SLOAPCD limits emissions and public exposure to TACs through a number of programs. The SLOAPCD prioritizes TAC-emitting stationary sources, based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. The SLOAPCD requires a comprehensive health risk assessment for facilities that are classified in the significant-risk category, pursuant to AB 2588. No major existing sources of TACs have been identified in the project area.

Asbestos

Asbestos is the common name for a group of naturally-occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Naturally-occurring asbestos (NOA), which was identified as a TAC in 1986 by ARB, is located in many parts of California and is commonly associated with ultramafic rock. The project site is not located within an area identified as having a potential for naturally-occurring ultramafic rock and serpentine soils.

Ambient Air Quality

Air pollutant concentrations are measured at several monitoring stations in the SCCAB. The Paso Robles-Santa Fe Avenue is the closest representative monitoring station with sufficient data to meet U.S. EPA and/or ARB criteria for quality assurance. Ambient monitoring data was obtained for the last three years of available measurement data (i.e., 2021 through 2023) and is summarized in Table 2. As depicted, the state $PM_{2.5}$ standards were exceeded for 3 days in 2021 and was exceeded for 2 days in 2023. Measured 24-hour PM_{10}, 8-hour ozone, 1-hour ozone, and NO_2 concentrations did not exceed the state and federal ambient air quality standards in the last three years of monitoring.

Table 2. Summary of Ambient Air Quality Monitoring Data

Pollutant	Monitoring Year		
	2021	2022	2023
Ozone (O_3)[1]			
Maximum concentration (1-hour/8-hour average; ppm)	0.070/0.065	0.074/0.068	0.075/0.066
Number of days state/national 1-hour standard exceeded	0/0	0/0	0/0
Number of days state/national 8-hour standard exceeded	0/0	0/0	0/0
Nitrogen Dioxide (NO_2)[2]			
Maximum concentration (1-hour average; ppb)	44.0	26.0	50.7
Number of days state/national standard exceeded	0/0	0/0	0/0
Suspended Particulate Matter ($PM_{2.5}$)[2]			
Maximum 24-hour concentration (national/state; µg/m3)	19.1/19.1	24.3/24.3	28.7/28.7
Number of days national standard exceeded (measured/calculated)[3]	0/0	0/0	0/0
Suspended Particulate Matter (PM_{10})[1]			
Maximum concentration (national/state; µg/m3)	74.4/74.7	46.8/46.1	54.1/52.9
Number of days state standard exceeded (measured/calculated)[3]	3/3.1	0/NA	2/2
Number of days national standard exceeded (measured/calculated)[3]	0/0	0/0	0/0

ppm = parts per million by volume, µg/m³ = micrograms per cubic meter, NA=Not Available

1. *Based on ambient concentrations obtained from the Paso Robles-Santa Fe Avenue. Monitoring Station.*
2. *Based on ambient concentrations obtained from the Atascadero-Lift Station #5 Monitoring Station.*
3. *Measured days are those days that an actual measurement was greater than the standard. Calculated days are estimated days that measurement would have exceeded the standard had measurements been collected every day.*

Source: ARB 2024

Air Quality Index

The health effects of ambient air pollutant concentrations can be evaluated and presented in various ways. The most common method is the use of the Air Quality Index (AQI). The U.S. EPA developed the AQI as an easy-to-understand measure of health impacts based on measured ambient air quality in comparison to established ambient air quality standards. Tables 3 and 4 present a summary of the health impacts for ozone and fine particulate matter ($PM_{2.5}$), respectively, based on the U.S. EPA's AQI.

A summary of the annual air quality index for the project area, based on monitoring data obtained from the Paso Robles monitoring station for the last three years of available data, is provided in Table 5. As depicted in Table 5, the project area typically experiences "good" air quality with the total number of days ranging from 117 to 207 days per year. Days classified as "moderate" AQI ranged from 152 to 245 days per year. Over the last three years of available data, the area has experienced a total of 17 days classified as "Unhealthy for Sensitive Groups". Over the past three years, the area has not experienced air quality conditions within the "Unhealthy", "Very Unhealthy" or "Hazardous" range (U.S. EPA 2023).

Table 3. Air Quality Index Summary for Ozone & Related Health Effects

Air Quality Index / 8-hour Ozone Concentration	Health Effects Description
AQI 51-100: Moderate Ambient Ozone Concentrations: 55-70 ppb	Sensitive Groups: Children and people with asthma are the groups at most risk. Health Effects Statements: Unusually sensitive individuals may experience respiratory symptoms. Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI 101-150: Unhealthy for Sensitive Groups Ambient Ozone Concentrations: 71-85 ppb	Sensitive Groups: Children and people with asthma are the groups at most risk. Health Effects Statements: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI 151–200: Unhealthy Ambient Ozone Concentrations: 86-105 ppb	Sensitive Groups: Children and people with asthma are the groups at most risk. Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI 201-300: Very Unhealthy Ambient Ozone Concentrations: 106-200 ppb	Sensitive Groups: Children and people with asthma are the groups at most risk. Health Effects Statements: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid outdoor exertion; everyone else, especially children, should limit outdoor exertion.
An AQI of 50 and below is categorized as "Good" and air quality is satisfactory, and poses little or no risk. An AQI of 301 or higher is categorized as "Hazardous" having a health warning of emergency conditions: everyone is more likely to be affected. Outdoor activities should be avoided for all individuals. *AQI = Air quality index, ppb = parts per billion* *Source: ARB 2018*	

Table 4. Air Quality Index Summary for Fine Particulate Matter & Related Health Effects

Air Quality Index / 8-hour Ozone Concentration	Health Effects Description
AQI 51-100: Moderate Ambient Concentrations: 12.1-35.4 µg/m^3	Sensitive Groups: Some people who may be unusually sensitive to particulate. Health Effects Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion. Cautionary Statements: Unusually sensitive people: Consider reducing prolonged or heavy exertion. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier.
AQI 101-150: Unhealthy for Sensitive Groups Ambient Concentrations: 35.5-55.4 µg/m^3	Sensitive Groups: People with heart or lung disease, older adults, children, and teenagers. Health Effects Statements: Increasing likelihood of respiratory symptoms for sensitive individuals, aggravation of heart or lung disease, and premature mortality in persons with cardiopulmonary disease, and the elderly. Cautionary Statements: If you have heart disease: Symptoms such as palpations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact a health care provider.
AQI 151–200: Unhealthy Ambient Concentrations: 55.5-150.4 µg/m^3	Sensitive Groups: Everyone. Health Effects Statements: Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and the elderly; increased respiratory effects in general population. Cautionary Statements: Sensitive groups: Avoid prolonged or heavy exertion. Consider moving activities indoors or rescheduling. Everyone else: Reduce prolonged or heavy exertion. Take more breaks during outdoor activities.
AQI 201-300: Very Unhealthy Ambient Concentrations: 150.5-250.4 µg/m^3	Sensitive Groups: Everyone. Health Effects Statements: Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and the elderly; significant increase in respiratory effects in general population. Cautionary Statements: Sensitive groups: Avoid all physical activity outdoors. Move activities indoors or reschedule to a time when air quality is better. Everyone else: Avoid prolonged or heavy exertion. Consider moving activities indoors or reschedule to a time when air quality is better.

An AQI of 50 and below is categorized as "Good" and air quality is satisfactory and poses little or no risk. An AQI of 301 or higher is categorized as "Hazardous" having a health warning of emergency conditions: everyone is more likely to be affected. Outdoor activities should be avoided for all individuals.

AQI = Air quality index, µg/m3 = micrograms per cubic meter

Source: ARB 2018

Table 5. Air Quality Index Annual Historical Summary

Year	Air Quality Index (AQI) - Number of Days					
	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy	Hazardous
2023	207	152	6	0	0	0
2022	117	245	3	0	0	0
2021	154	203	8	0	0	0

Represents overall air quality taking into account all criteria pollutants measured.

Source: U.S, EPA 2023

Regulatory Framework

Air quality within the SCCAB is regulated by several jurisdictions including the U.S. EPA, ARB, and the SLOAPCD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation.

Federal

U.S. ENVIRONMENTAL PROTECTION AGENCY

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

FEDERAL CLEAN AIR ACT

The FCAA required the U.S. EPA to establish NAAQS or National AAQS, and set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 6.

State

CALIFORNIA AIR RESOURCES BOARD

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The CAAQS are summarized in Table 6. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel, and engine used.

CALIFORNIA CLEAN AIR ACT

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for ozone, CO, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2) by the earliest practicable date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for the implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

ASSEMBLY BILLS 1807 & 2588 - TOXIC AIR CONTAMINANTS

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

IN-USE OFF-ROAD DIESEL VEHICLE REGULATION

On July 26, 2007, the ARB adopted a regulation to reduce DPM and oxides of nitrogen (NO_X) emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. The regulation applies to self-propelled diesel-fueled vehicles that cannot be registered and licensed to drive on-road, as well as two-engine vehicles

that drive on road, with the limited exception of two-engine sweepers. Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, airport ground support equipment, water well drilling rigs, and two-engine cranes. Such vehicles are used in construction, mining, and industrial operations. The regulation does not apply to stationary equipment or portable equipment such as generators. The off-road vehicle regulation establishes emissions performance requirements, reporting, disclosure, and labeling requirements for off-road vehicles, and limits unnecessary idling.

CALIFORNIA BUILDING CODE

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

GREEN BUILDING STANDARDS

In essence, green buildings standards are indistinguishable from any other building standards. Both standards are contained in the CBC and regulate the construction of new buildings and improvements. The only practical distinction between the two is that whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

The 2019 Building Energy Efficiency Standards (2019 Standards), adopted in May 2018, addressed four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to the exterior and vice versa), residential and nonresidential ventilation requirements, and non-residential lighting requirements. The 2019 Standards required new residential and non-residential construction; as well as major alterations to existing structures, to include EV-capable parking spaces which have electrical panel capacity and conduit to accommodate future installation. In addition, the 2019 Standards also required the installation of PV systems for low-rise residential dwellings, defined as single-family dwellings and multi-family dwellings up to three stories in height. These requirements are based on various factors, including the floor area of the home, sun exposure, and climate zone. Under the 2019 standards, nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2019).

The recently updated 2022 Building Energy Efficiency Standards (2022 Standards), which were approved in December 2021, encourage efficient electric heat pumps, establish electric-ready requirements when natural gas is installed and support the future installation of battery storage, and further expands solar photovoltaic and battery storage standards. The 2022 Standards extend solar PV system requirements, as well as battery storage capabilities for select land uses, including high-rise multi-family and non-residential land uses, such as office buildings, schools, restaurants, warehouses, theaters, grocery stores, and more. Depending on the land use and other factors, solar systems should be sized to meet targets of up to 60 percent of the structure's loads. These new solar requirements will become effective January 1, 2023, and contribute to California's goal of reaching net-zero carbon footprint by 2045 (CEC 2021).

Local

COUNTY OF SAN LUIS OBISPO AIR POLLUTION CONTROL DISTRICT

The SLOAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions within the region are maintained. Responsibilities of the SLOAPCD include but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

Table 6. Summary of Ambient Air Quality Standards & Attainment Designations

San Luis Obispo County Attainment Status						
Pollutant	**Averaging Time**	**California Standards***		**Federal Standards†**		
		Concentration	**Attainment Status**	**Primary**	**Secondary**	**Attainment Status**
Ozone (O_3)	1 Hour	0.09 ppm	Non-Attainment	–	Same as Primary Standard	Non-Attainment Eastern SLO County - Attainment Western SLO County‡
	8 Hour	0.070 ppm		0.070 ppm		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m³	Non-Attainment	150 µg/m³	Same as Primary Standard	Unclassified
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter (PM2.5)	24 Hour	No State Standard	Attainment	35 µg/m³	Same as Primary Standard	Unclassified/ Attainment
	Annual Arithmetic Mean	12 µg/m³		9.0 µg/m³	15.0 µg/m³	No Attainment Information§
Carbon Monoxide (CO)	8 Hour	9.0 ppm	Attainment	9 ppm	–	Unclassified/ Attainment
	1 Hour	20 ppm		35 ppm	–	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	Attainment	0.053 ppm	–	Unclassified/ Attainment
	1 Hour	0.18 ppm		100 ppb	Same as Primary Standard	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	Attainment	0.030 ppm	–	Unclassified/ Attainment
	24 Hour	0.04 ppm		0.14 ppm	–	
	3 Hour	–		–	0.5 ppm	
	1 Hour	0.25 ppm		75 ppb	–	
Lead	30 Day Average	1.5 µg/m³	Attainment	–	-	Unclassified/ Attainment
	Calendar Quarter	–		1.5 µg/m³	Same as Primary Standard	
	Rolling 3-Month Average*	–		0.15 µg/m³		
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent.	Unclassified	**No Federal Standards**		
Sulfates	24 Hour	25 µg/m³	Attainment			
Hydrogen Sulfide	1 Hour	0.03 ppm	Attainment			
Vinyl Chloride*	24 Hour	0.01 ppm	No Attainment Information			

* For more information on California standards visit: https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards

† For more information on Federal standards visit: https://www.epa.gov/criteria-air-pollutants

‡ San Luis Obispo County has been designated non-attainment east of the -120.4 deg Longitude line in areas of SLO County that are south of latitude 35.45 degrees, and east of the -120.3 degrees longitude line in areas of SLO County that are north of latitude 35.45 degrees. Map of non-attainment area is available upon request from the APCD.

§ On February 7, 2024, the national annual $PM_{2.5}$ primary standard was lowered from 12.0 µg/m³ to 9.0 µg/m³. The existing national 24- hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15.0 µg/m³. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m³ also were retained. Area designations for the new standard are expected to be promulgated Feb. 2026. The county is designated as Unclassifiable/Attainment for the 2012 Annual $PM_{2.5}$ standard of 12.0 µg/m³.

Revised January 13, 2025

Source: SLOAPCD 2025

CITY OF PASO ROBLES

The City's General Plan includes numerous policies related to air quality. These policies address emissions generated by mobile and non-mobile sources and land use compatibility. The General Plan includes the following policies related to air quality:

- *Circulation Element - Policy CE-1A*. Circulation Master Plan. Revise/update the City's Circulation Master Plan to address the mobility needs of all users of the streets, roads, and highways including

motorists, movers of commercial goods, seniors, children, pedestrians, disabled persons, users of public transportation, and bicyclists.

- *Circulation Element - Policy CE-1B. Reduce Vehicle Miles Traveled (VMT). The City shall strive to reduce VMT generated per household per weekday by making efficient use of existing transportation facilities and by providing direct routes for pedestrians and bicyclists through the implementation of sustainable planning principles.*
- *Circulation Element - Policy CE-1C. Airport. Improve/expand transportation to and from the Paso Robles Municipal Airport as set forth in the Airport Master Plan*
- *Circulation Element - Policy CE-1D. Transit. Improve and expand transit services.*
- *Circulation Element - Policy CE-1E. Rail. Promote regional, interstate, and intra-state rail service.*
- *Circulation Element - Policy CE-1F. Pedestrian and Bicycle Access. Provide safe and convenient pedestrian and bicycle access to all areas of the City.*
- *Conservation Element - Policy C-2A. Traffic Congestion Reduction. Implement circulation systems improvements to reduce congestion and associated air contaminant emissions.*
- *Conservation Element - Policy C-2B. VMT Reduction. Implement programs to reduce the number of VMT, especially by single occupant vehicles, including providing opportunities for mixed-use projects.*
- *Conservation Element - Policy C-2C.* Emissions Reduction. Take steps to reduce creation of air contaminant emissions.

Impact Analysis

Thresholds of Significance

In accordance with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines,* air quality impacts associated with the proposed project would be considered significant if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

c) Expose sensitive receptors to substantial pollutant concentrations.

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

To assist in the evaluation of air quality impacts, the SLOAPCD has developed recommended significance thresholds, which are contained in the SLOAPCD's *CEQA Air Quality Handbook* (2012). For the purposes of this analysis, project emissions are considered potentially significant impacts if any of the following SLOAPCD thresholds are exceeded:

Construction Impacts

The threshold criteria established by the SLOAPCD to determine the significance and appropriate mitigation level for a project's short-term construction emissions are presented in Table 7 and discussed, as follows (SLOAPCD 2012):

Table 7. SLOAPCD Thresholds of Significance for Project-Level Construction Impacts

Pollutant	Threshold[1]		
	Daily (lbs/day)	Quarterly Tier 1 (tons)	Quarterly Tier 2 (tons)
Ozone Precursors (ROG + NO_X)	137	2.5	6.3
Diesel Particulate Matter (DPM)	7	0.13	0.32
Fugitive Particulate Matter (PM_{10}), Dust[2]	--	2.5	--

1. Daily and quarterly emissions thresholds are based on the California Health & Safety Code and the ARB Carl Moyer Guidelines.
2. Any project with a grading area greater than 4.0 acres of a worked area can exceed the 2.5 tons PM10 quarterly threshold.
Source: SLOAPCD 2012

ROG and NOx Emissions

Daily: For construction projects exceeding the 137 lbs/day threshold require Standard Mitigation Measures.

Quarterly – Tier 1: For construction projects exceeding the 2.5 tons/quarter threshold, require Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment. Off-site mitigation may be required if feasible mitigation measures are not implemented, or if no mitigation measures are feasible for the project.

Quarterly – Tier 2: For construction projects exceeding the 6.3 tons/quarter threshold, Standard Mitigation Measures, BACT, implementation of a Construction Activity Management Plan (CAMP), and off-site mitigation are required.

DPM Emissions

Daily: For construction projects exceeding the 7 lbs/day threshold, require Standard Mitigation Measures.

Quarterly - Tier 1: For construction projects lasting more than one quarter, exceedance of the 0.13 tons/quarter threshold requires Standard Mitigation Measures, BACT for construction equipment; and,

Quarterly - Tier 2: For construction projects exceeding the 0.32 tons/quarter threshold, require Standard Mitigation Measures, BACT, implementation of a CAMP, and off-site mitigation.

Fugitive Particulate Matter (PM10), Dust Emissions

Quarterly- Tier 1: For construction projects exceeding the 2.5 tons/quarter threshold require Fugitive PM_{10} dust Mitigation Measures and may require the implementation of a CAMP.

Operational Impacts

Criteria Air Pollutants

The threshold criteria established by the SLOAPCD to determine the significance and appropriate mitigation level for long-term operational emissions from a project are presented in Table 8.

For projects exceeding the 25 lbs/day operational ozone precursor threshold but not the corresponding 25 tons/year annual threshold, the project shall implement all applicable SLOAPCD-recommended mitigation measures. Off-site mitigation may be required for projects (exceeding the 25 lbs/day threshold) if all applicable SLOAPCD-recommended mitigation measures are not implemented, or if no mitigation measures are feasible for the project. Off-site mitigation is required for projects exceeding the 25 tons/year threshold (SLOAPCD 2017).

Table 8. SLOAPCD Thresholds of Significance for Project-Level Operational Impacts

Pollutant	Threshold[1]	
	Daily (lbs/day)	Annual (tons/year)
Ozone Precursors [reactive organic gas (ROG) + oxides of nitrogen (NO_X)]	25	25
Diesel Particulate Matter (DPM)[2]	1.25	--
Fugitive Particulate Matter (PM_{10}), Dust	25	25
Carbon Monoxide (CO)	550	--

1. *Daily and annual emissions thresholds are based on the California Health & Safety Code Division 26, Part 3, Chapter 10, Section 40918 and the ARB Carl Moyer Guidelines for DPM.*
2. *Applies to on-site emissions. DPM is seldom emitted from individual projects in quantities which lead to local or regional air quality attainment violations.*

Source: SLOAPCD 2012

Toxic Air Contaminants

If a project has the potential to emit toxic or hazardous air pollutants or is located in close proximity to sensitive receptors, impacts may be considered significant due to increased cancer risk for the affected population, even at a very low level of emissions. For the evaluation of new proposed land use projects that generate TACs, such as diesel-fueled engines, the SLOAPCD has defined the excess cancer risk significance threshold at 10 in a million.

Localized CO Concentrations

Localized CO concentrations associated with the proposed project would be considered a less-than-significant impact if: (1) Traffic generated by the proposed project would not result in deterioration of signalized intersection level of service (LOS) to LOS E or F; or (2) the project would not contribute additional traffic to a signalized intersection that already operates at LOS of E or F (Caltrans 1996).

Odors

Screening of potential odor impacts is typically recommended for the following two situations:

- Projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate; and
- Residential or other sensitive receptor projects or other projects that may attract people locating near existing odor sources.

If the proposed project would locate receptors and known odor sources within one mile of each other, a full analysis of odor impacts is recommended. Known odor sources of primary concern, as identified by the SLOAPCD include landfills, transfer stations, asphalt batch plants, rendering plants, petroleum refineries, and painting/coating operations, as well as, composting, food processing, wastewater treatment, chemical manufacturing, and feedlot/dairy facilities.

Methodology

Emissions associated with the construction of the proposed project were calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1.1.28, computer program. Project construction is anticipated to occur over an approximately 24-month period beginning in December 2024. Construction phase durations were based on the provided information. No existing structure would be demolished. Based on information provided by the project proponent, no fill will be imported or exported. Additional construction information such as off-road equipment use, worker vehicle trips, and equipment load factors were based on default parameters contained in the model. Modeling assumptions and output files are included in Appendix A of this report.

Long-term operational emissions were calculated using the CalEEMod, version 2022.1.1.28 based, in part, on vehicle trip-generation rates derived from the traffic analysis prepared for this project (CCTC 2024). Vehicle travel distribution/distances were not available and were based on model defaults for San Luis Obispo County. Emission modeling files are provided in Appendix A.

Project Impacts and Mitigation Measures

Impact AQ-A. Conflict with or obstruct implementation of the applicable air quality plan?

SLOAPCD Clean Air Plan

As part of the CCAA, the SLOAPCD is required to develop a plan to achieve and maintain the state ozone standard by the earliest practicable date. The SLOAPCD's 2001 Clean Air Plan addresses the attainment and maintenance of state and federal ambient air quality standards. The Clean Air Plan was adopted by SLOAPCD on March 26, 2002.

The SLOAPCD's Clean Air Plan outlines the District's strategies to reduce ozone-precursor pollutants [i.e., reactive organic gas (ROG) and NO_X] from a wide variety of sources. The SLOAPCD's Clean Air Plan includes a stationary-source control program, which includes control measures for permitted stationary sources; as well as transportation and land use management strategies to reduce motor vehicle emissions and use. The stationary-source control program is administered by SLOAPCD. Transportation and land use control measures are implemented at the local or regional level, by promoting and facilitating the use of alternative transportation options, increased pedestrian access and accessibility to community services and local destinations, reductions in VMT, and promotion of congestion management efforts. In addition, local jurisdictions also prepare population forecasts, which are used by SLOAPCD to forecast population-related emissions and air quality attainment, including those contained in the SLOAPCD's Clean Air Plan. As a result, consistency with the SLOAPCD's Clean Air Plan has been evaluated based on the proposed project's

consistency with the land use management strategies and transportation control measures identified in the Clean Air Plan. This analysis also provides an analysis of regional vehicle miles traveled (VMT) and consistency with regional VMT-reduction efforts. Regional VMT estimates are relied upon for regional air quality planning purposes. Regional VMT and growth projections are used to determine the strategies to be implemented sufficient to reach the emission reduction targets set by the ARB through Senate Bill (SB) 375 which is transportation legislation that supports the broader 2030 emission reduction targets required in SB 32.

Transportation and Land Use Control Measures

The SLOAPCD's Clean Air Plan includes multiple transportation and land use control measures intended to reduce emissions through reductions in VMT and the promotion of alternative forms of transportation. The project is not located along existing or planned public transit or pedestrian/bicycle routes. However, mitigation measures have been included that would help to promote the use of alternative means of transportation, including provisions that would promote shuttle service to and from the downtown transit station, promotion of alternative fueled vehicle infrastructure, and bicycle use.

Projected Population, Employment & VMT Growth

According to the Regional Housing Needs Assessment, the City has about 14 percent more housing units than jobs, indicative of a "jobs-poor" community. The City's jobs-to-housing ratio is estimated to improve from a year 2015 ratio of 0.87 to a 0.89 jobs-housing ratio by the year 2035 (SLOCOG 2019). The proposed project would result in increased employment and would not result in additional housing units. As a result, the proposed project would be anticipated to improve the jobs-housing balance.

In addition, the proposed project would have a less than significant impact on VMT. As noted in the traffic report, "The employment-based uses proposed on the site would generate work VMT per employee below the City's threshold. The hotel uses would result in an increase in regional VMT before accounting for the mix of uses, pedestrian and bicycle facilities, and provision of electric golf carts on the site. Once those project features are included, the hotel VMT would be less-than-significant." (CCTC 2024). As a result, the proposed project would not conflict with regional VMT-reduction efforts and associated reductions in mobile-source emissions accounted for in the SLOAPCD's Clean Air Plan. For these reasons, this impact would be considered ***less than significant***.

Particulate Matter Report – Implementation of SB 656 Requirements

In July 2005, SLOAPCD adopted the *Particulate Matter Report* (PM Report). The PM Report identifies various measures and strategies to reduce public exposure to PM emitted from a wide variety of sources, including emissions from permitted stationary sources and fugitive sources, such as construction activities. As discussed in Impact AQ-B, uncontrolled fugitive dust generated during construction may result in localized pollutant concentrations that may result in increased nuisance concerns to nearby land uses. Therefore, construction-generated emissions of PM would be considered to have a ***potentially-significant impact*** with regard to air quality planning efforts.

Mitigation Measures

Implement Mitigation Measures AQ-1 through AQ-2 (refer to Impact AQ-B).

Significance After Mitigation

Implementation of Mitigation Measures AQ-1 and AQ-2 would include measures to reduce construction-generated emissions. Additional mitigation measures have been included that would further reduce project-related operational emissions. Together these measures would help to reduce PM emissions and provide consistency with SLOAPCD's airborne PM-reduction efforts as well as measures identified in the SLOAPCD's Clean Air Plan. With mitigation, this impact would be considered ***less than significant.***

Impact AQ-B. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Short-term Construction Emissions

Construction-generated emissions are of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact. Construction of the proposed project would result in the temporary generation of emissions associated with clearing, site prep, grading, building construction, paving, motor vehicle exhaust associated with construction equipment, and worker trips, as well as the movement of construction equipment on unpaved surfaces. Short-term construction emissions would result in increased emissions of ozone-precursor pollutants (i.e., ROG and NO_X) and emissions of PM. Emissions of ozone-precursors would result from the operation of on- and off-road motorized vehicles and equipment. Emissions of airborne PM are largely dependent on the amount of ground disturbance associated with site preparation activities and can result in increased concentrations of PM that can adversely affect nearby sensitive land uses.

Estimated maximum daily and quarterly emissions associated with the construction of the proposed project are presented in Table 9 and Table 10, respectively. Construction-generated emissions were compared to SLOAPCD's recommended significance thresholds (Daily, Quarterly Tier 1, and Quarterly Tier 2). As depicted in Table 9, the maximum daily emissions associated with project construction would total approximately 164.0 lbs/day of ROG+NO_X and 2.8 lbs/day of $PM_{2.5}$ exhaust. As depicted in Table 10, maximum quarterly construction-generated emissions would total approximately 3.1 tons/quarter of ROG+NO_X, 0.1 tons/quarter of fugitive PM_{10} dust, and <0.1 tons/quarter of $PM_{2.5}$ exhaust.

Maximum daily construction emissions would not exceed SLOAPCD's daily significance threshold. However, maximum quarterly construction emissions are predicted to exceed SLOAPCD's quarterly significance threshold. Emissions would be largely a result of mobile-source emissions associated with construction vehicle and equipment operations anticipated to occur during the grading. If uncontrolled, fugitive dust generated during construction may also result in localized pollutant concentrations that could exceed ambient air quality standards and result in increased nuisance concerns to nearby land uses. For this reason, construction-generated emissions would be considered to have a ***potentially-significant impact.***

Table 9. Daily Construction Emissions without Mitigation

Construction Activity	Phase / Year	Maximum Daily Emissions (lbs/day)[1]									
		ROG	NO_X	ROG+NO_X	CO	PM_{10}			$PM_{2.5}$		
						Exhaust	Dust	Total	Exhaust	Dust	Total
Site Preparation	Phase 1 / 2024	3.7	36.1	39.8	33.5	1.6	5.2	6.8	1.5	2.7	4.1
Grading	Phase 1 / 2024	3.6	34.4	38.0	30.9	1.5	2.5	4.0	1.3	1.0	2.3
Grading	Phase 1 / 2025	3.3	29.8	33.0	28.9	1.2	2.5	3.7	1.1	1.0	2.1
Construction	Phase 1 / 2025	1.8	12.6	14.4	18.3	0.5	1.1	1.6	0.4	0.3	0.7
Paving	Phase 1 / 2025	1.1	7.5	8.6	10.5	0.4	0.1	0.4	0.3	0.0	0.3
Architectural Coating	Phase 1 / 2025	97.2	1.0	98.2	2.1	0.0	0.2	0.2	0.0	0.0	0.1
Site Preparation	Phase 2 / 2025	3.4	31.6	35.0	30.8	1.4	5.2	6.6	1.3	2.7	3.9
Grading	Phase 2 / 2025	1.8	16.3	18.1	18.4	0.7	1.9	2.7	0.7	0.9	1.6
Construction	Phase 2 / 2025	1.2	10.8	12.0	13.9	0.4	0.2	0.6	0.4	0.1	0.5
Paving	Phase 2 / 2025	0.8	6.6	7.4	9.5	0.3	0.1	0.4	0.3	0.0	0.3
Paving	Phase 2 / 2026	0.8	6.3	7.1	9.4	0.3	0.1	0.4	0.2	0.0	0.3
Architectural Coating	Phase 2 / 2025	16.2	0.9	17.0	1.3	0.0	0.0	0.1	0.0	0.0	0.0
Site Preparation	Phase 3 / 2025	3.4	31.7	35.0	30.8	1.4	5.2	6.6	1.3	2.7	3.9
Grading	Phase 3 / 2026	3.1	27.3	30.4	28.2	1.1	2.5	3.6	1.0	1.0	2.0
Construction	Phase 3 / 2026	1.8	12.4	14.2	18.9	0.4	1.3	1.7	0.4	0.3	0.7
Paving	Phase 3 / 2026	1.2	7.2	8.3	10.4	0.3	0.1	0.4	0.3	0.0	0.3
Architectural Coating	Phase 3 / 2026	110.3	0.9	111.2	2.2	0.0	0.2	0.2	0.0	0.0	0.1
SLOAPCD Daily Thresholds (pounds/day)		--	--	**137**	--	--	--	--	**7**	--	--
Maximum Daily Emissions-Year 2024[2]		7.3	70.4	77.7	64.4	3.1	7.7	10.8	2.8	3.6	6.4
Exceed SLOAPCD Thresholds?		--	--	No	--	--	--	--	No	--	--
Maximum Daily Emissions-Year 2025[2]		102.0	61.4	142.8	59.7	2.6	7.7	10.3	2.4	3.6	6.0
Exceed SLOAPCD Thresholds?		--	--	**Yes**	--	--	--	--	No	--	--
Maximum Daily Emissions-Year 2026[2]		116.3	47.7	164.0	59.7	1.9	4.1	6.0	1.7	1.4	3.1
Exceed SLOAPCD Thresholds?		--	--	**Yes**	--	--	--	--	No	--	--

1. Emissions were quantified using the CalEEMod, v2022.1.1.28., computer program.
2. Maximum daily emissions assumes activities with overlapping schedules could potentially occur on the same day.
lbs/day = pounds per day; ROG =Reactive Organic Gases; NO_X = oxides of nitrogen; CO = carbon monoxide.
PM_{10} = respirable particulate matter (10 micrometers or less); $PM_{2.5}$ = respirable particulate matter (2.5 micrometers or less)
Refer to Appendix A for emissions modeling assumptions and results.

Table 10. Quarterly Construction Emissions without Mitigation

Phase – Quarter	Maximum Quarterly Emissions (tons)[1]								
	ROG	NOx	ROG+NO_X	PM_{10}[2]			$PM_{2.5}$		
				Exhaust	Dust	Total	Exhaust	Dust	Total
Phase 1 – Quarter 1	0.1	1.2	1.4	0.05	0.1	0.16	0.05	0.04	0.09
Phase 1 – Quarter 2	2.7	0.4	3.1	0.02	0.04	0.06	0.01	0.01	0.02
Phase 1 – Quarter 3	1.3	0.3	1.6	0.01	0.02	0.03	0.01	< 0.005	0.01
Phase 2 – Quarter 1	0.1	0.5	0.6	0.02	0.05	0.07	0.02	0.02	0.04
Phase 2 – Quarter 2	0.6	0.4	0.9	0.02	0.01	0.02	0.01	< 0.005	0.02
Phase 2 – Quarter 3	0.2	0.3	0.5	0.01	0.01	0.02	0.01	< 0.005	0.01
Phase 3 – Quarter 1	0.1	0.5	0.6	0.02	0.06	0.08	0.02	0.02	0.04
Phase 3 – Quarter 2	2.2	0.4	2.7	0.01	0.05	0.06	0.01	0.01	0.02
Phase 3 – Quarter 3	2.5	0.4	2.9	0.01	0.03	0.05	0.01	0.01	0.02
SLOAPCD Quarterly Tier 1/Tier 2 Thresholds (tons/quarter)	--	--	**2.5/6.3**	--	**2.5/None**	--	**0.13/0.32**	--	--
Maximum Quarterly Emissions:	2.7	1.2	3.1	<0.1	0.1	0.16	0.05	0.04	0.09
Exceed SLOAPCD Tier 1/Tier 2 Thresholds?	--	--	**Yes**/No	--	No/--	--	No/No	--	--

Maximum Quarterly Emissions: Based on construction schedule information provided and default assumptions contained in the CalEEMod computer model. Totals may not sum due to rounding. Refer to Appendix A for modeling assumptions and results.

1. Maximum quarterly emissions include on-site and off-site emissions.

Table 11. Summary of Construction Emissions without Mitigation

Criteria	Project Emissions (lbs/day)	SLOAPCD Significance Threshold		Exceeds Significance Threshold?	
Maximum Daily Emissions of ROG+NO_X	164.0	137 lbs/day		**Yes**	
Maximum Daily Emissions of $PM_{2.5}$ Exhaust	2.8	7 lbs/day		No	
	(tons/quarter)	**Tier 1**	**Tier 2**	**Tier 1**	**Tier 2**
Maximum Quarterly Emissions of ROG+NO_X	3.1	2.5 tons/quarter	6.3 tons/quarter	**Yes**	No
Maximum Quarterly Emissions of PM_{10} Dust	0.1	2.5 tons/quarter	None	No	No
Maximum Quarterly Emissions of $PM_{2.5}$ Exhaust	0.05	0.13 tons/quarter	0.32 tons/quarter	No	No
Refer to Appendix A for modeling assumptions and results.					

Mitigation Measures

AQ-1: The following mitigation measures shall be implemented to reduce construction-generated fugitive dust. These measures shall be shown on grading and building plans.

a. Reduce the amount of disturbed areas where possible.
b. Use water trucks, SLOAPCD-approved dust suppressants (see Section 4.3 in the CEQA Air Quality Handbook), or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the District's limit of 20 percent opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. Please note that since water use is a concern due to drought conditions, the contractor or builder shall consider the use of an APCD-approved dust suppressant where possible to reduce the amount of water used for dust control. For a list of suppressants, see Section 4.3 of the CEQA Air Quality Handbook.
c. All dirt stockpile areas should be sprayed daily or covered with tarps or other dust barriers as needed.
d. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
e. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between the top of load and top of trailer) in accordance with California Vehicle Code (CVC) Section 23114.
f. "Track-Out" is defined as sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto any highway or street as described in CVC Section 23113 and California Water Code 13304. To prevent 'track out', designate access points and require all employees, subcontractors, and others to use them. Install and operate a 'track-out prevention device' where vehicles enter and exit unpaved roads onto paved streets. The 'track-out prevention device' can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices need periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified.
g. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities.
h. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established.
i. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the SLOAPCD.
j. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where possible. Roads shall be pre-wetted prior to sweeping when possible.
l. The burning of vegetative material shall be prohibited. Effective February 25, 2000, SLOAPCD prohibited developmental burning of vegetative material within San Luis Obispo County. If you have any questions regarding these requirements, contact the SLOAPCD Engineering & Compliance Division at (805) 781-5912.
m. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20 percent opacity, and to prevent the transport of dust off-site. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the SLOAPCD Compliance Division prior to the start of any grading, earthwork, or demolition.

AQ-2: The following measures shall be implemented to reduce construction emissions from on and off-road construction equipment (NOx, ROG, and DPM) and area sources. These measures shall be shown on grading and building plans:

a. Maintain all construction equipment in proper tune according to manufacturer's specifications.
b. Fuel all off-road and portable diesel-powered equipment with ARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road).
c. Heavy-duty (50 horsepower or greater) diesel-fueled construction equipment shall meet, at a minimum, ARB's Tier 3 certified engines, or cleaner, off-road heavy-duty diesel engines; be fitted with diesel exhaust particulate filters in accordance with manufacturer recommendations; and, comply with the State Off-Road Regulation. Heavy-duty equipment with Tier 4 engines shall be used to the extent locally available. Where Tier 3, or cleaner, equipment is not available, incorporate diesel emission control strategies/retrofits, such that emission reductions achieved equal or exceed that of a Tier 3 engine. Installing California Verified Diesel Emission Control Strategies. Verified diesel emissions control strategies can be found at: arb.ca.gov/diesel/verdev/vt/cvt.htm.
d. When applicable, portable equipment, 50 horsepower (hp) or greater, used during construction activities shall be registered with the California statewide portable equipment registration program (issued by the California Air Resources Board) or be permitted by the APCD. Such equipment may include power screens, conveyors, internal combustion engines, crushers, portable generators, tub grinders, trammel screens, and portable plants (e.g, aggregate plant, asphalt plant, concrete plant). For more information, contact the SLOAPCD Engineering & Compliance Division at (805) 781-5912.
e. Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation.
f. All on and off-road diesel equipment shall not idle when not in use. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5-minute idling limit.
g. Construction equipment staging areas shall be located at the furthest distance possible from nearby noise-sensitive land uses.
h. To the extent locally available, electrified, or alternatively powered construction equipment shall be used.
i. Substitute gasoline-powered in place of diesel-powered equipment, where possible; and,
j. Use alternative-fueled construction equipment on-site where possible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.
k. Construction of the proposed project shall use low-VOC content paints not exceeding 50 grams per liter.
l. To the extent locally available, use prefinished building materials or materials that do not require the application of architectural coatings.
m. Meet or exceed Cal Green Tier 2 standards for reducing cement use in concrete mix as allowed by local ordinance and conditions.

Significance After Mitigation

Implementation of Mitigation Measures AQ-1 and AQ-2 include SLOAPCD-recommended standard and best available control measures to reduce construction-generated emissions of fugitive dust, mobile-source emissions associated with construction vehicles and equipment, and evaporative emissions from architectural coasting (e.g. low VOC-emission paint). Mitigated daily and annual construction emissions are presented in Table 12, respectively. Mitigated quarterly construction emissions are presented in Table 13. A summary of construction emissions is presented in Table 14. With mitigation, project-generated construction emissions would not exceed applicable significance thresholds. With mitigation, this impact would be considered ***less than significant.***

Table 12. Daily Construction Emissions with Mitigation

Construction Activity[2]	Phase / Year	Maximum Daily Emissions (lbs/day)[1]									
		ROG	NO_X	ROG+NO_X	CO	PM_{10}			$PM_{2.5}$		
						Exhaust	Dust	Total	Exhaust	Dust	Total
Site Preparation	Phase 1 / 2024	3.7	36.1	39.8	33.5	1.6	5.2	6.8	1.5	2.7	4.1
Grading	Phase 1 / 2024	3.6	34.4	38.0	30.9	1.5	2.5	4.0	1.3	1.0	2.3
Grading	Phase 1 / 2025	3.3	29.8	33.0	28.9	1.2	2.5	3.7	1.1	1.0	2.1
Construction	Phase 1 / 2025	1.8	12.6	14.4	18.3	0.5	1.1	1.6	0.4	0.3	0.7
Paving	Phase 1 / 2025	1.1	7.5	8.6	10.5	0.4	0.1	0.4	0.3	<0.1	0.3
Architectural Coating	Phase 1 / 2025	19.7	1.0	20.7	2.1	<0.1	0.2	0.2	<0.1	<0.1	0.1
Site Preparation	Phase 2 / 2025	3.4	31.6	35.0	30.8	1.4	5.2	6.6	1.3	2.7	3.9
Grading	Phase 2 / 2025	1.8	16.3	18.1	18.4	0.7	1.9	2.7	0.7	0.9	1.6
Construction	Phase 2 / 2025	1.2	10.8	12.0	13.9	0.4	0.2	0.6	0.4	0.1	0.5
Paving	Phase 2 / 2025	0.8	6.6	7.4	9.5	0.3	0.1	0.4	0.3	<0.1	0.3
Paving	Phase 2 / 2026	0.8	6.3	7.1	9.4	0.3	0.1	0.4	0.2	<0.1	0.3
Architectural Coating	Phase 2 / 2025	16.2	0.9	17.0	1.3	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Site Preparation	Phase 3 / 2025	3.4	31.7	35.0	30.8	1.4	5.2	6.6	1.3	2.7	3.9
Grading	Phase 3 / 2026	3.1	27.3	30.4	28.2	1.1	2.5	3.6	1.0	1.0	2.0
Construction	Phase 3 / 2026	1.8	12.4	14.2	18.9	0.4	1.3	1.7	0.4	0.3	0.7
Paving	Phase 3 / 2026	1.2	7.2	8.3	10.4	0.3	0.1	0.4	0.3	<0.1	0.3
Architectural Coating	Phase 3 / 2026	22.5	0.9	23.4	2.2	<0.1	0.2	0.2	<0.1	<0.1	0.1
SLOAPCD Daily Thresholds (pounds/day)		--	--	**137**	--	--	--	--	**7**	--	--
Maximum Daily Emissions-Year 2024[2]		7.3	70.4	77.7	64.4	3.1	7.7	10.8	2.8	3.6	6.4
Exceed SLOAPCD Thresholds?		--	--	No	--	--	--	--	No	--	--
Maximum Daily Emissions-Year 2025[2]		24.5	61.4	68.1	59.7	2.6	7.7	10.3	2.4	3.6	6.0
Exceed SLOAPCD Thresholds?		--	--	No	--	--	--	--	No	--	--
Maximum Daily Emissions-Year 2026[2]		28.5	47.7	76.2	59.7	1.9	4.1	6.0	1.7	1.4	3.1
Exceed SLOAPCD Thresholds?		--	--	No	--	--	--	--	No	--	--

1. Emissions were quantified using the CalEEMod, v2022.1.1.28., computer program.
2. Includes measures to limit vehicle speeds on unpaved roads and required use of Low-VOC pain for construction.
3. Maximum daily emissions assumes activities with overlapping schedules could potentially occur on the same day.
lbs/day = pounds per day; ROG =Reactive Organic Gases; NO_X = oxides of nitrogen; CO = carbon monoxide;
PM_{10} = respirable particulate matter (10 micrometers or less); $PM_{2.5}$ = respirable particulate matter (2.5 micrometers or less)
Refer to Appendix A for emissions modeling assumptions and results.

Table 13. Quarterly Construction Emissions with Mitigation

Phase – Quarter	Maximum Quarterly Emissions (tons)[1]								
	ROG	NOx	ROG+NO_X	PM_{10}[2]			$PM_{2.5}$		
				Exhaust	Dust	Total	Exhaust	Dust	Total
Phase 1 – Quarter 1	0.1	1.2	1.4	0.05	0.1	0.16	0.05	0.04	0.09
Phase 1 – Quarter 2	0.6	0.4	1.0	0.02	0.04	0.06	0.01	0.01	0.02
Phase 1 – Quarter 3	0.3	0.3	0.6	0.01	0.02	0.03	0.01	< 0.005	0.01
Phase 2 – Quarter 1	0.1	0.5	0.6	0.02	0.05	0.07	0.02	0.02	0.04
Phase 2 – Quarter 2	0.6	0.4	0.9	0.02	0.01	0.02	0.01	< 0.005	0.02
Phase 2 – Quarter 3	0.5	0.3	0.9	0.01	0.02	0.02	0.01	0.01	0.01
Phase 3 – Quarter 1	0.1	0.5	0.6	0.02	0.06	0.08	0.02	0.02	0.04
Phase 3 – Quarter 2	0.5	0.4	0.9	0.01	0.05	0.06	0.01	0.01	0.02
Phase 3 – Quarter 3	0.5	0.4	0.9	0.02	0.04	0.04	0.02	0.01	0.02
SLOAPCD Quarterly Tier 1/Tier 2 Thresholds (tons/quarter)	--	--	**2.5/6.3**	--	**2.5/None**	--	**0.13/0.32**	--	--
Maximum Quarterly Emissions:	0.6	1.2	1.4	0.05	0.1	0.16	0.05	0.04	0.09
Exceed SLOAPCD Tier 1/Tier 2 Thresholds?	--	--	No/No	--	No/--	--	No/No	--	--

Maximum Quarterly Emissions: Based on construction schedule information provided and default assumptions contained in the CalEEMod computer model. Emissions were compared to SLOAPCD thresholds. Totals may not sum due to rounding. Refer to Appendix A for modeling assumptions and results.

1. *Maximum quarterly emissions include on-site and off-site emissions.*
2. *Includes measures to limit vehicle speeds on unpaved roads and required use of Low-VOC pain for construction.*

Table 14. Summary of Construction Emissions with Mitigation

Criteria	Project Emissions (lbs/day)	SLOAPCD Significance Threshold		Exceeds Significance Threshold?	
Maximum Daily Emissions of ROG+NO_X	77.7	137 lbs/day		No	
Maximum Daily Emissions of $PM_{2.5}$ Exhaust	2.8	7 lbs/day		No	
	(tons/quarter)	**Tier 1**	**Tier 2**	**Tier 1**	**Tier 2**
Maximum Quarterly Emissions of ROG+NO_X	1.4	2.5 tons/quarter	6.3 tons/quarter	No	No
Maximum Quarterly Emissions of PM_{10} Dust	0.1	2.5 tons/quarter	None	No	No
Maximum Quarterly Emissions of $PM_{2.5}$ Exhaust	0.05	0.13 tons/quarter	0.32 tons/quarter	No	No
Refer to Appendix A for modeling assumptions and results.					

Long-term Operational Emissions

Long-term operational emissions associated with the proposed project would be predominantly associated with mobile sources and area sources, such as landscape maintenance activities.

Unmitigated operational emissions associated with the proposed project are summarized in Table 15. As depicted, daily operational emissions from non-permitted sources would total approximately 55.7 lbs/day of ROG+NO_X, 78 lbs/day of CO, 0.01 lbs/day of fugitive PM_{10} dust, and 0.55 lbs/day of $PM_{2.5}$ exhaust. Annual operational emissions would total approximately 9.0 tons/year of ROG+NO_x and 0.01 tons/year of fugitive PM_{10} dust. Predicted operational emissions would exceed SLOAPCD's recommended ROG+NO_x threshold. As a result, this impact would be considered ***potentially significant.***

Health Effects of Project-Generated Regional Emissions

Project-generated emissions are evaluated based on the pollutants' potential to affect local or regional air quality. As noted earlier in this report, regional pollutants of concern typically include ozone and particulate matter. Whereas, for development projects, localized pollutants of primary concern often include carbon monoxide, TACs, as well as airborne particulates. The health effects of these pollutants are discussed earlier in this report and summarized in Table 1.

For localized pollutants, health impacts can be evaluated using screening criteria or through dispersion modeling. However, for regional pollutants such as ozone, the change in health effects associated with an individual project is a secondary pollutant created by NO_X and ROG (also commonly referred to as VOCs). As previously discussed earlier in this report, ozone is not a directly emitted pollutant. NO_X and ROG are not criteria air pollutants but, when in the presence of sunlight, they can form ozone and also contribute to the formation of secondary $PM_{2.5}$. Because ozone is not a directly emitted pollutant and is created under specific meteorological conditions over a wide transport area, ozone concentrations are typically evaluated at a regional level using complex photochemical models. These models are capable of predicting concentrations that take into account variations in amounts of precursor emissions (e.g., ROG, NO_X), temperature, inversions, sunlight, hourly variations, ambient conditions, and wind flow over long distances (e.g., miles). At the project level of analysis, evaluation of ozone concentrations is "not practicable and not likely [to] yield valid information" (SJVAPCD 2015).

Of the criteria pollutants identified, ozone and $PM_{2.5}$ have the most critical health effects. As a result, concentrations of these pollutants are typically relied upon for determining public health effects. In comparison to modeled regional emissions, the emissions associated with most individual projects would be negligible and too small to produce a measurable change in regional ozone or $PM_{2.5}$ concentrations or associated public health effects. In addition, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has recently conducted regional emissions modeling analyses using a chemical transport model to evaluate changes in emissions and associated health effects associated with an individual project. The modeling was based on very conservative assumptions representative of the largest projects, which assumed up to approximately eight times the threshold of significance (up to 656 lbs/day) of NO_X, ROG, and PM. This level of emissions would be more representative of large community plan projects. Based on the modeling conducted by SMAQMD, even these large projects would have "low overall health effects" (SMAQMD 2020).

It is important to reiterate that the health effects of criteria air pollutants are taken into consideration when the U.S., EPA establishes the NAAQS for individual pollutants. The health effects of a particular pollutant are analyzed on a regional basis based on the area's attainment of the NAAQS. As previously discussed in this report, the AQI is one common method of evaluating public health impacts for criteria air pollutants of primary concern. Local air districts establish significance thresholds that are based on the evaluation of an individual project's contribution to regional air quality conditions and associated health effects. Based on the above discussion and given that project-generated criteria pollutants would exceed applicable significance thresholds, project-generated emissions of regional criteria pollutants (e.g., ROG, NO_X, PM) could have an effect on public health. Refer to Impact AQ-C for a discussion of localized air quality impacts.

Table 15. Operational Emissions without Mitigation

Operational Source	Emissions[1]									
	ROG	NO_X	ROG+NO_X	CO	PM_{10}			PM2.5		
					Exhaust	Dust	Total	Exhaust	Dust	Total
Daily Emissions (lbs/day)										
Mobile[2]	15.8	3.7	19.5	36.2	0.02	0.01	0.03	0.02	<0.01	0.02
Area	29.3	0.3	29.6	36.5	0.06	<0.01	0.06	0.05	<0.01	0.05
Energy[3]	0.4	6.3	6.6	5.3	0.48	<0.01	0.48	0.48	<0.01	0.48
SLOAPCD Significance Thresholds	--	--	**25**	**550**	--	**25**	--	**1.25**	--	--
Total Daily Emissions:	45.5	10.3	55.7	78.0	0.56	0.01	0.57	0.55	<0.01	0.55
Exceeds SLOAPCD Thresholds?[5]	--	--	**Yes**	No	--	No	--	No	--	--
Annual Emissions (tons/year)										
Total Annual Emissions[4]:	7.3	1.7	9.0	11.4	0.1	0.01	0.1	0.1	0.0	0.1
SLOAPCD Significance Thresholds	--	--	**25**	--	--	**25**	--	--	--	--
Exceeds SLOAPCD Thresholds?	--	--	No	--	--	No	--	--	--	--

Note: Based on operational year 2025. Totals may not sum due to rounding. Refer to Appendix A for modeling output files and assumptions.

1. *Daily emissions are based on the worst case between summer and winter buildout operational conditions.*
2. *Mobile emissions were based on trip-generation rates derived from the traffic analysis prepared for this project and CalEEMod default fleet mix and trip distances.*
3. *Includes consistency with current building standards related to the use of energy-efficient mechanical equipment/appliances.*
4. *Annual emissions were derived from the CalEEMod modeling. Annual emissions associated with onsite events were calculated based on the estimated daily emissions and assuming a total of 156 event days/year.*
5. *In accordance with current SLOAPCD-recommended guidance, project's exceeding the SLOAPCD's daily significance threshold for ozone shall implement all feasible SLOAPCD-recommended mitigation measures. Projects implementing all feasible SLOAPCD-recommended mitigation measures that do not exceed SLOAPCD's annual significance threshold for ozone would be considered to have a less-than-significant impact.*

Mitigation Measures

AQ-3: The following mitigation measures shall be implemented, to the extent possible, to minimize long-term operational emissions:

a. The project shall provide shade (e.g. through tree planting or built structures) over 50 percent of parking spaces to reduce evaporative emissions from parked vehicles, excluding areas where increased shade would affect the performance of solar PV systems.
b. Implement driveway design standards (e.g., speed bumps, curved driveway) for self-enforcement of reduced speed limits on unpaved driveways.
c. Use a SLOAPCD-approved suppressant on private unpaved roads leading to the site, unpaved driveways, and parking areas applied at a rate and frequency that ensures compliance with SLOAPCD Rule 401: Visible Emissions and ensures off-site nuisance impacts do not occur.
d. Work with SLOCOG to create, improve, or expand an onsite or nearby transit/shuttle systems, including (but not limited to) transit stops, mobility hubs, park-and-ride lots.
e. Implement on-site circulation design elements in parking lots to reduce vehicle queuing and improve the pedestrian environment.
f. Provide employee lockers and showers to promote bicycle and pedestrian use. One shower and five lockers for every 25 new employees is recommended.
g. A minimum of 15 percent of on-site fleet vehicles owned by the project proponent shall be zero-emission vehicles.
h. Provide dedicated parking for carpools, vanpools, and/or high-efficiency vehicles to meet or exceed Cal Green Tier 2.
i. Work with SLO Regional Rideshare to educate occupants with alternative transportation and smart commute information (e.g., transportation board, electronic kiosk, new hire packets, web portal, newsletters, social media, etc.).
j. Encourage non-residential land uses to implement and promote programs to reduce employee vehicle miles traveled (e.g. incentives, SLO Regional Rideshare trip reduction program, vanpools, on-site employee housing, alternative schedules (e.g. 9–80s, 4–10s, telecommuting, satellite work sites, etc.).
k. Exceed CALGreen Tier 2 standards at the time of development for building energy efficiency.
l. Implement a "No Idling" vehicle program which includes signage enforcement, etc.
m. Exceed CALGreen Tier 2 building standards at the time of development for utilizing recycled content materials.
n. Exceed CALGreen building standards at the time of development for water conservation (e.g., use of low-flow water fixtures, water-efficient water irrigation systems, and drought-tolerant landscaping).
o. Exceed 2022 CALGreen standards for the use of greywater, rainwater, or recycled water where applicable/available.
p. Exceed 2022 CALGreen standards for using shading, trees, plants, cool roofs, etc. to reduce "heat island" effect.
q. To the extent allowed by the building code at the time of development, incorporate natural lighting in buildings to minimize daytime lighting demand.
r. Outdoor lighting shall be designed to minimize electrical demand, such as the use of solar-powered lighting and lighting controlled by motion sensors.
s. All built-in appliances shall be Energy Star certified or equivalent.
t. Utilize on-site renewable energy systems (e.g. solar, wind, geothermal, biomass, and/or biogas) sufficient to exceed applicable building standards at the time of development with a goal of achieving zero net energy (ZNE) buildings.
u. Design roof trusses to handle dead-weight loads of standard solar-heated water and PV panels.
v. Encourage the use of low-VOC content cleaning products that are certified as meeting U.S. EPA's Safer Product Standards.
w. Hotel rooms shall include the installation of occupancy sensors to minimize electricity use with the rooms not occupied.
x. Encourage hotel participation in SLO Car Free. SLO Car Free is a cooperative partnership initiated and led by SLOAPCD to promote travel to and from the County via alternative means of transportation (e.g., AMTRAK). Additional information is available at website url: SLO Car Free | SLO County APCD (slocleanair.org).

y. The proposed hotel shall offer shuttle service for onsite guests that provides service (at a minimum) to and from the North County Transit Station, which is located at 800 Pine Street, Paso Robles, CA.

Significance After Mitigation

In accordance with current SLOAPCD-recommended guidance, project's exceeding the SLOAPCD's daily significance thresholds shall implement all feasible SLOAPCD-recommended mitigation measures. Projects implementing all feasible SLOAPCD-recommended mitigation measures that do not exceed SLOAPCD's annual significance threshold would be considered to have a less-than-significant impact.

Implementation of Mitigation Measure AQ-3 includes all feasible SLOAPCD-recommended mitigation measures. Additional mitigation measures have also been included to further reduce operational emissions. The project also incorporates California Air Pollution Control Officers Association (CAPCOA)-recommended VMT reductions strategies within its site design. However, the effectiveness of the design features in reducing VMT and emissions from mobile sources is uncertain (CCTC 2024). With implementation of the proposed mitigation measures and given that annual operational emissions would not exceed applicable significance thresholds, this impact would be considered ***less than significant***.

Table 16. Operational Emissions with Mitigation

Operational Source	Emissions[1]									
	ROG	NO_X	ROG+NO_X	CO	PM_{10}			PM2.5		
					Exhaust	Dust	Total	Exhaust	Dust	Total
Daily Emissions (lbs/day)										
Mobile[2]	15.8	3.7	19.5	36.2	0.02	0.01	0.03	0.02	<0.01	0.02
Area[3]	25.0	0.3	25.3	36.5	0.06	<0.01	0.06	0.05	<0.01	0.05
Energy	0	0	0	0	0	0	0	0	0	0
SLOAPCD Significance Thresholds	--	--	**25**	**550**	--	**25**	--	**1.25**	--	--
Total Daily Emissions:	39.5	4.0	43.5	72.7	0.8	0.01	0.9	0.1	<0.01	0.1
Exceeds SLOAPCD Thresholds?[5]	--	--	**Yes**	No	--	No	--	No	--	--
Annual Emissions (tons/year)										
Total Annual Emissions:	6.5	0.5	6.96	10.4	0.01	<0.01	0.01	0.01	<0.01	0.01
SLOAPCD Significance Thresholds	--	--	**25**	--	--	**25**	--	--	--	--
Exceeds SLOAPCD Thresholds?	--	--	No	--	--	No	--	--	--	--

Note: Based on operational year 2025. Totals may not sum due to rounding. Refer to Appendix A for modeling output files and assumptions.

1. *Daily emissions are based on the worst case between summer and winter buildout operational conditions.*
2. *Mobile emissions were based on trip-generation rates derived from the traffic analysis prepared for this project and CalEEMod default fleet mix and trip distances. No pedestrian/bicycle access or transit service is available in the vicinity of the project site.*
3. *Area sources include the use of consumer products, architectural coatings, and landscape equipment.*
4. *As per Mitigation Measure GHG-1 does not include emissions associated with natural gas.*
5. *In accordance with current SLOAPCD-recommended guidance, project's exceeding the SLOAPCD's daily significance threshold for ozone shall implement all feasible SLOAPCD-recommended mitigation measures. Projects implementing all feasible SLOAPCD-recommended mitigation measures that do not exceed SLOAPCD's annual significance threshold for ozone would be considered to have a less-than-significant impact. Mitigation Measure AQ-3 includes all feasible SLOAPCD-recommended mitigation measures.*

Impact AQ-C. Expose sensitive receptors to substantial pollutant concentrations?

The proposed project would not result in the installation of any equipment or processes that would be considered a major emission source. However, the proposed project would result in localized increases in pollutant concentrations during project construction. The proposed project's potential contribution to localized air pollutants is discussed, as follows:

Short-Term Construction Activities

Naturally-Occurring Asbestos

NOA has been identified as a TAC by the ARB. In accordance with ARB's Air Toxics Control Measure (ATCM), prior to any grading activities, a geologic evaluation should be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request form, along with a copy of the geologic report, must be filed with the SLOAPCD. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM (SLOAPCD 2018).

Based on a review of the SLOAPCD's map depicting potential areas of NOA, the project site is not located in or near an area that has been identified as having a potential for NOA. As a result, this impact would be considered ***less than significant***.

Localized Construction PM Concentrations

Fugitive dust emissions would be primarily associated with site preparation, grading, and vehicle travel on unpaved and paved surfaces. On-site off-road equipment and trucks would also result in short-term emissions of DPM, which could contribute to elevated localized concentration at nearby receptors. Uncontrolled emissions of fugitive dust may also contribute to potential increases in nuisance impacts to nearby receptors. Short-term exposure to airborne particulates can result in irritation of the eyes and the respiratory system and may affect sensitive individuals, including those suffering from asthma and other medical conditions. For these reasons, localized uncontrolled concentrations of construction-generated PM would be considered to have a ***potentially-significant impact.***

Mitigation Measures

Implement Mitigation Measures AQ-1 and AQ-2.

Significance After Mitigation

With the implementation of Mitigation Measures AQ-1 and AQ-2 construction-related emissions of PM would be substantially reduced. With mitigation, short-term exposure to localized pollutants would be considered to have a ***less-than-significant impact.***

Impact AQ-D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

The proposed project would not result in the installation of any equipment or processes that would be considered major odor-emission sources. In addition, no known odor sources are within one mile of the project site. However, construction of the proposed project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel exhaust, may be considered objectionable by some people. In addition, pavement coatings and architectural coatings used during project construction would also emit temporary odors. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing

distance from the source. Mitigation measures, such as the implementation of idling restrictions for construction equipment and vehicles and the use of newer, cleaner equipment and vehicles would further reduce construction-generated emissions. For these reasons, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. For these reasons, potential exposure of sensitive receptors to odorous emissions would be considered ***less than significant***.

GREENHOUSE GASES AND CLIMATE CHANGE

Existing Setting

To fully understand global climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the GHGs that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the Earth's atmosphere from space and a portion of the radiation is absorbed by the Earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Primary GHGs attributed to global climate change, are discussed, as follows:

- **Carbon Dioxide**. Carbon dioxide (CO_2) 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 (U.S. EPA 2018).

- **Methane**. Methane (CH_4) is a colorless, odorless gas that is not flammable under most circumstances. CH_4 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 (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 into the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years (U.S. EPA 2018).

- **Nitrous Oxide**. Nitrous oxide (N_2O) is a clear, colorless gas with a slightly sweet odor. N_2O 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, 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 114 years (U.S. EPA 2018).

- **Hydrofluorocarbons.** Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 270 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (U.S. EPA 2018).

- **Perfluorocarbons.** Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and non-toxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F_{14}). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for PFCs ranges from 2,600 to 50,000 years (U.S. EPA 2018).

- **Nitrogen Trifluoride**. Nitrogen trifluoride (NF_3) is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. NF_3 is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin-film solar cells. It has a global warming potential of 16,100 CO_2e. While NF_3 may have a lower global warming potential than other chemical etchants, it is still a potent GHG. In 2009, NF_3 was listed by California as a high (global warming potential) GWP GHG to be listed and regulated under AB 32 (Section 38505 Health and Safety Code).

- **Sulfur Hexafluoride**. Sulfur hexafluoride (SF_6) is an inorganic compound that is colorless, odorless, non-toxic, and generally non-flammable. SF_6 is primarily used as an electrical insulator in high-voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (U.S. EPA 2018).

- **Black Carbon**. Black carbon is the strongest light-absorbing component of PM emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands) (U.S. EPA 2018).

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. Often, estimates of GHG emissions are presented in CO_2e, which weighs each gas by its global warming potential (GWP). 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. Table 17 provides a summary of the GWP for GHG emissions of typical concern with regard to community development projects, based on a 100-year time horizon. As indicated, Methane traps over 25 times more heat per molecule than CO_2, and N_2O absorbs roughly 298 times more heat per molecule than CO_2. Additional GHGs with high GWP include NF_3, SF_6, PFCs, and black carbon.

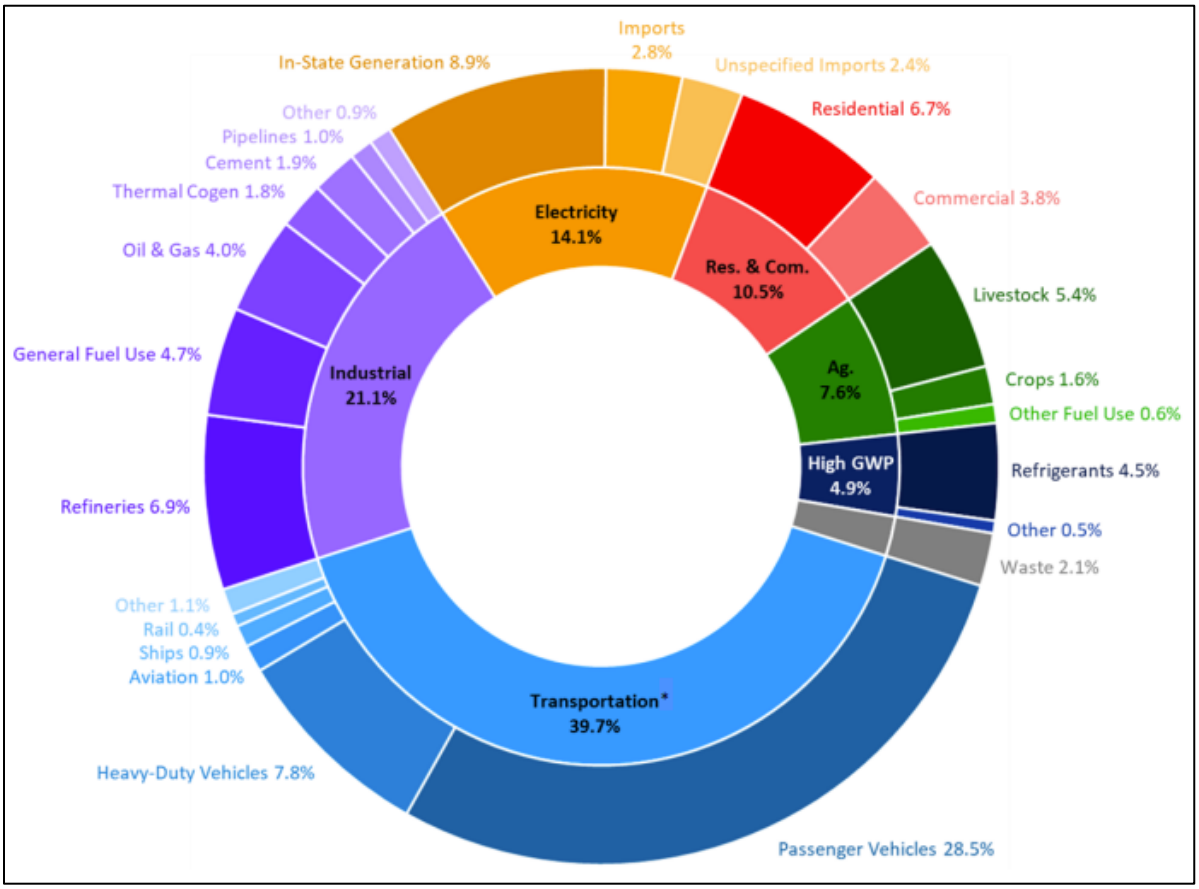
Table 17. Global Warming Potential for Greenhouse Gases

Greenhouse Gas	Global Warming Potential (100-year)
Carbon Dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous Dioxide (N_2O)	298
Based on IPCC GWP values for 100-year time horizon. *Source: IPCC 2007*	

Statewide GHG Emissions

In 2019, GHG emissions within California totaled 418.1 MMT of CO_2e. GHG emissions, by sector, are summarized in Figure 3. Within California, the transportation sector is the largest contributor, accounting for approximately 39.7 percent of the total state-wide GHG emissions. Emissions associated with industrial uses are the second-largest contributor, totaling roughly 21.1 percent. Electricity generation totaled roughly 14.1 percent. Other major emission sources included commercial uses, residential uses, agriculture, refrigerants, and waste (ARB 2021).

Figure 3. California GHG Emissions Inventory by Sector & Subsector (2019)



Source: ARB 2021

City of Paso Robles GHG Emissions Inventories

The City has completed a community-wide inventory of GHG emissions for the years 2005 and 2020, which are summarized in Table 18. As shown, a majority of the City's emissions are associated with mobile sources. Remaining GHG emissions are predominantly associated with energy use and solid waste generation. In comparison to year 2005 community-wide emissions, year 2016 metric tons (MT)CO_2e emissions decreased by a total of approximately 20 percent (City of Paso Robles 2013).

Table 18. City of Paso Robles GHG Emissions Inventories

Sector	Year 2005 ($MTCO_2e$)	Year 2020 ($MTCO_2e$)	Percent Change from 2005 to 2020
Residential	40,188	46,828	17%
Commercial/Industrial	33,536	30,551	-9%
Transportation	67,801	92,913	37%
Off-Road	13,205	15,878	20%
Solid Waste	13,343	16,653	17%
Wastewater	70	82	17%
Aircraft	1,324	1,543	17%
Total	**169,557**	**203,448**	**20%**

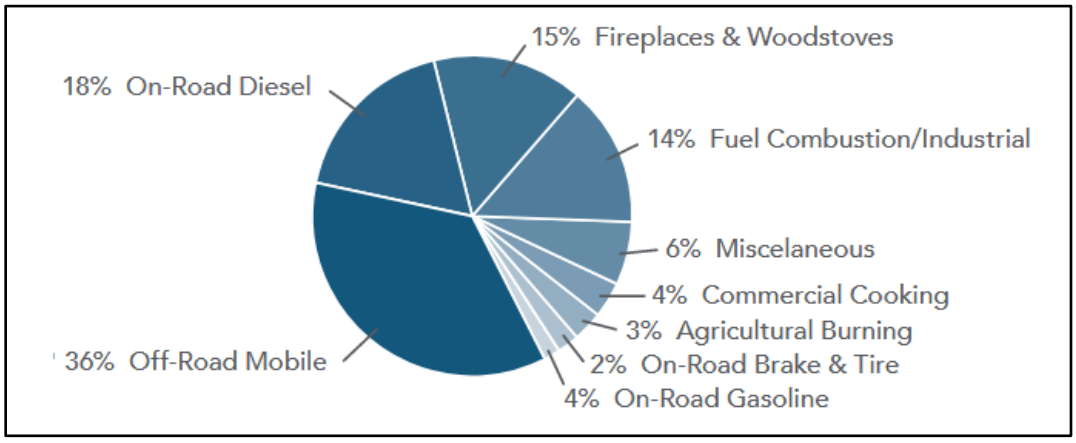
$MTCO_2e$ = Metric tons of carbon dioxide equivalent
Source: City of Paso Robles Climate Action Plan 2013

Short-Lived Climate Pollutants

Short-lived climate pollutants (SLCPs), such as black carbon, fluorinated gases, and methane also have a dramatic effect on climate change. Though short-lived, these pollutants create a warming influence on the climate that is many times more potent than that of carbon dioxide.

As part of the ARB's efforts to address SLCPs, the ARB has developed a statewide emission inventory for black carbon. The black carbon inventory will help support the implementation of the SLCP Strategy, but it is not part of the State's GHG Inventory that tracks progress towards the State's climate targets. The most recent inventory for year 2013 conditions is depicted in Figure 4. As depicted, off-road mobile sources account for a majority of black carbon emissions totaling roughly 36 percent of the inventory. Other major anthropogenic sources of black carbon include on-road transportation, residential wood burning, fuel combustion, and industrial processes (ARB 2020).

Figure 4. California Black Carbon Emissions Inventory (Year 2013)



Source: ARB 2020

Effects of Global Climate Change

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea-level rise, the spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records depict an increasing trend toward earlier snowmelt in the Sierra Nevada. This snowpack is a principal supply of water for the state, providing roughly 50 percent of the state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during the spring and summer months. Earlier snowmelt would also impact the State's energy resources. Currently, approximately 20 percent of California's electricity comes from hydropower. Early exhaustion of the Sierra snowpack may force electricity producers to switch to more costly or non-renewable forms of electricity generation during the spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. As a result, changes in climate will likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry.

Regulatory Framework

Federal

EXECUTIVE ORDER 13514

Executive Order (EO) 13514 is focused on reducing GHGs internally in federal agency missions, programs, and operations. In addition, the executive order directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in Massachusetts v. U.S. EPA, 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the FCAA, and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009. On May 7, 2010, the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards were published in the Federal Register.

The U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 MMT and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On August 28, 2012, U.S. EPA and NHTSA issued their joint rule to extend this national program of coordinated GHG and fuel economy standards to model years 2017 through 2025 passenger vehicles.

State

EXECUTIVE ORDER NO. S-3-05

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

The EO directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the EO, the secretary of CalEPA created a Climate Action Team made up of members from various state agencies and commissions. The Climate Action Team released its first report in March 2006 and continues to release periodic reports on progress. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government, and community actions, as well as through state incentives and regulatory programs.

ASSEMBLY BILL 32 - CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006

AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, NF_3, and SF_6. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

CLIMATE CHANGE SCOPING PLAN

In October 2008, ARB published its *Climate Change Proposed Scoping Plan*, which is the State's plan to achieve GHG reductions in California required by AB 32. This initial Scoping Plan contained the main strategies to be implemented in order to achieve the target emission levels identified in AB 32. The Scoping Plan included ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations were associated with improving emissions standards for light-duty vehicles, implementing the Low Carbon Fuel Standard program, implementing energy efficiency measures in buildings and appliances, the widespread development of combined heat and power systems, and developing a renewable portfolio standard for electricity production.

The Scoping Plan states that land use planning and urban growth decisions will play important roles in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. With regard to land use planning, the Scoping Plan expects approximately 5.0 MMT CO_2e will be achieved associated with the implementation of SB 375, which is discussed further below.

The initial Scoping Plan was first approved by ARB on December 11, 2008, and is updated every five years. The first update of the Scoping Plan was approved by the ARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reaching the 2050 goals. The *2017 Climate Change Scoping Plan*, was released in November 2017. The *2017 Climate Change Scoping Plan* incorporates strategies for achieving the 2030 GHG-reduction target established in SB 32 and EO B-30-15. Most notably, the *2017 Climate Change Scoping Plan* encourages zero net increases in GHG emissions. However, the *2017 Climate Change Scoping Plan* recognizes that achieving net zero increases in GHG emissions may not be possible or appropriate for all projects and that the inability of a project to mitigate its GHG emissions to zero would not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA.

On November 16, 2022, the ARB approved the *2022 Scoping Plan for Achieving Carbon Neutrality*. The 2022 Scoping Plan continues the path to achieve the SB 32 2030 target and expands upon earlier plans by targeting an 85 percent reduction in GHG below 1990 levels by 2045 (ARB 2022).

SENATE BILL 1078 AND GOVERNOR'S ORDER S-14-08

SB 1078 (Public Utilities Code Sections 387, 390.1, 399.25, and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum of 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed EO S-14-08, which set the Renewables Portfolio Standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. EO S-14-08 was later superseded by EO S-21-09 on September 15, 2009. EO S-21-09 directed the ARB to adopt regulations requiring 33 percent of electricity sold in the State to come from renewable energy by 2020. Statute SB X1-2 superseded this EO in 2011, which obligated all California electricity providers, including investor-owned utilities and publicly owned utilities, to obtain at least 33 percent of their energy from renewable electrical generation facilities by 2020.

ARB is required by current law, AB 32 of 2006, to regulate sources of GHGs to meet a state goal of reducing GHG emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050. The California Energy Commission and California Public Utilities Commission serve in advisory roles to help ARB develop the regulations to administer the 33 percent by 2020 requirement. ARB is also authorized to increase the target and accelerate and expand the time frame.

MANDATORY REPORTING OF GHG EMISSIONS

The California Global Warming Solutions Act (AB 32, 2006) requires the reporting of GHGs by major sources to the ARB. Major sources required to report GHG emissions include industrial facilities, suppliers of transportation fuels, natural gas, natural gas liquids, liquefied petroleum gas, and CO_2, operators of petroleum and natural gas systems, and electricity retail providers and marketers.

CAP-AND-TRADE REGULATION

The cap-and-trade regulation is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013, and apply to large electric power plants and large industrial plants. In 2015, fuel distributors, including distributors of heating and transportation fuels, also became subject to the cap-and-trade rules. At that stage, the program will encompass around 360 businesses throughout California and nearly 85 percent of the state's total GHG emissions.

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions and are free to buy and sell allowances on the open market. California held its first auction of GHG allowances on November 14, 2012. California's GHG cap-and-trade system is projected to reduce GHG emissions to 1990 levels by the year 2020 and would achieve an approximate 80 percent reduction from 1990 levels by 2050.

SENATE BILL 32

SB 32 was signed by Governor Brown on September 8, 2016. SB 32 effectively extends California's GHG emission-reduction goals from year 2020 to year 2030. This new emission-reduction target of 40 percent below 1990 levels by 2030 is intended to promote further GHG-reductions in support of the State's ultimate goal of reducing GHG emissions by 80 percent below 1990 levels by 2050. SB 32 also directs the ARB to update the Climate Change Scoping Plan to address this interim 2030 emission-reduction target.

SENATE BILL 97

SB 97 was enacted in 2007. SB 97 required the Office of Planning and Research (OPR) to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and

mitigation of GHG emissions. Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions.
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions.
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change.
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria.
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives.

As part of the administrative rulemaking process, the California Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010.

SENATE BILL 100

SB 100 was signed by Governor Jerry Brown on September 10, 2018. SB 100 sets a goal of phasing out all fossil fuels from the state's electricity sector by 2045. SB 100 increases to 60 percent, from 50 percent, how much of California's electricity portfolio must come from renewables by 2030. It establishes a further goal to have an electric grid that is entirely powered by clean energy by 2045, which could include other carbon-free sources, like nuclear power, that are not renewable.

SENATE BILL 375

SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will address land-use allocation in that MPOs regional transportation plan. ARB, in consultation with MPOs, establishes regional reduction targets for GHGs emitted by passenger cars and light trucks for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, funding for transportation projects may be withheld. In 2018, ARB adopted updated SB 375 targets.

SENATE BILLS 1383 & 1206

SB 1383 requires California to reduce hydrofluorocarbon (HFC) emissions associated with the use of refrigerants to 40 percent below 2013 levels by 2030. Starting in 2022, new facilities will be required to use refrigerants that can reduce their emissions by up to 90 percent. The intent of the new rules is to eliminate the use of very high-GWP refrigerants in every sector that uses non-residential refrigeration systems. Compliance begins for most home air conditioning equipment in 2025. Senate Bill 1206, signed into law in September 2022, prohibits the sale or distribution of HFCs that exceed a specified GWP. Under this new law, refrigerants would not be allowed to exceed 2,200 GWP beginning January 1, 2025; 1,500 GWP beginning January 1, 2030; and 750 GWP beginning January 1, 2030. California Building Code

The CBC contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Code is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

CALIFORNIA GREEN BUILDING STANDARDS

In essence, the green building standards are indistinguishable from any other building standards, are contained in the CBC, and regulate the construction of new buildings and improvements. Whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

The 2019 Building Energy Efficiency Standards (2019 Standards), adopted in May 2018, addressed four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to the exterior and vice versa), residential and nonresidential ventilation requirements, and non-residential lighting requirements. The 2019 Standards required new residential and non-residential construction; as well as major alterations to existing structures, to include EV-capable parking spaces which have electrical panel capacity and conduit to accommodate future installation. In addition, the 2019 Standards also required the installation of PV systems for low-rise residential dwellings, defined as single-family dwellings and multi-family dwellings up to three stories in height. These requirements are based on various factors, including the floor area of the home, sun exposure, and climate zone. Under the 2019 standards, nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2019).

The recently updated 2022 Building Energy Efficiency Standards (2022 Standards), which were approved in December 2021, encourage efficient electric heat pumps, establish electric-ready requirements when natural gas is installed and support the future installation of battery storage, and further expands solar photovoltaic and battery storage standards. The 2022 Standards extend solar PV system requirements, as well as battery storage capabilities for select land uses, including high-rise multi-family and non-residential land uses, such as office buildings, schools, restaurants, warehouses, theaters, grocery stores, and more. Depending on the land use and other factors, solar systems should be sized to meet targets of up to 60 percent of the structure's loads. These new solar requirements will become effective January 1, 2023, and contribute to California's goal of reaching net-zero carbon footprint by 2045 (CEC 2021).

SHORT-LIVED CLIMATE POLLUTANT REDUCTION STRATEGY

In March 2017, the ARB adopted the *Short-Lived Climate Pollutant Reduction Strategy* (*SLCP Strategy*) establishing a path to decrease GHG emissions and displace fossil-based natural gas use. Strategies include avoiding landfill methane emissions by reducing the disposal of organics through edible food recovery, composting, in-vessel digestion, and other processes; and recovering methane from wastewater treatment facilities, and manure methane at dairies, and using the methane as a renewable source of natural gas to fuel vehicles or generate electricity. The *SLCP Strategy* also identifies steps to reduce natural gas leaks from oil and gas wells, pipelines, valves, and pumps to improve safety, avoid energy losses, and reduce methane emissions associated with natural gas use. Lastly, the *SLCP Strategy* also identifies measures that can reduce HFC emissions at national and international levels, in addition to State-level action that includes an incentive program to encourage the use of low-GWP refrigerants and limitations on the use of high-GWP refrigerants in new refrigeration and air-conditioning equipment (ARB 2020).

San Luis Obispo County Air Pollution Control District

SLOAPCD is a local public agency with the primary mission of realizing and preserving clean air for all county residents and businesses. Responsibilities of the SLOAPCD include but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by federal and state regulatory requirements.

City Of Paso Robles Climate Action Plan

The City's Climate Action Plan is a long-range plan to reduce GHG emissions from City government operations and community activities. The Climate Action Plan will also help achieve multiple community goals such as lowering energy costs, reducing air pollution, and supporting local economic development. The Climate Action Plan includes measures to reduce community-wide GHG emissions by 15 percent below 2005 levels by 2020 (City of Paso Robles 2013).

County of San Luis Obispo 2023 Regional Transportation Plan/Sustainable Communities Strategy

The 2023 RTP was adopted by the SLOCOG Board in June 2023. The RTP includes the region's SCS, which outlines how the region will exceed its GHG reduction targets as required by SB 375 through the promotion of a variety of transportation demand management & system management tools and techniques to maximize the efficiency of the transportation network. Consistency with the requirement of SB 375 ensures consistency with the GHG-reduction targets set by ARB. The 2023 SCS was found to be consistent with the requirement of SB 375 and is also consistent with the general plans of the region's jurisdictions (SLOCOG 2023).

Impact Analysis

Thresholds of Significance

In accordance with Appendix G of the *State CEQA Guidelines,* increased GHG emissions associated with the implementation of the proposed project would be considered significant if it would:

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

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

In accordance with SLOAPCD recommendations, the proposed project would be considered to be consistent with the State's carbon neutrality goals and would be considered to have a less-than-significant impact if: 1) the project is deemed consistent with regional VMT-reduction targets; 2) the project incorporates best management practices (BMPs) to support the State's GHG-reduction efforts; and 3) the project would not result in a wasteful, inefficient, or unnecessary energy use as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

The SLOAPCD has not identified recommended BMPs for development projects. However, other air districts in the State have recently released BMP-related guidance for the evaluation of GHG impacts. For instance, the Bay Area Air Quality Management District (BAAQMD) has recently released recommended GHG significance thresholds that are based on a "fair share" approach for achieving carbon neutrality goals and to ensure consistency with the State's GHG-reduction efforts, including the State's Climate Change Scoping Plan. Accordingly, the BAAQMD recommends that the installation of natural gas infrastructure for development projects be prohibited to the extent that alternatively powered options are available. Similarly, the SMAQMD has also recently released BMPs, which also discourage the installation of natural gas infrastructure for development projects as well as a requirement that projects meet current CalGreen Tier 2 standards for electric-vehicle (EV) spaces, except that EV-capable spaces shall instead be EV ready. This additional requirement requires the installation of electrical infrastructure sufficient to service the future installation of EV chargers. The BAAQMD and SMAQMD thresholds are based on an approach endorsed by the Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015). Although not located within these jurisdictions, development in San Luis Obispo County and associated GHG emissions are comparable to those generated by developments within other areas of the state, including the BAAQMD and SMAQMD jurisdictions. Given that climate change is inherently a cumulative impact that occurs on a global scale, these BMPs would, likewise, be considered representative of the project's "fair share" of what would be required to meet the State's long-term climate goals, including achieving carbon neutrality by 2045 and ensuring consistency with the State's Climate Change Scoping Plan. It is also important to note that the CARB 2022 Scoping Plan states that under the Lead Agencies discretion with supporting evidence projects that incorporate some but not all key attributes could be found by the lead agency as being consistent with the State's Scoping Plan. Project-related operational GHG impacts were assessed based on consistency with applicable GHG reduction plans. Refer to Appendix A for emissions modeling assumptions and results.

Methodology

Emissions associated with the construction of the proposed project were calculated using CalEEMod, version 2022.1.1.28, computer program. Project construction is anticipated to occur over an approximately 24-month period beginning in December 2024. Construction phase durations were based on the provided information. No existing structure would be demolished. Based on information provided by the project proponent, no fill will be imported or exported. Additional construction information such as off-road equipment use, worker vehicle trips, and equipment load factors were based on default parameters contained in the model. Construction-generated GHG emissions attributable to the proposed project are presented for informational purposes. Refer to Appendix A for emissions modeling assumptions and results.

Long-term operational emissions were calculated using the CalEEMod, version 2022.1.1.28 for opening year 2025 and future year 2030 conditions. Mobile-source emissions were calculated based on vehicle trip-generation rates derived from the traffic analysis prepared for this project. Area source and energy use-related emissions were calculated based largely on default parameters contained in CalEEMod for San Luis Obispo County. Operational GHG emissions attributable to the proposed project are presented for informational purposes. Project-related operational GHG impacts were assessed based on consistency with applicable GHG reduction plans. Emission modeling files are provided in Appendix A.

Project Impacts and Mitigation Measures

Impact GHG-A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? or Conflice with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Estimated GHG emissions attributable to future development would be primarily associated with increases in CO_2 from mobile sources. To a lesser extent, other GHG pollutants, such as CH_4 and N_2O, would also be generated. Short-term and long-term GHG emissions associated with the development of the proposed project are discussed in greater detail, as follows:

Short-term Construction GHG Emissions

Estimated increases in GHG emissions associated with the construction of the proposed project are summarized in Table 19. Based on the modeling conducted, construction-related GHG emissions would total approximately 820 $MTCO_2e$. Amortized GHG emissions, when averaged over the assumed 30-year minimum life of the project, would total approximately 27.3 $MTCO_2e$/year. There would also be a small amount of GHG emissions from waste generated during construction; however, this amount is speculative. Actual emissions may vary, depending on the final construction schedules, equipment required, and activities conducted. Amortized construction-generated GHG emissions are included in the operational GHG emissions impact discussion provided below.

Table 19. Construction-Generated GHG Emissions

Construction Year	GHG Emissions ($MTCO_2e$/Year)
2024	34
2025	580
2026	206
Total Construction Emissions:	820
Amortized Construction Emissions:	27.3
Amortized emissions are quantified based on a minimum 30-year project life. Refer to Appendix A for modeling assumptions and results.	

Long-term Operational GHG Emissions

For informational purposes, estimated long-term increases in GHG emissions associated with the proposed project for the year 2025 and future year 2030 conditions are summarized in Table 20. As depicted, operational GHG emissions for the proposed project, with the inclusion of amortized construction GHGs, would total approximately 963.3 $MTCO_2e$ /year under operational year 2025 conditions and approximately 953.7 $MTCO_2e$ under operational year 2030 conditions. A majority of the operational GHG emissions would

be associated with motor vehicle use, energy use, and refrigerant. To a lesser extent, operational GHG emissions would also be associated with solid waste generation and water use.

Table 20. Operational GHG Emissions

Operational Year/Source	GHG Emissions ($MTCO_2e$/Year)	
	Opening Year 2025	Future Year 2030
Mobile[1]	100	90.4
Area Source[2]	22.5	22.5
Energy Source	556.0	556.0
Water[3]	33.7	33.7
Waste[4]	58.8	58.8
Refrigerant[5]	165	165
Amortized Construction Emissions:	27.3	27.3
Total Emissions:	963.3	953.7

1. *Based on default fleet mix for land uses contained in CalEEMod for San Luis Obispo County.*
2. *Area sources include emissions associated primarily with consumer products and the use of landscape maintenance equipment.*
3. *Includes use of low-flow water fixtures and water-efficient irrigation systems, per current building code requirements.*
4. *Based on an average annual waste diversion/recycling rate of 50% based on statewide averages.*
5. *Reduced service leak emissions.*
6. *Includes energy efficient appliance and as per Mitigation Measure GHG-1 does not include emissions associated with natural gas*

Refer to Appendix A for modeling assumptions and results.

Consistency With Applicable Plans

As noted in Table 20, operational GHG emissions attributable to the proposed project would be primarily associated with energy use, refrigerant emissions, and mobile sources. Applicable GHG-reduction plans related to reducing operational GHG emissions are the *County of San Luis Obispo's Regional Transportation Plan/Sustainable Communities Strategy,* ARB's *2022 Climate Change Scoping Plan,* and the *City of Paso Robles CAP*. The project's consistency with these plans is discussed in greater detail, as follows:

City of Paso Robles Climate Action Plan

The City's Climate Action Plan is a long-range plan to reduce GHG emissions from City government operations and community activities within the community. The City's Climate Action Plan includes numerous measures to reduce GHG emissions associated with energy use, motor vehicle use, water use, waste generation, and construction. It is important to note, however, that the City's Climate Action Plan is based on the year 2020 GHG-reduction targets and has not yet been updated to reflect year 2030 GHG-reduction targets, per SB 32. Nonetheless, a summary of the proposed project's consistency with the measures identified in the City's Climate Action Plan is summarized in Table 21. As noted, and with the implementation of proposed mitigation measures, the project would be consistent with the GHG-reduction measures identified in the City's currently adopted Climate Action Plan (City of Paso Robles 2013).

County of San Luis Obispo 2023 Regional Transportation Plan/Sustainable Communities Strategy

The 2023 RTP was adopted by the SLOCOG Board in June 2023. The RTP includes the region's SCS, which outlines how the region will meet or exceed its GHG reduction targets as required by SB 375 through the promotion of a variety of transportation demand management & system management tools and techniques to maximize the efficiency of the transportation network. Consistency with the requirement of SB 375 ensures consistency with the GHG-reduction targets set by ARB. The 2023 SCS was found to be consistent with the requirement of SB 375 and is also consistent with the general plans of the region's jurisdictions (SLOCOG 2023). Based on the VMT analysis prepared for the project, project-generated VMT would not exceed the City's VMT significance threshold (CCTC 2024). As a result, the project would not be considered to conflict with regional VMT-reduction efforts.

California's 2022 Climate Change Scoping Plan

The previously adopted 2017 Climate Change Scoping Plan incorporated the State's GHG emissions reduction target of 40 percent below 1990 emissions levels by 2030, as mandated by SB 32. On November 16, 2022, the ARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality. The recently adopted 2022 Scoping Plan continues the path to achieve the SB 32 2030 target and expands upon earlier Scoping Plans by targeting an 85 percent reduction in GHG below 1990 levels by 2045. A significant part of achieving

Table 21. Project Consistency with the City's Climate Action Plan

Climate Action Plan Measures	Project Consistency
Energy Measures	
Does the project exclusively include "All-electric buildings"?	**Consistent with Mitigation**. A mitigation measure has been included to encourage the installation of electrically-powered appliances in place of natural gas to the extent possible. Where natural gas service for equipment is required, electrical service to the equipment shall also be required to promote the future conversion from natural gas to electrical service. In addition, mitigation has also been included to require the installation of infrastructure to facilitate the future installation of alternative energy sources, such as the installation of photovoltaic systems (refer to Mitigation Measure GHG-1).
If the project/plan includes a new mixed-fuel building or buildings (plumbed for the use of natural gas as fuel for space heating, water heating, cooking, or clothes drying appliances) does that building/those buildings exceed the City's Energy Reach code?	
Transportation and Land Use Measures	
Does the project comply with requirements in the City's Municipal Code with no exceptions, including bicycle parking, bikeway design, and EV charging stations?	**Consistent with Mitigation**. The project is not located near public transit. Mitigation measures have been included to require shuttle service to and from the downtown transit station and EV-Ready charging stations.
Is the estimated project-generated VMT within the City's adopted thresholds, as confirmed by the City's Transportation Division?	**Consistent**. Based on the traffic analysis prepared for this project, project-generated VMT is within the City's adopted thresholds.
If "No", does the project/plan include VMT mitigation strategies and/or a Transportation Demand Management (TDM) Plan approved by the City's Transportation Division?	
Does the project demonstrate consistency with the City's Bicycle Network Plan?	**Not Applicable**. The project is not located along an existing or planned City bicycle route.
Off-Road Measure	
Will the project work to reduce GHG emissions by reducing off-road equipment and vehicle usage and idling?	**Consistent with Mitigation**. Mitigation measures have been included to require the project to restrict idling and vehicle usage when feasible and to use alternatively-powered equipment where possible (refer to Mitigation Measure AQ-2).
Water Measure	
Does the project comply with water efficiency and conservation requirements?	**Consistent with Mitigation**. A mitigation measure has been included to require the use of low-flow water fixtures, water-efficient irrigation systems, and drought-tolerant landscaping (refer to Mitigation Measure AQ-3).
Waste Measure	
Does the project include an operational commitment to reduce the amount of trash and other waste and recycle as many materials as possible?	**Consistent.** The project shall provide organic waste pick up and shall provide the appropriate on-site enclosures consistent with the provisions of the City of Paso Robles Development Standards for Solid Waste Services (refer to Mitigation Measure GHG-1).
Tree Planting Measure	
Does the project include an operational commitment to maintain a healthy urban forest and incorporate native drought-tolerant trees?	**Consistent with Mitigation**. Mitigation measures have been included to require the installation of trees and drought-tolerant landscaping (refer to Mitigation Measure AQ-3).

the SB 32 goals are strategies to promote sustainable communities, such as the promotion of zero net energy buildings, and improved transportation choices that result in reducing VMT. Other measures include the increased use of low-carbon fuels and cleaner vehicles (ARB 2022).

For land use development projects, additional reductions in GHG emissions may be required in order to meet the project's fair share of the statewide reductions required to achieve carbon neutrality, consistent with EO B-55-18 and ARB's Draft 2022 Scoping Plan Update. Neither the SLOAPCD nor the City have developed recommended thresholds of significance that are based on achieving carbon neutrality by the year 2045. However, the Bay Area Air Quality Management District (BAAQMD) has recently released recommended GHG significance thresholds that are based on a "fair share" approach for achieving carbon neutrality goals. Consistent with this approach, new land use development projects would be considered to be consistent with the State's carbon neutrality goals and would be considered to have a less-than-significant impact if: 1) the project is deemed consistent with regional VMT-reduction targets; 2) the project prohibits the installation of natural gas infrastructure (to the extent that alternative power sources are available); and 3)

the project would not result in a wasteful, inefficient, or unnecessary energy use as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. Similarly, the SMAQMD has also recently released Best Management Practices (BMPs), which also include the prohibited installation of natural gas infrastructure for development projects, as well as a requirement that projects meet current CALGreen Tier 2 standards for EV spaces, except that *EV-capable* spaces shall instead be *EV ready*. This additional requirement requires the installation of electrical infrastructure sufficient to service the future installation of EV chargers. The BAAQMD and SMAQMD thresholds are based on an approach endorsed by the Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015). Although not located within these jurisdictions, development in San Luis Obispo County and associated GHG emissions are comparable to those generated by developments within other areas of the state, including the BAAQMD and SMAQMD jurisdictions. Given that climate change is inherently a cumulative impact that occurs on a global scale, these BMPs would, likewise, be considered representative of the project's "fair share" of what would be required to meet the State's long-term climate goals, including achieving carbon neutrality by 2045, as identified by the BAAQMD and the SMAQMD.

As noted above, the proposed project would be consistent with the regional VMT-reduction targets. However, the proposed project does not include BMPs that would constitute its "fair share" of what would be required to meet the State's long-term climate goals, including achieving carbon neutrality by 2045. Specifically, the project does not prohibit the installation of natural gas-fueled appliances/equipment, nor require that current CALGreen Tier 2 compliant EV spaces be *EV Ready*, as opposed to *EV Capable*. As a result, this impact would be considered **potentially significant**.

Mitigation Measures

Implement Mitigation Measure AQ-2, AQ-3 and the following:

GHG-1: The project shall include the following measures:

a. CALGreen Tier 2 compliant electric vehicle (EV) charging stations shall be "EV Ready" as opposed to "EV Capable".

b. Install electrically powered appliances and building mechanical equipment in place of natural-gas-fueled equipment. If natural gas equipment is to be installed, the following shall be implemented: (1) Install electrical service to the natural gas equipment location sufficient to allow for the future conversion from natural gas to electrical service; (2) A Greenhouse Gas (GHG) Reduction Plan shall be prepared for the proposed project. The GHG Reduction Plan shall include a menu of all possible onsite GHG reduction measures sufficient to offset operational natural-gas source emissions. In the event that the City of Paso Robles (City) adopts an updated Climate Action Plan or the San Luis Obispo County Air Pollution Control District (SLOAPCD) releases updated recommended GHG significance thresholds that address future-year GHG emissions reductions, the GHG-Reduction Plan may be evaluated in comparison to the GHG thresholds and reduction measures identified in the Climate Action Plan or those identified by the SLOAPCD and adjusted in order for the project to be in compliance with the Climate Action Plan. The GHG Reduction plan shall be approved by the City prior to issuance of building construction permits.

   Under California Environmental Quality Act Guidelines Section 15126.4(c)(3) and (c)(4), respectively, a project's GHG emissions may also be reduced by offsite measures, including offsets that are not otherwise required by existing regulations and measures that sequester GHGs. In the event that feasible onsite GHG-reduction measures are insufficient to offset operational natural-gas source GHG emissions, offsite mitigation measures may be included to the extent feasible. Offsite mitigation measures may include "Direct Reduction Activities" located in the City of Paso Robles or the SLOAPCD jurisdictional areas. "Direct Reduction Activities" means undertaking or funding activities that will reduce or sequester GHG emissions. GHG reduction credits shall achieve GHG emission reductions that are real, permanent, quantifiable, verifiable, and enforceable. GHG reduction credits shall be undertaken for the specific purpose of reducing project-generated GHG emissions and shall not include reductions that would otherwise be required by law. All Direct Reduction Activities and associated reduction credits shall be confirmed by an independent, qualified third-party air consultant retained by the Applicant.

c. The project shall provide organic waste pick up and shall provide the appropriate on-site enclosures consistent with the provisions of the City of Paso Robles Development Standards for Solid Waste Services.

Significance After Mitigation

Implementation of Mitigation Measures AQ-2 and GHG-1 would reduce project-generated GHG emissions to ensure consistency with future year 2030 GHG-reduction targets. With mitigation, the project would be considered consistent with the regional GHG-reduction planning efforts, which have been deemed consistent with State-wide GHG-reduction planning efforts.

Mitigation Measure GHG-1a would require the installation of EV-ready parking spaces in support of the State's carbon neutrality goals. With regard to CALGreen EV parking requirements, "EV Capable" is defined as including the installation of a "raceway" (the enclosed conduit that forms the physical pathway for electrical wiring to protect it from damage) and adequate future installation of a dedicated branch circuit and charging station(s). "EV Ready" includes "EV Capable" requirements plus the addition of dedicated branch circuit(s) (electrical pre-wiring), circuit breakers, and other electrical components, including a receptacle (240-volt outlet) or blank cover needed to support future installation of one or more charging stations. Mitigation has also been included to promote the use of electrically powered appliances/equipment (as opposed to natural gas-fueled appliances/equipment) and to reduce waste per applicable City development standards. It is important to note that, as currently proposed, natural gas service to the project site is not anticipated. Implementation of Mitigation Measure GHG-1c would help to reduce GHG emissions associated with waste generation. Mitigation Measures AQ-2 would help to reduce GHG emissions associated with construction-related activities, including short-lived climate pollutants, such as black carbon. Mitigation Measure AQ-3 includes various measures that would help to reduce operational emissions of GHGs. With mitigation, the project would be considered consistent with the local, regional, and state GHG-reduction planning efforts. With mitigation, this impact would be considered ***less than significant.***

REFERENCES

California Air Resources Board (ARB). April 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*.

California Air Resources Board (ARB). Accessed January 20, 2018. *ARB Health-Related Fact Sheets. Website URL:* http://www.arb.ca.gov/research/health/fs/fs.htm.

California Air Resources Board (ARB). December 2022. *California's 2022 Climate Change Scoping Plan*. Website URL: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2022.pdf.

California Air Resources Board (ARB). Accessed December 12, 2020. *Short Lived Climate Pollutants.* Website URL: https://ww2.arb.ca.gov/our-work/programs/slcp.

California Air Resources Board (ARB). Accessed September 17, 2024. *iADAM: Air Quality Data Statistics*. Website URL: https://www.arb.ca.gov/adam.

California Air Resources Board (ARB). 2021. *California Greenhouse Gas Emissions Inventory: 2000-2019.* Available at website URL: https://ww2.arb.ca.gov/sites/default/files/classic/cc/ca_ghg_inventory_trends_2000-2019.pdf.

California Department of Transportation (Caltrans). 1996. *Transportation Project-Level Carbon Monoxide Protocol. University of California Davis, Institute of Transportation Studies, UCD-ITS-RR-96-1*.

California Energy Commission (CEC). 2019. *2019 Building Energy Efficiency Standards*. Website URL: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency.

California Energy Commission (CEC). May 9, 2018. *News Release. Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation*. Available at website URL: http://www.energy.ca.gov/releases/2018_releases/2018-05-09_building_standards_adopted_nr.html.

California Energy Commission (CEC). August 11, 2021. *2022 Building Energy Efficiency Standards*. Available at website URL: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency.

Central Coast Transportation Consulting (CCTC). July 17, 2024. *Hunter Ranch Resort – Transportation Impact Analysis*.

City of Paso Robles. 2013. *City of Paso Robles Climate Action Plan*. Available at website URL: https://www.prcity.com/DocumentCenter/View/14729/Climate-Action-Plan-PDF.

Intergovernmental Panel on Climate Change (IPCC). 2007. *Fourth Assessment Report, Climate Change 2007: Impacts, Adaptation and Vulnerability.* Available at website URL: https://www.ipcc.ch/site/assets/uploads/2018/03/ar4_wg2_full_report.pdf.

Iowa Environmental Mesonet. Accessed July 2023. *IEM Site Information*. Website URL: https://mesonet.agron.iastate.edu/sites/site.php?station=PRB&network=CA_ASOS.

Sacramento Metropolitan Air Quality Management District (SMAQMD). October 2020. *Guidance to Address the Friant Ranch Ruling For CEQA Projects in the Sac Metro Air District.*

San Joaquin Valley Air Pollution Control District (SJVAPCD). April 13, 2015. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno, Plaintiffs and Appellants v. County of Fresno, Defendant and Respondent. Application for Leave to File Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. Website URL: https://www.courts.ca.gov/documents/7-s219783-ac-san-joaquin-valley-unified-air-pollution-control-dist-041315.pdf.

San Luis Obispo Council of Governments (SLOCOG). 2023. *SLOCOG 2023 Regional Transportation Plan.* Available at Website URL: https://www.slocog.org/programs/regional-planning/2023-rtp.

San Luis Obispo Council of Governments (SLOCOG). 2019. *2019 Regional Housing Needs Allocation Plan*. Available at Website URL: https://www.slocog.org/programs/housing/regional-housing-needs-allocation-rhna

San Luis Obispo County Air Pollution Control District (SLOAPCD). January 29, *2019. SLO County Attainment Status*. Website URL: https://storage.googleapis.com/slocleanair org/images/cms/upload/files/AttainmentStatus29January2019.pdf.

San Luis Obispo County Air Pollution Control District (SLOAPCD). December 2001. *Clean Air Plan*.

San Luis Obispo County Air Pollution Control District (SLOAPCD). April 2012. *CEQA Air Quality Handbook*. Available at website URL: https://www.slocleanair.org/rules-regulations/land-use-ceqa.php.

San Luis Obispo County Air Pollution Control District (SLOAPCD). 2017. *Clarification Memo related to the CEQA Air Quality Handbook*. Available at website URL: https://www.slocleanair.org/rules-regulations/land-use-ceqa.php.

San Luis Obispo County Air Pollution Control District (SLOAPCD). 2018. *APCD Naturally Occurring Asbestos Map*. Available at website URL: https://www.slocleanair.org/rules-regulations/land-use-ceqa.php.

United States Environmental Protection Agency (U.S. EPA). Accessed: August 20, 2018. *Overview of Greenhouse Gases*. Website URL: https://www.epa.gov/ghgemissions/overview-greenhouse-gases.

United States Environmental Protection Agency (U.S. EPA). 2023. *Air Quality Index Report*. Website URL: https://www.epa.gov/outdoor-air-quality-data/air-quality-index-report.

Watson Planning Consultants. March 2024. *Hunter Ranch Site Development*.

APPENDIX A

EMISSIONS MODELING

Phase 1 Unmitigated											
Phase:	ROG	NOX	CO	SO2	PM10 Exhaust	PM10 Fugitive	PM10 Total	PM2.5 Exhaust	PM2.5 Fugitive	PM2.5 Total	ROG+NOX
Site Prep 2024	3.72	36.05	33.5	0.05	1.6	5.21	6.81	1.47	2.65	4.12	39.77
Grading 2024	3.6	34.36	30.88	0.06	1.45	2.5	3.95	1.33	0.98	2.31	37.96
Grading 2025	3.28	29.76	28.94	0.06	1.23	2.5	3.73	1.14	0.98	2.12	33.04
BC 2025	1.75	12.64	18.27	0.03	0.45	1.12	1.56	0.42	0.28	0.69	14.39
Paving 2025	1.08	7.49	10.47	0.01	0.35	0.09	0.44	0.32	0.02	0.34	8.57
Arc 2025	97.24	0.95	2.05	0	0.03	0.16	0.19	0.03	0.04	0.07	98.19
Total:	110.67	121.25	124.11	0.21	5.11	11.58	16.68	4.71	4.95	9.65	231.92

Phase 1 Mitigated											
Phase:	ROG	NOX	CO	SO2	PM10 Exhaust	PM10 Fugitive	PM10 Total	PM2.5 Exhaust	PM2.5 Fugitive	PM2.5 Total	ROG+NOX
Site Prep	3.72	36.05	33.5	0.05	1.6	5.21	6.81	1.47	2.65	4.12	39.77
Grading 2024	3.6	34.36	30.88	0.06	1.45	2.5	3.95	1.33	0.98	2.31	37.96
Grading 2025	3.28	29.76	28.94	0.06	1.23	2.5	3.73	1.14	0.98	2.12	33.04
BC	1.75	12.64	18.27	0.03	0.45	1.12	1.56	0.42	0.28	0.69	14.39
Paving	1.08	7.49	10.47	0.01	0.35	0.09	0.44	0.32	0.02	0.34	8.57
Arc	19.74	0.95	2.05	0	0.03	0.16	0.19	0.03	0.04	0.07	20.69
Total:	33.17	121.25	124.11	0.21	5.11	11.58	16.68	4.71	4.95	9.65	154.42

Phase 1 Quarterly											
Quarter	ROG	NOX	CO	SO2	PM10 Exhaust	PM10 Fugitive	PM10 Total	PM2.5 Exhaust	PM2.5 Fugitive	PM2.5 Total	ROG+NOX
Q1											
Unmit.	0.14	1.24	1.25	< 0.005	0.05	0.1	0.16	0.05	0.04	0.09	1.38
Mit.	0.14	1.24	1.25	< 0.005	0.05	0.1	0.16	0.05	0.04	0.09	1.38
Q2											
Unmit.	2.7	0.44	0.65	< 0.005	0.02	0.04	0.06	0.01	0.01	0.02	3.14
Mit.	0.59	0.44	0.65	< 0.005	0.02	0.04	0.06	0.01	0.01	0.02	1.03
Q3											
Unmit.	1.29	0.27	0.4	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	1.56
Mit.	0.29	0.27	0.4	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	0.56
Quarterly (Max)											
Unmit.	2.63	0.96	0.88	< 0.005	0.04	0.05	0.05	0.04	0.03	0.04	3.59
Mit.	0.53	0.96	0.88	< 0.005	0.04	0.05	0.05	0.04	0.03	0.04	1.49

Phase 2 Unmitigated											
Phase:	ROG	NOX	CO	SO2	PM10 Exhaust	PM10 Fugitive	PM10 Total	PM2.5 Exhaust	PM2.5 Fugitive	PM2.5 Total	ROG+NOX
Site Prep 2025	3.38	31.64	30.77	0.05	1.37	5.21	6.58	1.26	2.65	3.91	35.02
Grading 2025	1.8	16.34	18.39	0.03	0.72	1.93	2.65	0.66	0.91	1.57	18.14
BC 2025	1.24	10.79	13.91	0.02	0.43	0.2	0.63	0.4	0.05	0.45	12.03
Paving 2025	0.83	6.58	9.48	0.01	0.29	0.11	0.4	0.26	0.03	0.29	7.41
Paving 2026	0.8	6.28	9.41	0.01	0.26	0.11	0.37	0.24	0.03	0.27	7.08
Arc 2025	16.15	0.89	1.3	0	0.03	0.03	0.06	0.03	0.01	0.04	17.04
Total:	24.2	72.52	83.26	0.12	3.1	7.59	10.69	2.85	3.68	6.53	96.72

Phase 2 Mitigated											
Phase:	ROG	NOX	CO	SO2	PM10 Exhaust	PM10 Fugitive	PM10 Total	PM2.5 Exhaust	PM2.5 Fugitive	PM2.5 Total	ROG+NOX
Site Prep 2025	3.38	31.64	30.77	0.05	1.37	5.21	6.58	1.26	2.65	3.91	35.02
Grading 2025	1.8	16.34	18.39	0.03	0.72	1.93	2.65	0.66	0.91	1.57	18.14
BC 2025	1.24	10.79	13.91	0.02	0.43	0.2	0.63	0.4	0.05	0.45	12.03
Paving 2025	0.83	6.58	9.48	0.01	0.29	0.11	0.4	0.26	0.03	0.29	7.41
Paving 2026	0.8	6.28	9.41	0.01	0.26	0.11	0.37	0.24	0.03	0.27	7.08
Arc 2025	16.15	0.89	1.3	0	0.03	0.03	0.06	0.03	0.01	0.04	17.04
Total:	24.2	72.52	83.26	0.12	3.1	7.59	10.69	2.85	3.68	6.53	96.72

Phase 2 Quarterly											
Quarter	ROG	NOX	CO	SO2	PM10 Exhaust	PM10 Fugitive	PM10 Total	PM2.5 Exhaust	PM2.5 Fugitive	PM2.5 Total	ROG+NOX
Q1											
Unmit.	0.07	0.53	0.62	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	0.6
Mit.	0.07	0.53	0.62	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	0.6
Q2											
Unmit.	0.56	0.38	0.49	< 0.005	0.02	0.01	0.02	0.01	< 0.005	0.02	0.94
Mit.	0.56	0.38	0.49	< 0.005	0.02	0.01	0.02	0.01	< 0.005	0.02	0.94
Q3											
Unmit.	0.18	0.29	0.41	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	0.47
Mit.	0.18	0.29	0.41	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	0.47
Quarterly (Max)											
Unmit.	0.52	0.34	0.42	< 0.005	0.01	0.02	0.02	0.01	0.01	0.01	0.86
Mit.	0.52	0.34	0.42	< 0.005	0.01	0.02	0.02	0.01	0.01	0.01	0.86

Phase 3 Unmitigated											
Phase:	ROG	NOX	CO	SO2	PM10 Exhaus	PM10 Fugitive	PM10 Tota	PM2.5 Exhaus	PM2.5 Fugitive	PM2.5 Tota	ROG+NOX
Site Prep 2025	3.38	31.65	30.76	0.05	1.37	5.21	6.58	1.26	2.65	3.91	35.03
Grading 2026	3.12	27.25	28.2	0.06	1.12	2.5	3.62	1.03	0.98	2.01	30.37
BC 2026	1.77	12.38	18.9	0.03	0.4	1.33	1.73	0.37	0.32	0.69	14.15
Paving 2026	1.17	7.16	10.4	0.01	0.32	0.09	0.41	0.29	0.02	0.31	8.33
Arc Coat 2026	110.25	0.94	2.15	0	0.02	0.19	0.21	0.02	0.04	0.06	111.19
Total:	119.69	79.38	90.41	0.15	3.23	9.32	12.55	2.97	4.01	6.98	199.07

Phase 3 Mitigated											
Phase:	ROG	NOX	CO	SO2	PM10 Exhaus	PM10 Fugitive	PM10 Tota	PM2.5 Exhaus	PM2.5 Fugitive	PM2.5 Tota	ROG+NOX
Site Prep 2026	3.38	31.65	30.76	0.05	1.37	5.21	6.58	1.26	2.65	3.91	35.03
Grading 2026	3.12	27.25	28.2	0.06	1.12	2.5	3.62	1.03	0.98	2.01	30.37
BC 2026	1.77	12.38	18.9	0.03	0.4	1.33	1.73	0.37	0.32	0.69	14.15
Paving 2026	1.17	7.16	10.4	0.01	0.32	0.09	0.41	0.29	0.02	0.31	8.33
Arc Coat 2026	22.45	0.94	2.15	0	0.02	0.19	0.21	0.02	0.04	0.06	23.39
Total:	31.89	79.38	90.41	0.15	3.23	9.32	12.55	2.97	4.01	6.98	111.27

Phase 3 Quarterly											
Quarter	ROG	NOX	CO	SO2	PM10 Exhaus	PM10 Fugitive	PM10 Tota	PM2.5 Exhaus	PM2.5 Fugitive	PM2.5 Tota	ROG+NOX
Q1											
Unmit.	0.06	0.54	0.59	< 0.005	0.02	0.06	0.08	0.02	0.02	0.04	0.6
Mit.	0.06	0.54	0.59	< 0.005	0.02	0.06	0.08	0.02	0.02	0.04	0.6
Q2											
Unmit.	2.23	0.42	0.65	< 0.005	0.01	0.05	0.06	0.01	0.01	0.02	2.65
Mit.	0.5	0.42	0.65	< 0.005	0.01	0.05	0.06	0.01	0.01	0.02	0.92
Q3											
Unmit.	2.46	0.39	0.61	< 0.005	0.01	0.03	0.05	0.01	0.01	0.02	2.85
Mit.	0.54	0.39	0.61	< 0.005	0.01	0.03	0.05	0.01	0.01	0.02	0.93
Quarterly (Max)											
Unmit.	2.4	0.4	0.42	< 0.005	0.02	0.04	0.04	0.02	0.01	0.02	2.8
Mit.	0.48	0.4	0.42	< 0.005	0.02	0.04	0.04	0.02	0.01	0.02	0.88

Phase Name	Start Date	End Date
SP1	12/16/2024	12/22/2024
G1	12/22/2024	2/1/2025
BC1	2/3/2025	7/19/2025
P1	7/21/2025	8/30/2025
A1	4/1/2025	7/21/2025
SP2	6/4/2025	6/11/2025
G2	6/12/2025	7/23/2025
BC2	7/14/2025	12/27/2025
P2	12/22/2025	1/31/2026
A2	9/1/2025	12/27/2025
SP3	12/1/2025	12/6/2025
G3	1/5/2026	2/14/2026
BC3	2/14/2026	7/31/2026
P3	7/20/2026	8/29/2026
A3	4/7/2026	7/31/2026

Total: Emissions Unmitigated											
Phase 1	**ROG**	**NOX**	**CO**	**SO2**	**PM10 Exhaust**	**PM10 Fugitive**	**PM10 Total**	**PM2.5 Exhaust**	**M2.5 Fugitiv**	**PM2.5 Total**	**ROG+NOX**
Site Prep 2024	3.72	36.05	33.5	0.05	1.6	5.21	6.81	1.47	2.65	4.12	39.77
Grading 2024	3.6	34.36	30.88	0.06	1.45	2.5	3.95	1.33	0.98	2.31	37.96
Grading 2025	3.28	29.76	28.94	0.06	1.23	2.5	3.73	1.14	0.98	2.12	33.04
BC 2025	1.75	12.64	18.27	0.03	0.45	1.12	1.56	0.42	0.28	0.69	14.39
Paving 2025	1.08	7.49	10.47	0.01	0.35	0.09	0.44	0.32	0.02	0.34	8.57
Arc 2025	97.24	0.95	2.05	0	0.03	0.16	0.19	0.03	0.04	0.07	98.19
Total:	**110.67**	**121.25**	**124.11**	**0.21**	**5.11**	**11.58**	**16.68**	**4.71**	**4.95**	**9.65**	**231.92**
Phase 2	**ROG**	**NOX**	**CO**	**SO2**	**PM10 Exhaust**	**PM10 Fugitive**	**PM10 Total**	**PM2.5 Exhaust**	**M2.5 Fugitiv**	**PM2.5 Total**	**ROG+NOX**
Site Prep 2025	3.38	31.64	30.77	0.05	1.37	5.21	6.58	1.26	2.65	3.91	35.02
Grading 2025	1.8	16.34	18.39	0.03	0.72	1.93	2.65	0.66	0.91	1.57	18.14
BC 2025	1.24	10.79	13.91	0.02	0.43	0.2	0.63	0.4	0.05	0.45	12.03
Paving 2025	0.83	6.58	9.48	0.01	0.29	0.11	0.4	0.26	0.03	0.29	7.41
Paving 2026	0.8	6.28	9.41	0.01	0.26	0.11	0.37	0.24	0.03	0.27	7.08
Arc 2025	16.15	0.89	1.3	0	0.03	0.03	0.06	0.03	0.01	0.04	17.04
Total:	**24.2**	**72.52**	**83.26**	**0.12**	**3.1**	**7.59**	**10.69**	**2.85**	**3.68**	**6.53**	**96.72**
Phase 3	**ROG**	**NOX**	**CO**	**SO2**	**PM10 Exhaust**	**PM10 Fugitive**	**PM10 Total**	**PM2.5 Exhaust**	**M2.5 Fugitiv**	**PM2.5 Total**	**ROG+NOX**
Site Prep 2025	3.38	31.65	30.76	0.05	1.37	5.21	6.58	1.26	2.65	3.91	35.03
Grading 2026	3.12	27.25	28.2	0.06	1.12	2.5	3.62	1.03	0.98	2.01	30.37
BC 2026	1.77	12.38	18.9	0.03	0.4	1.33	1.73	0.37	0.32	0.69	14.15
Paving 2026	1.17	7.16	10.4	0.01	0.32	0.09	0.41	0.29	0.02	0.31	8.33
Arc Coat 2026	110.25	0.94	2.15	0	0.02	0.19	0.21	0.02	0.04	0.06	111.19
Total:	**119.69**	**79.38**	**90.41**	**0.15**	**3.23**	**9.32**	**12.55**	**2.97**	**4.01**	**6.98**	**199.07**
SLO APCD Thresholds (Lbs/Day)	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**137**
Maximum Daily Emissions Year 2024	**7.32**	**70.41**	**64.38**	**0.11**	**3.05**	**7.71**	**10.76**	**2.8**	**3.63**	**6.43**	**77.73**
Exceeds SLOAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Maximum Daily Emissions Year 2025	**102.03**	**61.4**	**59.71**	**0.11**	**2.6**	**7.71**	**10.31**	**2.4**	**3.63**	**6.03**	**142.75**
Exceeds SLOAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**
Maximum Daily Emissions Year 2026	**116.31**	**47.73**	**59.65**	**0.1**	**1.86**	**4.11**	**5.97**	**1.71**	**1.36**	**3.07**	**164.04**
Exceeds SLOAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**

Total: Emissions Mitigated											
Phase 1	**ROG**	**NOX**	**CO**	**SO2**	**PM10 Exhaust**	**PM10 Fugitive**	**PM10 Total**	**PM2.5 Exhaust**	**PM2.5 Fugitive**	**PM2.5 Total**	**ROG+NOX**
Site Prep 2024	3.72	36.05	33.5	0.05	1.6	5.21	6.81	1.47	2.65	4.12	39.77
Grading 2024	3.6	34.36	30.88	0.06	1.45	2.5	3.95	1.33	0.98	2.31	37.96
Grading 2025	3.28	29.76	28.94	0.06	1.23	2.5	3.73	1.14	0.98	2.12	33.04
BC 2025	1.75	12.64	18.27	0.03	0.45	1.12	1.56	0.42	0.28	0.69	14.39
Paving 2025	1.08	7.49	10.47	0.01	0.35	0.09	0.44	0.32	0.02	0.34	8.57
Arc 2025	19.74	0.95	2.05	0	0.03	0.16	0.19	0.03	0.04	0.07	**20.69**
Total:	**33.17**	**121.25**	**124.11**	**0.21**	**5.11**	**11.58**	**16.68**	**4.71**	**4.95**	**9.65**	**154.42**
Phase 2	**ROG**	**NOX**	**CO**	**SO2**	**PM10 Exhaust**	**PM10 Fugitive**	**PM10 Total**	**PM2.5 Exhaust**	**PM2.5 Fugitive**	**PM2.5 Total**	**ROG+NOX**
Site Prep 2025	3.38	31.64	30.77	0.05	1.37	5.21	6.58	1.26	2.65	3.91	35.02
Grading 2025	1.8	16.34	18.39	0.03	0.72	1.93	2.65	0.66	0.91	1.57	18.14
BC 2025	1.24	10.79	13.91	0.02	0.43	0.2	0.63	0.4	0.05	0.45	12.03
Paving 2025	0.83	6.58	9.48	0.01	0.29	0.11	0.4	0.26	0.03	0.29	7.41
Paving 2026	0.8	6.28	9.41	0.01	0.26	0.11	0.37	0.24	0.03	0.27	7.08
Arc 2025	16.15	0.89	1.3	0	0.03	0.03	0.06	0.03	0.01	0.04	17.04
Total:	**24.2**	**72.52**	**83.26**	**0.12**	**3.1**	**7.59**	**10.69**	**2.85**	**3.68**	**6.53**	**96.72**
Phase 3	**ROG**	**NOX**	**CO**	**SO2**	**PM10 Exhaust**	**PM10 Fugitive**	**PM10 Total**	**PM2.5 Exhaust**	**PM2.5 Fugitive**	**PM2.5 Total**	**ROG+NOX**
Site Prep 2025	3.38	31.65	30.76	0.05	1.37	5.21	6.58	1.26	2.65	3.91	35.03
Grading 2026	3.12	27.25	28.2	0.06	1.12	2.5	3.62	1.03	0.98	2.01	30.37
BC 2026	1.77	12.38	18.9	0.03	0.4	1.33	1.73	0.37	0.32	0.69	14.15
Paving 2026	1.17	7.16	10.4	0.01	0.32	0.09	0.41	0.29	0.02	0.31	8.33
Arc Coat 2026	22.45	0.94	2.15	0	0.02	0.19	0.21	0.02	0.04	0.06	23.39
Total:	**31.89**	**79.38**	**90.41**	**0.15**	**3.23**	**9.32**	**12.55**	**2.97**	**4.01**	**6.98**	**111.27**
SLO APCD Thresholds (Lbs/Day)	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**137**
Maximum Daily Emissions Year 2024	**7.32**	**70.41**	**64.38**	**0.11**	**3.05**	**7.71**	**10.76**	**2.8**	**3.63**	**6.43**	**77.73**
Exceeds SLOAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Maximum Daily Emissions Year 2025	**24.53**	**61.4**	**59.71**	**0.11**	**2.6**	**7.71**	**10.31**	**2.4**	**3.63**	**6.03**	**68.06**
Exceeds SLOAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Maximum Daily Emissions Year 2026	**28.51**	**47.73**	**59.65**	**0.1**	**1.86**	**4.11**	**5.97**	**1.71**	**1.36**	**3.07**	**76.24**
Exceeds SLOAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Unmitigated

Quarter	ROG	NOX	CO	SO2	PM10 Exhau	PM10 Fugiti	PM10 Total	PM2.5 Exha	PM2.5 Fugit	PM2.5 Total	ROG+NOX
Phase 1 - Quarter 1	0.14	1.24	1.25	< 0.005	0.05	0.1	0.16	0.05	0.04	0.09	1.38
Phase 1 - Quarter 2	2.7	0.44	0.65	< 0.005	0.02	0.04	0.06	0.01	0.01	0.02	3.14
Phase 1 - Quarter 3	1.29	0.27	0.4	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	1.56
Phase 2 - Quarter 1	0.07	0.53	0.62	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	0.6
Phase 2 - Quarter 2	0.56	0.38	0.49	< 0.005	0.02	0.01	0.02	0.01	< 0.005	0.02	0.94
Phase 2 - Quarter 3	0.18	0.29	0.41	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	0.47
Phase 3 - Quarter 1	0.06	0.54	0.59	< 0.005	0.02	0.06	0.08	0.02	0.02	0.04	0.6
Phase 3 - Quarter 2	2.23	0.42	0.65	< 0.005	0.01	0.05	0.06	0.01	0.01	0.02	2.65
Phase 3 - Quarter 3	2.46	0.39	0.61	< 0.005	0.01	0.03	0.05	0.01	0.01	0.02	2.85

Mitigated

Quarter	ROG	NOX	CO	SO2	PM10 Ex	PM10 Fu	PM10 To	PM2.5 Exhaust	PM2.5 Fugitive	PM2.5 T	ROG+NOX
Phase 1 – Quarter 1	0.14	1.24	1.25	< 0.005	0.05	0.1	0.16	0.05	0.04	0.09	1.38
Phase 1 – Quarter 2	0.59	0.44	0.65	< 0.005	0.02	0.04	0.06	0.01	0.01	0.02	1.03
Phase 1 – Quarter 3	0.29	0.27	0.4	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	0.56
Phase 2 – Quarter 1	0.07	0.53	0.62	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	0.6
Phase 2 – Quarter 2	0.56	0.38	0.49	< 0.005	0.02	0.01	0.02	0.01	< 0.005	0.02	0.94
Phase 2 – Quarter 3	0.52	0.34	0.42	< 0.005	0.01	0.02	0.02	0.01	0.01	0.01	0.86
Phase 3 – Quarter 1	0.06	0.54	0.59	< 0.005	0.02	0.06	0.08	0.02	0.02	0.04	0.6
Phase 3 – Quarter 2	0.5	0.42	0.65	< 0.005	0.01	0.05	0.06	0.01	0.01	0.02	0.92
Phase 3 – Quarter 3	0.48	0.4	0.42	< 0.005	0.02	0.04	0.04	0.02	0.01	0.02	0.88

Unmitigated 2025

Source	ROG	NOX	CO	SO2	PM10 Exhaust	PM10 Fugitive	PM10 Total	PM2.5 Exhaust	PM2.5 Fugitive	PM2.5 Total	Co2e	ROG+NOX
Daily Emissions (lbs/day)												
Mobile	15.8	3.68	36.2	0.01	0.02	0.01	0.03	0.02	0	0.02	859	19.48
Area	29.3	0.31	36.5	< 0.005	0.06	0	0.06	0.05	0	0.05	151	29.61
Energy	0	0	0	0	0	0	0	0	0	0	3457	0
Natgas	0.35	6.28	5.27	0.04	0.48	0	0.48	0.48	0	0.48	7512	6.63
Water	0	0	0	0	0	0	0	0	0	0	220	0
Waste	0	0	0	0	0	0	0	0	0	0	711	0
Refrigerant	0	0	0	0	0	0	0	0	0	0	1263	0
Total Daily:	45.45	10.27	77.97	0.05	0.56	0.01	0.57	0.55	0	0.55	14173	55.72
Annual (Tons/year)												
Mobile	1.98	0.46	4.37	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	100	2.44
Area	5.25	0.05	6.02	< 0.005	0.01	0	0.01	0.01	0	0.01	22.5	5.3
Energy	0	0	0	0	0	0	0	0	0	0	572	0
Natgas	0.06	1.15	0.96	0.01	0.09	0	0.09	0.09	0	0.09	1244	1.21
Water	0	0	0	0	0	0	0	0	0	0	36.4	0
Waste	0	0	0	0	0	0	0	0	0	0	118	0
Refrigerant	0	0	0	0	0	0	0	0	0	0	209	0
Total Annual	7.29	1.66	11.35	0.01	0.1	0	0.1	0.1	0	0.1	2301.9	8.95

Mitigated 2025

Source	ROG	NOX	CO	SO2	PM10 Exhaus	PM10 Fugitiv	PM10 Total	M2.5 Exhaus	M2.5 Fugitiv	PM2.5 Total	Co2e	ROG+NOX
Daily Emissions (lbs/day)												
Mobile	15.8	3.68	36.2	0.01	0.02	0.01	0.03	0.02	0	0.02	859	19.48
Area	23.7	0.31	36.5	< 0.005	0.06	0	0.06	0.05	0	0.05	151	24.01
Energy	0	0	0	0	0	0	0	0	0	0	3355	0
Natgas	0.35	6.28	5.27	0	0.48	0	0.48	0.48	0	0.48	7512	6.63
Water	0	0	0	0	0	0	0	0	0	0	204	0
Waste	0	0	0	0	0	0	0	0	0	0	355	0
Refrigerant	0	0	0	0	0	0	0	0	0	0	999	0
Total Daily:	39.85	10.27	77.97	0.01	0.56	0.01	0.57	0.55	0	0.55	13435	50.12
Annual (Tons/year)												
Mobile	1.98	0.46	4.37	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	100	2.44
Area	4.47	0.05	6.02	< 0.005	0.01	0	0.01	0.01	0	0.01	22.5	4.52
Energy	0	0	0	0	0	0	0	0	0	0	556	0
Natgas	0.06	1.15	0.96	0.01	0.09	0	0.09	0.09	0	0.09	1244	1.21
Water	0	0	0	0	0	0	0	0	0	0	33.7	0
Waste	0	0	0	0	0	0	0	0	0	0	58.8	0
Refrigerant	0	0	0	0	0	0	0	0	0	0	165	0
Total Annual	6.51	1.66	11.35	0.01	0.1	0	0.1	0.1	0	0.1	2180	8.17

2025 GHG Emissions	
Source	Co2e
Annual (Tons/year)	
Mobile	100
Area	22.5
Energy	556
Natgas	0
Water	33.7
Waste	58.8
Refrigerant	165
Total Annual	936

2030 GHG Emissions	
Source	Co2e
Annual (Tons/year)	
Mobile	90.4
Area	22.5
Energy	556
Natgas	0
Water	33.7
Waste	58.8
Refrigerant	165
Total Annual	926.4

Hunter Ranch Resort Phase 1 (1-A and 1-B) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

3.2. Site Preparation (2024) - Mitigated

3.3. Grading (2024) - Unmitigated

3.4. Grading (2024) - Mitigated

3.5. Grading (2025) - Unmitigated

3.6. Grading (2025) - Mitigated

3.7. Building Construction (2025) - Unmitigated

3.8. Building Construction (2025) - Mitigated

3.9. Paving (2025) - Unmitigated

3.10. Paving (2025) - Mitigated

3.11. Architectural Coating (2025) - Unmitigated

3.12. Architectural Coating (2025) - Mitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Resort Phase 1 (1-A and 1-B)
Construction Start Date	12/2/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64888931974407, -120.62173458944159
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Light Industry	2.00	1000sqft	0.05	2,000	0.00	0.00	—	Laundry
Motel	1.00	Room	0.60	2,600	0.00	0.00	—	Lobby

Motel	150	Room	6.75	294,030	0.00	0.00	—	Casitas (150)
Other Asphalt Surfaces	1.00	1000sqft	0.50	0.00	0.00	0.00	—	Golf Cart Facility
High Turnover (Sit Down Restaurant)	2.00	1000sqft	0.05	2,000	0.00	0.00	—	Restaurant #2
Parking Lot	188	Space	1.69	0.00	0.00	0.00	—	Parking (188)
Hotel	20.0	Room	0.67	29,040	0.00	0.00	—	Golf Villas
Health Club	3.00	1000sqft	0.07	3,000	0.00	0.00	—	Casitas Spa
Parking Lot	32.0	Space	0.29	0.00	0.00	0.00	—	Parking (32)

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-13	Use Low-VOC Paints for Construction

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

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	99.3	98.9	13.6	20.4	0.03	0.48	1.28	1.75	0.44	0.31	0.75	—	4,778	4,778	0.21	0.25	7.50	4,865
Mit.	21.8	21.5	13.6	20.4	0.03	0.48	1.28	1.75	0.44	0.31	0.75	—	4,778	4,778	0.21	0.25	7.50	4,865
% Reduced	78%	78%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.69	7.32	70.4	64.4	0.11	3.05	7.72	10.8	2.80	3.63	6.43	—	12,117	12,117	0.50	0.24	0.18	12,161
Mit.	8.69	7.32	70.4	64.4	0.11	3.05	7.72	10.8	2.80	3.63	6.43	—	12,117	12,117	0.50	0.24	0.18	12,161
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	22.3	22.2	6.86	9.09	0.02	0.26	0.56	0.82	0.24	0.16	0.40	—	2,079	2,079	0.08	0.09	1.06	2,107
Mit.	5.34	5.18	6.86	9.09	0.02	0.26	0.56	0.82	0.24	0.16	0.40	—	2,079	2,079	0.08	0.09	1.06	2,107
% Reduced	76%	77%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.07	4.05	1.25	1.66	< 0.005	0.05	0.10	0.15	0.04	0.03	0.07	—	344	344	0.01	0.01	0.18	349
Mit.	0.97	0.95	1.25	1.66	< 0.005	0.05	0.10	0.15	0.04	0.03	0.07	—	344	344	0.01	0.01	0.18	349
% Reduced	76%	77%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	99.3	98.9	13.6	20.4	0.03	0.48	1.28	1.75	0.44	0.31	0.75	—	4,778	4,778	0.21	0.25	7.50	4,865
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	8.69	7.32	70.4	64.4	0.11	3.05	7.72	10.8	2.80	3.63	6.43	—	12,117	12,117	0.50	0.11	0.03	12,161

2025	3.89	3.28	29.7	28.9	0.06	1.23	2.51	3.74	1.14	0.98	2.11	—	6,716	6,716	0.27	0.24	0.18	6,740
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.14	0.12	1.17	1.06	< 0.005	0.05	0.12	0.17	0.05	0.06	0.10	—	205	205	0.01	< 0.005	0.01	206
2025	22.3	22.2	6.86	9.09	0.02	0.26	0.56	0.82	0.24	0.16	0.40	—	2,079	2,079	0.08	0.09	1.06	2,107
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.03	0.02	0.21	0.19	< 0.005	0.01	0.02	0.03	0.01	0.01	0.02	—	34.0	34.0	< 0.005	< 0.005	< 0.005	34.1
2025	4.07	4.05	1.25	1.66	< 0.005	0.05	0.10	0.15	0.04	0.03	0.07	—	344	344	0.01	0.01	0.18	349

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	21.8	21.5	13.6	20.4	0.03	0.48	1.28	1.75	0.44	0.31	0.75	—	4,778	4,778	0.21	0.25	7.50	4,865
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	8.69	7.32	70.4	64.4	0.11	3.05	7.72	10.8	2.80	3.63	6.43	—	12,117	12,117	0.50	0.11	0.03	12,161
2025	3.89	3.28	29.7	28.9	0.06	1.23	2.51	3.74	1.14	0.98	2.11	—	6,716	6,716	0.27	0.24	0.18	6,740
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.14	0.12	1.17	1.06	< 0.005	0.05	0.12	0.17	0.05	0.06	0.10	—	205	205	0.01	< 0.005	0.01	206
2025	5.34	5.18	6.86	9.09	0.02	0.26	0.56	0.82	0.24	0.16	0.40	—	2,079	2,079	0.08	0.09	1.06	2,107
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.03	0.02	0.21	0.19	< 0.005	0.01	0.02	0.03	0.01	0.01	0.02	—	34.0	34.0	< 0.005	< 0.005	< 0.005	34.1
2025	0.97	0.95	1.25	1.66	< 0.005	0.05	0.10	0.15	0.04	0.03	0.07	—	344	344	0.01	0.01	0.18	349

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.49	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	72.5	72.5	< 0.005	< 0.005	—	72.8
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.01	0.01	0.09	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.60	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	104	104	0.01	< 0.005	0.01	106
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.44	1.44	< 0.005	< 0.005	< 0.005	1.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.24	0.24	< 0.005	< 0.005	< 0.005	0.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2024) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.49	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	72.5	72.5	< 0.005	< 0.005	—	72.8
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.60	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	104	104	0.01	< 0.005	0.01	106
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.44	1.44	< 0.005	< 0.005	< 0.005	1.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.24	0.24	< 0.005	< 0.005	< 0.005	0.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

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

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

Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	129	129	0.01	< 0.005	—	130
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	21.4	21.4	< 0.005	< 0.005	—	21.5
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.68	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	119	119	0.01	0.01	0.01	121
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.35	2.35	< 0.005	< 0.005	< 0.005	2.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.39	0.39	< 0.005	< 0.005	< 0.005	0.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	129	129	0.01	< 0.005	—	130
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	21.4	21.4	< 0.005	< 0.005	—	21.5
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.68	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	119	119	0.01	0.01	0.01	121

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.35	2.35	< 0.005	< 0.005	< 0.005	2.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.39	0.39	< 0.005	< 0.005	< 0.005	0.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.86	1.77	< 0.005	0.08	—	0.08	0.07	—	0.07	—	413	413	0.02	< 0.005	—	415
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	68.4	68.4	< 0.005	< 0.005	—	68.7
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.64	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	117	117	< 0.005	0.01	0.01	119
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.37	7.37	< 0.005	< 0.005	0.01	7.49

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.86	1.77	< 0.005	0.08	—	0.08	0.07	—	0.07	—	413	413	0.02	< 0.005	—	415

Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	68.4	68.4	< 0.005	< 0.005	—	68.7
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.64	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	117	117	< 0.005	0.01	0.01	119
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.37	7.37	< 0.005	< 0.005	0.01	7.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.24

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.43	4.29	0.01	0.14	—	0.14	0.13	—	0.13	—	788	788	0.03	0.01	—	791
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.08	0.07	0.63	0.78	< 0.005	0.03	—	0.03	0.02	—	0.02	—	131	131	0.01	< 0.005	—	131
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.57	0.36	4.55	0.00	0.00	0.80	0.80	0.00	0.19	0.19	—	852	852	0.05	0.04	3.57	868
Vendor	0.10	0.05	1.80	0.72	0.01	0.02	0.32	0.33	0.02	0.09	0.10	—	1,225	1,225	0.04	0.18	3.21	1,284
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.56	0.40	4.45	0.00	0.00	0.80	0.80	0.00	0.19	0.19	—	816	816	0.03	0.04	0.09	828
Vendor	0.09	0.05	1.84	0.74	0.01	0.02	0.32	0.33	0.02	0.09	0.10	—	1,226	1,226	0.04	0.18	0.08	1,281
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.18	0.13	1.45	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	270	270	0.01	0.01	0.51	275
Vendor	0.03	0.02	0.61	0.24	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	403	403	0.01	0.06	0.46	421
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.26	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.7	44.7	< 0.005	< 0.005	0.08	45.5
Vendor	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	66.7	66.7	< 0.005	0.01	0.08	69.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2025) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.43	4.29	0.01	0.14	—	0.14	0.13	—	0.13	—	788	788	0.03	0.01	—	791
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.63	0.78	< 0.005	0.03	—	0.03	0.02	—	0.02	—	131	131	0.01	< 0.005	—	131
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.60	0.57	0.36	4.55	0.00	0.00	0.80	0.80	0.00	0.19	0.19	—	852	852	0.05	0.04	3.57	868
Vendor	0.10	0.05	1.80	0.72	0.01	0.02	0.32	0.33	0.02	0.09	0.10	—	1,225	1,225	0.04	0.18	3.21	1,284
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.56	0.40	4.45	0.00	0.00	0.80	0.80	0.00	0.19	0.19	—	816	816	0.03	0.04	0.09	828
Vendor	0.09	0.05	1.84	0.74	0.01	0.02	0.32	0.33	0.02	0.09	0.10	—	1,226	1,226	0.04	0.18	0.08	1,281
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.18	0.13	1.45	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	270	270	0.01	0.01	0.51	275
Vendor	0.03	0.02	0.61	0.24	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	403	403	0.01	0.06	0.46	421
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.26	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.7	44.7	< 0.005	< 0.005	0.08	45.5
Vendor	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	66.7	66.7	< 0.005	0.01	0.08	69.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.22	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.61	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	124	124	0.01	< 0.005	—	125
Paving	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.49	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.4	91.4	0.01	< 0.005	0.38	93.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.25	7.25	< 0.005	< 0.005	0.01	7.37

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.20	1.20	< 0.005	< 0.005	< 0.005	1.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.22	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.61	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	124	124	0.01	< 0.005	—	125
Paving	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.49	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.4	91.4	0.01	< 0.005	0.38	93.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.25	7.25	< 0.005	< 0.005	0.01	7.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.20	1.20	< 0.005	< 0.005	< 0.005	1.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	97.0	97.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.19	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.3	29.3	< 0.005	< 0.005	—	29.4
Architectural Coatings	21.3	21.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.85	4.85	< 0.005	< 0.005	—	4.86
Architectural Coatings	3.88	3.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.07	0.91	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	170	170	0.01	0.01	0.71	174
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.19	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.07	36.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.97	5.97	< 0.005	< 0.005	0.01	6.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2025) - Mitigated

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

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

Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	19.5	19.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.19	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.3	29.3	< 0.005	< 0.005	—	29.4
Architectural Coatings	4.27	4.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.85	4.85	< 0.005	< 0.005	—	4.86
Architectural Coatings	0.78	0.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.07	0.91	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	170	170	0.01	0.01	0.71	174
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.19	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.07	36.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.97	5.97	< 0.005	< 0.005	0.01	6.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	12/16/2024	12/22/2024	5.00	5.00	1-A and 1-B
Grading	Grading	12/22/2024	2/1/2025	5.00	30.0	1-A and 1-B
Building Construction	Building Construction	2/3/2025	7/19/2025	5.00	120	1-A and 1-B
Paving	Paving	7/21/2025	8/30/2025	5.00	30.0	1-A and 1-B
Architectural Coating	Architectural Coating	4/1/2025	7/21/2025	5.00	80.0	1-A and 1-B

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20

Building Construction	Tractors/Loaders/Back	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.10	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	8.10	LDA,LDT1,LDT2
Grading	Vendor	—	6.90	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	140	8.10	LDA,LDT1,LDT2
Building Construction	Vendor	54.5	6.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	8.10	LDA,LDT1,LDT2
Paving	Vendor	—	6.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	27.9	8.10	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.10	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	8.10	LDA,LDT1,LDT2
Grading	Vendor	—	6.90	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	140	8.10	LDA,LDT1,LDT2
Building Construction	Vendor	54.5	6.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	8.10	LDA,LDT1,LDT2
Paving	Vendor	—	6.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	27.9	8.10	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	499,005	166,335	6,482

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	0.00	0.00	—
Grading	0.00	0.00	16.4	0.00	—
Paving	0.00	0.00	0.00	0.00	2.48

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	0.00	0%
Motel	0.00	0%

Motel	0.00	0%
Other Asphalt Surfaces	0.50	100%
High Turnover (Sit Down Restaurant)	0.00	0%
Parking Lot	1.69	100%
Hotel	0.00	0%
Health Club	0.00	0%
Parking Lot	0.29	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	21.8	annual days of extreme heat
Extreme Precipitation	4.00	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	24.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

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

6.2. Initial Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	5.51
AQ-DPM	5.08
Drinking Water	68.4
Lead Risk Housing	13.9
Pesticides	73.6
Toxic Releases	23.8
Traffic	5.54
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	94.7
Haz Waste Facilities/Generators	94.1
Impaired Water Bodies	66.7
Solid Waste	93.8
Sensitive Population	—
Asthma	38.9

Cardio-vascular	21.2
Low Birth Weights	17.2
Socioeconomic Factor Indicators	—
Education	34.4
Housing	38.1
Linguistic	18.1
Poverty	42.9
Unemployment	18.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	64.60926472
Employed	54.30514564
Median HI	73.28371616
Education	—
Bachelor's or higher	47.5426665
High school enrollment	100
Preschool enrollment	58.10342615
Transportation	—
Auto Access	72.44963429
Active commuting	26.36981907
Social	—
2-parent households	95.03400488
Voting	87.36045169
Neighborhood	—
Alcohol availability	79.96920313

Park access	8.661619402
Retail density	1.142050558
Supermarket access	15.16745798
Tree canopy	9.970486334
Housing	—
Homeownership	79.44308995
Housing habitability	90.29898627
Low-inc homeowner severe housing cost burden	67.59912742
Low-inc renter severe housing cost burden	87.38611574
Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	69.44693956
Arthritis	0.0
Asthma ER Admissions	59.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	35.5
Cognitively Disabled	44.8
Physically Disabled	32.1
Heart Attack ER Admissions	74.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	39.6

Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.4
SLR Inundation Area	0.0
Children	55.0
Elderly	20.2
English Speaking	70.4
Foreign-born	5.5
Outdoor Workers	16.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.9
Traffic Density	5.9
Traffic Access	0.0
Other Indices	—
Hardship	26.5
Other Decision Support	—
2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	69.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on provided information
Construction: Construction Phases	No Demo, based on provided construction schedule
Construction: Dust From Material Movement	no trips for import/export (earthwork balance on-site) all grading done in grading phase
Operations: Vehicle Data	Based on trips provided by CCTC

Hunter Ranch Resort Phase 1 (1-A and 1-B) Quarterly Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions

2.1.1. Construction Emissions Compared Against Thresholds

2.1.2. Construction Quarters

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Resort Phase 1 (1-A and 1-B)
Construction Start Date	12/2/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64888931974407, -120.62173458944159
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Light Industry	2.00	1000sqft	0.05	2,000	0.00	0.00	—	Laundry
Motel	1.00	Room	0.60	2,600	0.00	0.00	—	Lobby

Motel	150	Room	6.75	294,030	0.00	0.00	—	Casitas (150)
Other Asphalt Surfaces	1.00	1000sqft	0.50	0.00	0.00	0.00	—	Golf Cart Facility
High Turnover (Sit Down Restaurant)	2.00	1000sqft	0.05	2,000	0.00	0.00	—	Restaurant #2
Parking Lot	188	Space	1.69	0.00	0.00	0.00	—	Parking (188)
Hotel	20.0	Room	0.67	29,040	0.00	0.00	—	Golf Villas
Health Club	3.00	1000sqft	0.07	3,000	0.00	0.00	—	Casitas Spa
Parking Lot	32.0	Space	0.29	0.00	0.00	0.00	—	Parking (32)

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-13	Use Low-VOC Paints for Construction

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

2. Emissions Summary

2.1. Construction Emissions

2.1.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (ton/quarter) and GHGs (MT/quarter)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Q1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.16	0.14	1.24	1.25	< 0.005	0.05	0.10	0.16	0.05	0.04	0.09	—	255	255	0.01	< 0.005	< 0.005	257
Mit.	0.16	0.14	1.24	1.25	< 0.005	0.05	0.10	0.16	0.05	0.04	0.09	—	255	255	0.01	< 0.005	< 0.005	257
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Q2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.71	2.70	0.44	0.65	< 0.005	0.02	0.04	0.06	0.01	0.01	0.02	—	139	139	0.01	0.01	0.19	142
Mit.	0.60	0.59	0.44	0.65	< 0.005	0.02	0.04	0.06	0.01	0.01	0.02	—	139	139	0.01	0.01	0.19	142
% Reduced	78%	78%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Q3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.29	1.29	0.27	0.40	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	74.1	74.1	< 0.005	< 0.005	0.09	75.2
Mit.	0.30	0.29	0.27	0.40	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	74.1	74.1	< 0.005	< 0.005	0.09	75.2
% Reduced	77%	77%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Quarterly (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.63	2.63	0.96	0.88	< 0.005	0.04	0.05	0.05	0.04	0.03	0.04	—	180	180	0.01	0.01	0.17	180
Mit.	0.53	0.53	0.96	0.88	< 0.005	0.04	0.05	0.05	0.04	0.03	0.04	—	180	180	0.01	0.01	0.17	180
% Reduced	80%	80%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.1.2. Construction Quarters

Quarter	Start Date	End Date	Length (days)
Q1	12/16/2024	3/16/2025	91
Q2	3/17/2025	6/15/2025	91
Q3	6/16/2025	8/30/2025	76

Hunter Ranch Resort Phase 2 (1-C) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

3.2. Site Preparation (2025) - Mitigated

3.3. Grading (2025) - Unmitigated

3.4. Grading (2025) - Mitigated

3.5. Building Construction (2025) - Unmitigated

3.6. Building Construction (2025) - Mitigated

3.7. Paving (2025) - Unmitigated

3.8. Paving (2025) - Mitigated

3.9. Paving (2026) - Unmitigated

3.10. Paving (2026) - Mitigated

3.11. Architectural Coating (2025) - Unmitigated

3.12. Architectural Coating (2025) - Mitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Resort Phase 2 (1-C)
Construction Start Date	5/6/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64888931974407, -120.62173458944159
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Strip Mall	5.00	1000sqft	0.11	5,000	0.00	—	—	Retail Village
Hotel	30.0	Room	1.00	43,560	0.00	—	—	Casitas (30)

Arena	4.80	1000sqft	1.54	4,800	0.00	—	—	Event Center
User Defined Recreational	1.00	User Defined Unit	1.54	4,800	0.00	—	—	Maintenance Building
Parking Lot	51.0	Space	0.46	0.00	0.00	0.00	—	Parking (51)

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

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

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.6	17.3	31.7	32.3	0.05	1.37	5.21	6.58	1.26	2.65	3.91	—	5,808	5,808	0.24	0.09	1.56	5,842
Mit.	17.6	17.3	31.7	32.3	0.05	1.37	5.21	6.58	1.26	2.65	3.91	—	5,808	5,808	0.24	0.09	1.56	5,842
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.6	18.2	18.3	24.7	0.04	0.75	0.33	1.08	0.69	0.08	0.77	—	4,381	4,381	0.18	0.08	0.05	4,408
Mit.	18.6	18.2	18.3	24.7	0.04	0.75	0.33	1.08	0.69	0.08	0.77	—	4,381	4,381	0.18	0.08	0.05	4,408
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.50	4.38	5.76	7.08	0.01	0.24	0.31	0.55	0.22	0.14	0.35	—	1,311	1,311	0.05	0.02	0.20	1,319
Mit.	4.50	4.38	5.76	7.08	0.01	0.24	0.31	0.55	0.22	0.14	0.35	—	1,311	1,311	0.05	0.02	0.20	1,319
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.82	0.80	1.05	1.29	< 0.005	0.04	0.06	0.10	0.04	0.02	0.06	—	217	217	0.01	< 0.005	0.03	218
Mit.	0.82	0.80	1.05	1.29	< 0.005	0.04	0.06	0.10	0.04	0.02	0.06	—	217	217	0.01	< 0.005	0.03	218
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	17.6	17.3	31.7	32.3	0.05	1.37	5.21	6.58	1.26	2.65	3.91	—	5,808	5,808	0.24	0.09	1.56	5,842
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	18.6	18.2	18.3	24.7	0.04	0.75	0.33	1.08	0.69	0.08	0.77	—	4,381	4,381	0.18	0.08	0.05	4,408
2026	0.94	0.80	6.29	9.41	0.01	0.26	0.11	0.37	0.24	0.03	0.27	—	1,465	1,465	0.06	0.02	0.01	1,471
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.50	4.38	5.76	7.08	0.01	0.24	0.31	0.55	0.22	0.14	0.35	—	1,311	1,311	0.05	0.02	0.20	1,319
2026	0.06	0.05	0.38	0.57	< 0.005	0.02	0.01	0.02	0.01	< 0.005	0.02	—	88.9	88.9	< 0.005	< 0.005	0.01	89.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.82	0.80	1.05	1.29	< 0.005	0.04	0.06	0.10	0.04	0.02	0.06	—	217	217	0.01	< 0.005	0.03	218

2026	0.01	0.01	0.07	0.10	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	< 0.005	14.8

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	17.6	17.3	31.7	32.3	0.05	1.37	5.21	6.58	1.26	2.65	3.91	—	5,808	5,808	0.24	0.09	1.56	5,842
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	18.6	18.2	18.3	24.7	0.04	0.75	0.33	1.08	0.69	0.08	0.77	—	4,381	4,381	0.18	0.08	0.05	4,408
2026	0.94	0.80	6.29	9.41	0.01	0.26	0.11	0.37	0.24	0.03	0.27	—	1,465	1,465	0.06	0.02	0.01	1,471
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.50	4.38	5.76	7.08	0.01	0.24	0.31	0.55	0.22	0.14	0.35	—	1,311	1,311	0.05	0.02	0.20	1,319
2026	0.06	0.05	0.38	0.57	< 0.005	0.02	0.01	0.02	0.01	< 0.005	0.02	—	88.9	88.9	< 0.005	< 0.005	0.01	89.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.82	0.80	1.05	1.29	< 0.005	0.04	0.06	0.10	0.04	0.02	0.06	—	217	217	0.01	< 0.005	0.03	218
2026	0.01	0.01	0.07	0.10	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	< 0.005	14.8

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.52	0.50	< 0.005	0.02	—	0.02	0.02	—	0.02	—	87.0	87.0	< 0.005	< 0.005	—	87.3
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.04	0.57	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	107	107	0.01	< 0.005	0.45	109
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2025) - Mitigated

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

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

Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.52	0.50	< 0.005	0.02	—	0.02	0.02	—	0.02	—	87.0	87.0	< 0.005	< 0.005	—	87.3
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.04	0.57	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	107	107	0.01	< 0.005	0.45	109
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	—	2,959	2,959	0.12	0.02	—	2,970

Dust From Material Movement	—	—	—	—	—	—	1.84	1.84	—	0.89	0.89	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.34	1.47	< 0.005	0.06	—	0.06	0.05	—	0.05	—	243	243	0.01	< 0.005	—	244
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.3	40.3	< 0.005	< 0.005	—	40.4
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.49	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.4	91.4	0.01	< 0.005	0.38	93.2

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.25	7.25	< 0.005	< 0.005	0.01	7.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.20	1.20	< 0.005	< 0.005	< 0.005	1.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	—	2,959	2,959	0.12	0.02	—	2,970
Dust From Material Movement	—	—	—	—	—	—	1.84	1.84	—	0.89	0.89	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.34	1.47	< 0.005	0.06	—	0.06	0.05	—	0.05	—	243	243	0.01	< 0.005	—	244
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.3	40.3	< 0.005	< 0.005	—	40.4
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.49	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.4	91.4	0.01	< 0.005	0.38	93.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.25	7.25	< 0.005	< 0.005	0.01	7.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.20	1.20	< 0.005	< 0.005	< 0.005	1.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.43	4.29	0.01	0.14	—	0.14	0.13	—	0.13	—	788	788	0.03	0.01	—	791
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.63	0.78	< 0.005	0.03	—	0.03	0.02	—	0.02	—	131	131	0.01	< 0.005	—	131
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.06	0.78	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	146	146	0.01	0.01	0.61	149
Vendor	0.02	0.01	0.31	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	214	214	0.01	0.03	0.56	224
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.07	0.76	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	140	140	0.01	0.01	0.02	142
Vendor	0.02	0.01	0.32	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	214	214	0.01	0.03	0.01	224
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.25	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	46.3	46.3	< 0.005	< 0.005	0.09	47.0
Vendor	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	70.4	70.4	< 0.005	0.01	0.08	73.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.66	7.66	< 0.005	< 0.005	0.01	7.79
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.01	12.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Building Construction (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.43	4.29	0.01	0.14	—	0.14	0.13	—	0.13	—	788	788	0.03	0.01	—	791
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.63	0.78	< 0.005	0.03	—	0.03	0.02	—	0.02	—	131	131	0.01	< 0.005	—	131
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.06	0.78	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	146	146	0.01	0.01	0.61	149
Vendor	0.02	0.01	0.31	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	214	214	0.01	0.03	0.56	224
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.07	0.76	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	140	140	0.01	0.01	0.02	142
Vendor	0.02	0.01	0.32	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	214	214	0.01	0.03	0.01	224
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.25	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	46.3	46.3	< 0.005	< 0.005	0.09	47.0
Vendor	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	70.4	70.4	< 0.005	0.01	0.08	73.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.66	7.66	< 0.005	< 0.005	0.01	7.79
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.01	12.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.52	8.84	0.01	0.29	—	0.29	0.26	—	0.26	—	1,351	1,351	0.05	0.01	—	1,355
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.4	26.4	< 0.005	< 0.005	—	26.5
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.38	4.38	< 0.005	< 0.005	—	4.39
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.64	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	117	117	< 0.005	0.01	0.01	119
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.30	2.30	< 0.005	< 0.005	< 0.005	2.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.38	0.38	< 0.005	< 0.005	< 0.005	0.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Paving (2025) - Mitigated

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

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

Off-Road Equipment	0.85	0.71	6.52	8.84	0.01	0.29	—	0.29	0.26	—	0.26	—	1,351	1,351	0.05	0.01	—	1,355
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.4	26.4	< 0.005	< 0.005	—	26.5
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.38	4.38	< 0.005	< 0.005	—	4.39
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.64	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	117	117	< 0.005	0.01	0.01	119
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.30	2.30	< 0.005	< 0.005	< 0.005	2.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.38	0.38	< 0.005	< 0.005	< 0.005	0.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.68	6.23	8.81	0.01	0.26	—	0.26	0.24	—	0.24	—	1,350	1,350	0.05	0.01	—	1,355
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.53	< 0.005	0.02	—	0.02	0.01	—	0.01	—	81.9	81.9	< 0.005	< 0.005	—	82.2

Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.6	13.6	< 0.005	< 0.005	—	13.6
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.05	0.60	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	115	115	< 0.005	0.01	0.01	116
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.01	7.01	< 0.005	< 0.005	0.01	7.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.16	1.16	< 0.005	< 0.005	< 0.005	1.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.68	6.23	8.81	0.01	0.26	—	0.26	0.24	—	0.24	—	1,350	1,350	0.05	0.01	—	1,355
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.53	< 0.005	0.02	—	0.02	0.01	—	0.01	—	81.9	81.9	< 0.005	< 0.005	—	82.2
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.6	13.6	< 0.005	< 0.005	—	13.6
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.05	0.60	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	115	115	< 0.005	0.01	0.01	116
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.01	7.01	< 0.005	< 0.005	0.01	7.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.16	1.16	< 0.005	< 0.005	< 0.005	1.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134

Architectural Coating	16.0	16.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	16.0	16.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.21	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Architectural Coatings	3.72	3.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.15	5.15	< 0.005	< 0.005	—	5.17

Architectural Coatings	0.68	0.68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.2	29.2	< 0.005	< 0.005	0.12	29.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	< 0.005	28.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.56	6.56	< 0.005	< 0.005	0.01	6.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	16.0	16.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	16.0	16.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.21	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Architectural Coatings	3.72	3.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.15	5.15	< 0.005	< 0.005	—	5.17
Architectural Coatings	0.68	0.68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.2	29.2	< 0.005	< 0.005	0.12	29.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	< 0.005	28.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.56	6.56	< 0.005	< 0.005	0.01	6.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.10

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	6/4/2025	6/11/2025	5.00	6.00	1-C
Grading	Grading	6/12/2025	7/23/2025	5.00	30.0	1-C
Building Construction	Building Construction	7/14/2025	12/27/2025	5.00	120	1-C
Paving	Paving	12/22/2025	1/31/2026	5.00	30.0	1-C
Architectural Coating	Architectural Coating	9/1/2025	12/27/2025	5.00	85.0	1-C

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

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

Site Preparation	Tractors/Loaders/Back	Diesel	Average	4.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.10	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT

Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	8.10	LDA,LDT1,LDT2
Grading	Vendor	—	6.90	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	23.9	8.10	LDA,LDT1,LDT2
Building Construction	Vendor	9.53	6.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	8.10	LDA,LDT1,LDT2
Paving	Vendor	—	6.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.79	8.10	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.10	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT

Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	8.10	LDA,LDT1,LDT2
Grading	Vendor	—	6.90	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	23.9	8.10	LDA,LDT1,LDT2
Building Construction	Vendor	9.53	6.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	8.10	LDA,LDT1,LDT2
Paving	Vendor	—	6.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.79	8.10	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	87,240	29,080	1,200

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	0.00	0.00	—
Grading	0.00	0.00	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.46

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Strip Mall	0.00	0%
Hotel	0.00	0%
Arena	0.00	0%
User Defined Recreational	0.00	0%
Parking Lot	0.46	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	21.8	annual days of extreme heat
Extreme Precipitation	4.00	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	24.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	5.51
AQ-DPM	5.08
Drinking Water	68.4
Lead Risk Housing	13.9
Pesticides	73.6
Toxic Releases	23.8
Traffic	5.54
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	94.7
Haz Waste Facilities/Generators	94.1
Impaired Water Bodies	66.7
Solid Waste	93.8
Sensitive Population	—
Asthma	38.9
Cardio-vascular	21.2
Low Birth Weights	17.2
Socioeconomic Factor Indicators	—
Education	34.4
Housing	38.1
Linguistic	18.1
Poverty	42.9
Unemployment	18.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	64.60926472
Employed	54.30514564
Median HI	73.28371616
Education	—
Bachelor's or higher	47.5426665
High school enrollment	100
Preschool enrollment	58.10342615
Transportation	—
Auto Access	72.44963429
Active commuting	26.36981907
Social	—
2-parent households	95.03400488
Voting	87.36045169
Neighborhood	—
Alcohol availability	79.96920313
Park access	8.661619402
Retail density	1.142050558
Supermarket access	15.16745798
Tree canopy	9.970486334
Housing	—
Homeownership	79.44308995
Housing habitability	90.29898627
Low-inc homeowner severe housing cost burden	67.59912742
Low-inc renter severe housing cost burden	87.38611574

Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	69.44693956
Arthritis	0.0
Asthma ER Admissions	59.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	35.5
Cognitively Disabled	44.8
Physically Disabled	32.1
Heart Attack ER Admissions	74.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	39.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.4
SLR Inundation Area	0.0

Children	55.0
Elderly	20.2
English Speaking	70.4
Foreign-born	5.5
Outdoor Workers	16.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.9
Traffic Density	5.9
Traffic Access	0.0
Other Indices	—
Hardship	26.5
Other Decision Support	—
2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	69.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on provided information
Construction: Construction Phases	Based on provided construction schedule
Construction: Dust From Material Movement	grading accounted for in 1-A and 1-B

Hunter Ranch Resort Phase 2 (1-C) Quarterly Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions

2.1.1. Construction Emissions Compared Against Thresholds

2.1.2. Construction Quarters

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Resort Phase 2 (1-C)
Construction Start Date	5/6/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64888931974407, -120.62173458944159
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Strip Mall	5.00	1000sqft	0.11	5,000	0.00	—	—	Retail Village
Hotel	30.0	Room	1.00	43,560	0.00	—	—	Casitas (30)

Arena	4.80	1000sqft	1.54	4,800	0.00	—	—	Event Center
User Defined Recreational	1.00	User Defined Unit	1.54	4,800	0.00	—	—	Maintenance Building
Parking Lot	51.0	Space	0.46	0.00	0.00	0.00	—	Parking (51)

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

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

2. Emissions Summary

2.1. Construction Emissions

2.1.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (ton/quarter) and GHGs (MT/quarter)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Q1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.07	0.53	0.62	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	—	101	101	< 0.005	< 0.005	0.03	102
Mit.	0.08	0.07	0.53	0.62	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	—	101	101	< 0.005	< 0.005	0.03	102
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Q2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.57	0.56	0.38	0.49	< 0.005	0.02	0.01	0.02	0.01	< 0.005	0.02	—	86.0	86.0	< 0.005	< 0.005	0.01	86.6
Mit.	0.57	0.56	0.38	0.49	< 0.005	0.02	0.01	0.02	0.01	< 0.005	0.02	—	86.0	86.0	< 0.005	< 0.005	0.01	86.6
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Q3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.19	0.18	0.29	0.41	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	62.5	62.5	< 0.005	< 0.005	< 0.005	62.9
Mit.	0.19	0.18	0.29	0.41	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	62.5	62.5	< 0.005	< 0.005	< 0.005	62.9
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Quarterly (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.52	0.52	0.34	0.42	< 0.005	0.01	0.02	0.02	0.01	0.01	0.01	—	70.7	70.7	< 0.005	< 0.005	0.02	70.9
Mit.	0.52	0.52	0.34	0.42	< 0.005	0.01	0.02	0.02	0.01	0.01	0.01	—	70.7	70.7	< 0.005	< 0.005	0.02	70.9
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.1.2. Construction Quarters

Quarter	Start Date	End Date	Length (days)
Q1	6/4/2025	9/2/2025	91
Q2	9/3/2025	12/2/2025	91
Q3	12/3/2025	1/31/2026	60

Hunter Ranch Resort Phase 3 (2-A, 2-B, and 2-C) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

3.2. Site Preparation (2025) - Mitigated

3.3. Grading (2026) - Unmitigated

3.4. Grading (2026) - Mitigated

3.5. Building Construction (2026) - Unmitigated

3.6. Building Construction (2026) - Mitigated

3.7. Paving (2026) - Unmitigated

3.8. Paving (2026) - Mitigated

3.9. Architectural Coating (2026) - Unmitigated

3.10. Architectural Coating (2026) - Mitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Resort Phase 3 (2-A, 2-B, and 2-C)
Construction Start Date	12/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64888931974407, -120.62173458944159
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Motel	90.0	Room	4.05	176,418	0.00	0.00	—	Lodge (90)
Quality Restaurant	15.0	1000sqft	0.34	15,000	0.00	0.00	—	Restaurant #3

Hotel	28.0	Room	0.93	40,656	0.00	0.00	—	Suites (28)
Parking Lot	193	Space	1.74	0.00	0.00	0.00	—	Parking (193)
Health Club	7.00	1000sqft	0.16	7,000	0.00	0.00	—	Lodge Spa
Medical Office Building	5.00	1000sqft	0.11	5,000	0.00	0.00	—	Lodge Medical
Hotel	24.0	Room	0.80	34,848	0.00	0.00	—	Casitas (24)
Other Asphalt Surfaces	43.6	1000sqft	1.00	0.00	0.00	0.00	—	Sport Courts
Parking Lot	75.0	Space	0.67	0.00	0.00	0.00	—	Parking (75)
Motel	60.0	Room	2.70	117,612	0.00	0.00	—	Vaquero Lodge (30+30)
Parking Lot	60.0	Space	0.54	0.00	0.00	0.00	—	Parking (60)

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-13	Use Low-VOC Paints for Construction

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	114	113	20.4	31.4	0.05	0.74	1.60	2.34	0.68	0.39	1.08	—	6,757	6,757	0.26	0.30	8.62	6,861
Mit.	25.8	25.4	20.4	31.4	0.05	0.74	1.60	2.34	0.68	0.39	1.08	—	6,757	6,757	0.26	0.30	8.62	6,861
% Reduced	77%	78%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.77	4.88	39.7	46.9	0.09	1.52	5.21	6.58	1.40	2.65	3.91	—	11,497	11,497	0.46	0.33	0.21	11,607
Mit.	5.77	4.88	39.7	46.9	0.09	1.52	5.21	6.58	1.40	2.65	3.91	—	11,497	11,497	0.46	0.33	0.21	11,607
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	26.5	26.4	7.12	9.80	0.02	0.25	0.69	0.94	0.23	0.20	0.43	—	2,333	2,333	0.09	0.10	1.17	2,365
Mit.	6.26	6.09	7.12	9.80	0.02	0.25	0.69	0.94	0.23	0.20	0.43	—	2,333	2,333	0.09	0.10	1.17	2,365
% Reduced	76%	77%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.84	4.81	1.30	1.79	< 0.005	0.05	0.13	0.17	0.04	0.04	0.08	—	386	386	0.02	0.02	0.19	392
Mit.	1.14	1.11	1.30	1.79	< 0.005	0.05	0.13	0.17	0.04	0.04	0.08	—	386	386	0.02	0.02	0.19	392
% Reduced	76%	77%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	114	113	20.4	31.4	0.05	0.74	1.60	2.34	0.68	0.39	1.08	—	6,757	6,757	0.26	0.30	8.62	6,861
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.01	3.38	31.7	30.7	0.05	1.37	5.21	6.58	1.26	2.65	3.91	—	5,398	5,398	0.22	0.05	0.01	5,417

2026	5.77	4.88	39.7	46.9	0.09	1.52	3.83	5.35	1.40	1.30	2.70	—	11,497	11,497	0.46	0.33	0.21	11,607
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.05	0.05	0.43	0.42	< 0.005	0.02	0.07	0.09	0.02	0.04	0.05	—	73.9	73.9	< 0.005	< 0.005	< 0.005	74.2
2026	26.5	26.4	7.12	9.80	0.02	0.25	0.69	0.94	0.23	0.20	0.43	—	2,333	2,333	0.09	0.10	1.17	2,365
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.01	0.01	0.08	0.08	< 0.005	< 0.005	0.01	0.02	< 0.005	0.01	0.01	—	12.2	12.2	< 0.005	< 0.005	< 0.005	12.3
2026	4.84	4.81	1.30	1.79	< 0.005	0.05	0.13	0.17	0.04	0.04	0.08	—	386	386	0.02	0.02	0.19	392

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	25.8	25.4	20.4	31.4	0.05	0.74	1.60	2.34	0.68	0.39	1.08	—	6,757	6,757	0.26	0.30	8.62	6,861
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.01	3.38	31.7	30.7	0.05	1.37	5.21	6.58	1.26	2.65	3.91	—	5,398	5,398	0.22	0.05	0.01	5,417
2026	5.77	4.88	39.7	46.9	0.09	1.52	3.83	5.35	1.40	1.30	2.70	—	11,497	11,497	0.46	0.33	0.21	11,607
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.05	0.05	0.43	0.42	< 0.005	0.02	0.07	0.09	0.02	0.04	0.05	—	73.9	73.9	< 0.005	< 0.005	< 0.005	74.2
2026	6.26	6.09	7.12	9.80	0.02	0.25	0.69	0.94	0.23	0.20	0.43	—	2,333	2,333	0.09	0.10	1.17	2,365
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.01	0.01	0.08	0.08	< 0.005	< 0.005	0.01	0.02	< 0.005	0.01	0.01	—	12.2	12.2	< 0.005	< 0.005	< 0.005	12.3
2026	1.14	1.11	1.30	1.79	< 0.005	0.05	0.13	0.17	0.04	0.04	0.08	—	386	386	0.02	0.02	0.19	392

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.43	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	—	72.5	72.5	< 0.005	< 0.005	—	72.8
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.01	0.01	0.08	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	< 0.005	< 0.005	0.01	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.41	1.41	< 0.005	< 0.005	< 0.005	1.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2025) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.43	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	—	72.5	72.5	< 0.005	< 0.005	—	72.8
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	< 0.005	< 0.005	0.01	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.41	1.41	< 0.005	< 0.005	< 0.005	1.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2026) - Unmitigated

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

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

Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.24	2.27	0.01	0.09	—	0.09	0.08	—	0.08	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.41	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.05	0.60	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	115	115	< 0.005	0.01	0.01	116
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.50	9.50	< 0.005	< 0.005	0.02	9.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.57	1.57	< 0.005	< 0.005	< 0.005	1.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.24	2.27	0.01	0.09	—	0.09	0.08	—	0.08	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.41	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.05	0.60	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	115	115	< 0.005	0.01	0.01	116

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.50	9.50	< 0.005	< 0.005	0.02	9.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.57	1.57	< 0.005	< 0.005	< 0.005	1.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	3.24	4.26	0.01	0.12	—	0.12	0.11	—	0.11	—	788	788	0.03	0.01	—	791
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.59	0.78	< 0.005	0.02	—	0.02	0.02	—	0.02	—	130	130	0.01	< 0.005	—	131
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.69	0.65	0.39	5.08	0.00	0.00	0.95	0.95	0.00	0.22	0.22	—	994	994	0.03	0.04	3.92	1,012
Vendor	0.10	0.05	2.04	0.82	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,433	1,433	0.05	0.21	3.56	1,500
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.69	0.64	0.44	4.96	0.00	0.00	0.95	0.95	0.00	0.22	0.22	—	953	953	0.04	0.04	0.10	967
Vendor	0.10	0.05	2.09	0.84	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,434	1,434	0.05	0.21	0.09	1,497
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.14	1.61	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	315	315	0.01	0.01	0.56	321
Vendor	0.03	0.02	0.69	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	471	471	0.02	0.07	0.51	493

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.29	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	52.2	52.2	< 0.005	< 0.005	0.09	53.1
Vendor	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.0	78.0	< 0.005	0.01	0.08	81.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Building Construction (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	3.24	4.26	0.01	0.12	—	0.12	0.11	—	0.11	—	788	788	0.03	0.01	—	791

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.59	0.78	< 0.005	0.02	—	0.02	0.02	—	0.02	—	130	130	0.01	< 0.005	—	131
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.69	0.65	0.39	5.08	0.00	0.00	0.95	0.95	0.00	0.22	0.22	—	994	994	0.03	0.04	3.92	1,012
Vendor	0.10	0.05	2.04	0.82	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,433	1,433	0.05	0.21	3.56	1,500
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.69	0.64	0.44	4.96	0.00	0.00	0.95	0.95	0.00	0.22	0.22	—	953	953	0.04	0.04	0.10	967
Vendor	0.10	0.05	2.09	0.84	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,434	1,434	0.05	0.21	0.09	1,497
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.14	1.61	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	315	315	0.01	0.01	0.56	321
Vendor	0.03	0.02	0.69	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	471	471	0.02	0.07	0.51	493
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.29	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	52.2	52.2	< 0.005	< 0.005	0.09	53.1
Vendor	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.0	78.0	< 0.005	0.01	0.08	81.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.35	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.59	0.82	< 0.005	0.03	—	0.03	0.02	—	0.02	—	124	124	0.01	< 0.005	—	125
Paving	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.46	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	89.8	89.8	< 0.005	< 0.005	0.35	91.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.12	7.12	< 0.005	< 0.005	0.01	7.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.18	1.18	< 0.005	< 0.005	< 0.005	1.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Paving (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.35	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.59	0.82	< 0.005	0.03	—	0.03	0.02	—	0.02	—	124	124	0.01	< 0.005	—	125
Paving	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.46	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	89.8	89.8	< 0.005	< 0.005	0.35	91.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.12	7.12	< 0.005	< 0.005	0.01	7.24

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.18	1.18	< 0.005	< 0.005	< 0.005	1.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	110	110	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.20	0.26	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	30.7	30.7	< 0.005	< 0.005	—	30.8

Architectural	25.4	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.09	5.09	< 0.005	< 0.005	—	5.10
Architectural Coatings	4.63	4.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.08	1.02	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	199	199	0.01	0.01	0.78	202
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.23	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.2	44.2	< 0.005	< 0.005	0.08	44.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Architectural Coating (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	22.2	22.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.20	0.26	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	30.7	30.7	< 0.005	< 0.005	—	30.8
Architectural Coatings	5.10	5.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.09	5.09	< 0.005	< 0.005	—	5.10
Architectural Coatings	0.93	0.93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.08	1.02	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	199	199	0.01	0.01	0.78	202
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.23	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.2	44.2	< 0.005	< 0.005	0.08	44.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	12/1/2025	12/6/2025	5.00	5.00	2-A, 2-B, and 2-C
Grading	Grading	1/5/2026	2/14/2026	5.00	30.0	2-A, 2-B, and 2-C
Building Construction	Building Construction	2/14/2026	7/31/2026	5.00	120	2-A, 2-B, and 2-C
Paving	Paving	7/20/2026	8/29/2026	5.00	30.0	2-A, 2-B, and 2-C
Architectural Coating	Architectural Coating	4/7/2026	7/31/2026	5.00	84.0	2-A, 2-B, and 2-C

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37

Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48

Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.10	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	8.10	LDA,LDT1,LDT2
Grading	Vendor	—	6.90	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	166	8.10	LDA,LDT1,LDT2
Building Construction	Vendor	65.0	6.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	8.10	LDA,LDT1,LDT2
Paving	Vendor	—	6.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	33.2	8.10	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.10	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	8.10	LDA,LDT1,LDT2
Grading	Vendor	—	6.90	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	166	8.10	LDA,LDT1,LDT2
Building Construction	Vendor	65.0	6.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	8.10	LDA,LDT1,LDT2
Paving	Vendor	—	6.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	33.2	8.10	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	594,801	198,267	10,329

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	0.00	0.00	—
Grading	0.00	0.00	16.4	0.00	—

Paving	0.00	0.00	0.00	0.00	3.95

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Motel	0.00	0%
Quality Restaurant	0.00	0%
Hotel	0.00	0%
Parking Lot	1.74	100%
Health Club	0.00	0%
Medical Office Building	0.00	0%
Hotel	0.00	0%
Other Asphalt Surfaces	1.00	100%
Parking Lot	0.67	100%
Motel	0.00	0%
Parking Lot	0.54	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	21.8	annual days of extreme heat
Extreme Precipitation	4.00	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	24.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

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

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	5.51

AQ-DPM	5.08
Drinking Water	68.4
Lead Risk Housing	13.9
Pesticides	73.6
Toxic Releases	23.8
Traffic	5.54
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	94.7
Haz Waste Facilities/Generators	94.1
Impaired Water Bodies	66.7
Solid Waste	93.8
Sensitive Population	—
Asthma	38.9
Cardio-vascular	21.2
Low Birth Weights	17.2
Socioeconomic Factor Indicators	—
Education	34.4
Housing	38.1
Linguistic	18.1
Poverty	42.9
Unemployment	18.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	64.60926472

Employed	54.30514564
Median HI	73.28371616
Education	—
Bachelor's or higher	47.5426665
High school enrollment	100
Preschool enrollment	58.10342615
Transportation	—
Auto Access	72.44963429
Active commuting	26.36981907
Social	—
2-parent households	95.03400488
Voting	87.36045169
Neighborhood	—
Alcohol availability	79.96920313
Park access	8.661619402
Retail density	1.142050558
Supermarket access	15.16745798
Tree canopy	9.970486334
Housing	—
Homeownership	79.44308995
Housing habitability	90.29898627
Low-inc homeowner severe housing cost burden	67.59912742
Low-inc renter severe housing cost burden	87.38611574
Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	69.44693956
Arthritis	0.0
Asthma ER Admissions	59.2

High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	35.5
Cognitively Disabled	44.8
Physically Disabled	32.1
Heart Attack ER Admissions	74.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	39.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.4
SLR Inundation Area	0.0
Children	55.0
Elderly	20.2
English Speaking	70.4
Foreign-born	5.5
Outdoor Workers	16.4

Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.9
Traffic Density	5.9
Traffic Access	0.0
Other Indices	—
Hardship	26.5
Other Decision Support	—
2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	69.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Land Use	Based on provided information
Construction: Construction Phases	construction schedule based on provided information
Construction: Dust From Material Movement	all grading occurs in grading phase (half of total area 16.35/32.7 acres)

Hunter Ranch Resort Phase 3 (2-A, 2-B, and 2-C) Quarterly Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions

2.1.1. Construction Emissions Compared Against Thresholds

2.1.2. Construction Quarters

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Resort Phase 3 (2-A, 2-B, and 2-C)
Construction Start Date	12/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64888931974407, -120.62173458944159
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Motel	90.0	Room	4.05	176,418	0.00	0.00	—	Lodge (90)
Quality Restaurant	15.0	1000sqft	0.34	15,000	0.00	0.00	—	Restaurant #3

Hotel	28.0	Room	0.93	40,656	0.00	0.00	—	Suites (28)
Parking Lot	193	Space	1.74	0.00	0.00	0.00	—	Parking (193)
Health Club	7.00	1000sqft	0.16	7,000	0.00	0.00	—	Lodge Spa
Medical Office Building	5.00	1000sqft	0.11	5,000	0.00	0.00	—	Lodge Medical
Hotel	24.0	Room	0.80	34,848	0.00	0.00	—	Casitas (24)
Other Asphalt Surfaces	43.6	1000sqft	1.00	0.00	0.00	0.00	—	Sport Courts
Parking Lot	75.0	Space	0.67	0.00	0.00	0.00	—	Parking (75)
Motel	60.0	Room	2.70	117,612	0.00	0.00	—	Vaquero Lodge (30+30)
Parking Lot	60.0	Space	0.54	0.00	0.00	0.00	—	Parking (60)

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-13	Use Low-VOC Paints for Construction

2. Emissions Summary

2.1. Construction Emissions

2.1.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (ton/quarter) and GHGs (MT/quarter)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Q1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.07	0.06	0.54	0.59	< 0.005	0.02	0.06	0.08	0.02	0.02	0.04	—	124	124	0.01	< 0.005	< 0.005	125
Mit.	0.07	0.06	0.54	0.59	< 0.005	0.02	0.06	0.08	0.02	0.02	0.04	—	124	124	0.01	< 0.005	< 0.005	125

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Q2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.24	2.23	0.42	0.65	< 0.005	0.01	0.05	0.06	0.01	0.01	0.02	—	148	148	0.01	0.01	0.16	151
Mit.	0.51	0.50	0.42	0.65	< 0.005	0.01	0.05	0.06	0.01	0.01	0.02	—	148	148	0.01	0.01	0.16	151
% Reduced	77%	78%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Q3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.47	2.46	0.39	0.61	< 0.005	0.01	0.03	0.05	0.01	0.01	0.02	—	123	123	< 0.005	0.01	0.17	125
Mit.	0.55	0.54	0.39	0.61	< 0.005	0.01	0.03	0.05	0.01	0.01	0.02	—	123	123	< 0.005	0.01	0.17	125
% Reduced	78%	78%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Quarterly (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.40	2.40	0.40	0.42	< 0.005	0.02	0.04	0.04	0.02	0.01	0.02	—	87.7	87.7	< 0.005	0.01	0.15	88.0
Mit.	0.48	0.48	0.40	0.42	< 0.005	0.02	0.04	0.04	0.02	0.01	0.02	—	87.7	87.7	< 0.005	0.01	0.15	88.0
% Reduced	80%	80%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.1.2. Construction Quarters

Quarter	Start Date	End Date	Length (days)
Q1	12/1/2025	3/1/2026	91
Q2	3/2/2026	5/31/2026	91
Q3	6/1/2026	8/29/2026	90

Hunter Ranch Resort 2025 (Mobile Seperate) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

2.6. Operations Emissions by Sector, Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.3.2. Mitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.4.2. Mitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.5.2. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Resort 2025 (Mobile Seperate)
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64888931974407, -120.62173458944159
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Light Industry	2.00	1000sqft	0.05	2,000	0.00	0.00	—	Laundry
Motel	1.00	Room	0.60	2,600	0.00	0.00	—	Lobby

Other Asphalt Surfaces	21.8	1000sqft	0.50	0.00	0.00	0.00	—	Golf Cart Facility
High Turnover (Sit Down Restaurant)	2.00	1000sqft	0.05	2,000	0.00	0.00	—	Restaurant #2
Health Club	3.00	1000sqft	0.07	3,000	0.00	0.00	—	Casitas Spa
Strip Mall	5.00	1000sqft	0.11	5,000	0.00	0.00	—	Retail Village
Arena	4.80	1000sqft	1.54	4,800	0.00	0.00	—	Event Center
User Defined Recreational	1.00	User Defined Unit	0.00	4,800	0.00	0.00	—	Maintenance Building
Quality Restaurant	15.0	1000sqft	0.34	15,000	0.00	0.00	—	Restaurant #3
Health Club	7.00	1000sqft	0.16	7,000	0.00	0.00	—	Lodge Spa
Medical Office Building	5.00	1000sqft	0.11	5,000	0.00	0.00	—	Lodge Medical
Other Asphalt Surfaces	43.6	1000sqft	1.00	0.00	0.00	0.00	—	Sport Courts
Parking Lot	599	Space	5.39	0.00	0.00	0.00	—	Parking (599)
Motel	402	Room	18.1	788,000	0.00	0.00	—	Rooms

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-2	Require Energy Efficient Appliances
Energy	E-7*	Require Higher Efficacy Public Street and Area Lighting
Water	W-4	Require Low-Flow Water Fixtures
Waste	S-1/S-2	Implement Waste Reduction Plan
Refrigerants	R-5	Reduce Service Leak Emissions
Area Sources	AS-1	Use Low-VOC Cleaning Supplies
Area Sources	AS-2	Use Low-VOC Paints

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

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	48.0	46.3	17.0	118	0.18	0.70	11.8	12.5	0.68	3.01	3.68	241	25,836	26,077	26.4	0.99	1,323	28,353
Mit.	42.4	40.7	17.0	118	0.18	0.70	11.8	12.5	0.68	3.01	3.68	136	25,731	25,868	15.9	0.98	1,058	27,616
% Reduced	12%	12%	—	—	—	—	—	—	—	—	—	43%	< 0.5%	1%	40%	1%	20%	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	41.2	39.9	17.6	85.2	0.18	0.64	11.8	12.5	0.63	3.01	3.64	241	25,260	25,501	26.5	1.04	1,265	27,737
Mit.	35.6	34.3	17.6	85.2	0.18	0.64	11.8	12.5	0.63	3.01	3.64	136	25,155	25,291	16.0	1.03	1,000	26,999
% Reduced	14%	14%	—	—	—	—	—	—	—	—	—	43%	< 0.5%	1%	39%	1%	21%	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	44.7	43.2	16.1	105	0.16	0.67	9.78	10.5	0.65	2.49	3.13	241	23,184	23,425	26.3	0.90	1,285	25,636
Mit.	39.1	37.5	16.1	105	0.16	0.67	9.78	10.5	0.65	2.49	3.13	136	23,079	23,216	15.8	0.89	1,020	24,898
% Reduced	13%	13%	—	—	—	—	—	—	—	—	—	43%	< 0.5%	1%	40%	1%	21%	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.17	7.88	2.94	19.1	0.03	0.12	1.79	1.91	0.12	0.45	0.57	39.8	3,838	3,878	4.35	0.15	213	4,244
Mit.	7.14	6.85	2.94	19.1	0.03	0.12	1.79	1.91	0.12	0.45	0.57	22.6	3,821	3,844	2.62	0.15	169	4,122
% Reduced	13%	13%	—	—	—	—	—	—	—	—	—	43%	< 0.5%	1%	40%	1%	21%	3%

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.5	16.7	10.4	76.1	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,712	14,712	0.98	0.82	59.3	15,039
Area	29.8	29.3	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,915	10,915	1.22	0.08	—	10,969
Water	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Total	48.0	46.3	17.0	118	0.18	0.70	11.8	12.5	0.68	3.01	3.68	241	25,836	26,077	26.4	0.99	1,323	28,353
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.1	16.2	11.3	79.9	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,286	14,286	1.10	0.87	1.54	14,574
Area	23.3	23.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,915	10,915	1.22	0.08	—	10,969
Water	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Total	41.2	39.9	17.6	85.2	0.18	0.64	11.8	12.5	0.63	3.01	3.64	241	25,260	25,501	26.5	1.04	1,265	27,737
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.8	14.1	9.53	66.4	0.12	0.14	9.78	9.92	0.13	2.49	2.61	—	12,075	12,075	0.92	0.73	21.5	12,336
Area	29.2	28.8	0.28	33.0	< 0.005	0.06	—	0.06	0.04	—	0.04	—	136	136	0.01	< 0.005	—	136
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,915	10,915	1.22	0.08	—	10,969
Water	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Total	44.7	43.2	16.1	105	0.16	0.67	9.78	10.5	0.65	2.49	3.13	241	23,184	23,425	26.3	0.90	1,285	25,636
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.71	2.57	1.74	12.1	0.02	0.02	1.79	1.81	0.02	0.45	0.48	—	1,999	1,999	0.15	0.12	3.56	2,042
Area	5.33	5.25	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5
Energy	0.13	0.06	1.15	0.96	0.01	0.09	—	0.09	0.09	—	0.09	—	1,807	1,807	0.20	0.01	—	1,816
Water	—	—	—	—	—	—	—	—	—	—	—	6.19	9.76	16.0	0.64	0.02	—	36.4
Waste	—	—	—	—	—	—	—	—	—	—	—	33.6	0.00	33.6	3.36	0.00	—	118
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	209	209
Total	8.17	7.88	2.94	19.1	0.03	0.12	1.79	1.91	0.12	0.45	0.57	39.8	3,838	3,878	4.35	0.15	213	4,244

2.6. Operations Emissions by Sector, Mitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.5	16.7	10.4	76.1	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,712	14,712	0.98	0.82	59.3	15,039
Area	24.2	23.7	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,814	10,814	1.20	0.08	—	10,868
Water	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Waste	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Total	42.4	40.7	17.0	118	0.18	0.70	11.8	12.5	0.68	3.01	3.68	136	25,731	25,868	15.9	0.98	1,058	27,616
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.1	16.2	11.3	79.9	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,286	14,286	1.10	0.87	1.54	14,574
Area	17.7	17.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,814	10,814	1.20	0.08	—	10,868
Water	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Waste	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Total	35.6	34.3	17.6	85.2	0.18	0.64	11.8	12.5	0.63	3.01	3.64	136	25,155	25,291	16.0	1.03	1,000	26,999
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.8	14.1	9.53	66.4	0.12	0.14	9.78	9.92	0.13	2.49	2.61	—	12,075	12,075	0.92	0.73	21.5	12,336
Area	23.6	23.1	0.28	33.0	< 0.005	0.06	—	0.06	0.04	—	0.04	—	136	136	0.01	< 0.005	—	136
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,814	10,814	1.20	0.08	—	10,868
Water	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Waste	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Total	39.1	37.5	16.1	105	0.16	0.67	9.78	10.5	0.65	2.49	3.13	136	23,079	23,216	15.8	0.89	1,020	24,898
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.71	2.57	1.74	12.1	0.02	0.02	1.79	1.81	0.02	0.45	0.48	—	1,999	1,999	0.15	0.12	3.56	2,042
Area	4.30	4.22	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5
Energy	0.13	0.06	1.15	0.96	0.01	0.09	—	0.09	0.09	—	0.09	—	1,790	1,790	0.20	0.01	—	1,799
Water	—	—	—	—	—	—	—	—	—	—	—	5.73	9.04	14.8	0.59	0.01	—	33.7
Waste	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	1.68	0.00	—	58.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	165	165
Total	7.14	6.85	2.94	19.1	0.03	0.12	1.79	1.91	0.12	0.45	0.57	22.6	3,821	3,844	2.62	0.15	169	4,122

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	7.71	7.32	4.59	33.5	0.06	0.07	5.21	5.28	0.07	1.32	1.39	—	6,471	6,471	0.43	0.36	26.1	6,615
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.87	0.83	0.52	3.79	0.01	0.01	0.59	0.60	0.01	0.15	0.16	—	733	733	0.05	0.04	2.95	749
Arena	4.99	4.74	2.97	21.7	0.04	0.05	3.37	3.42	0.04	0.86	0.90	—	4,192	4,192	0.28	0.23	16.9	4,285
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	3.15	2.99	1.88	13.7	0.03	0.03	2.13	2.16	0.03	0.54	0.57	—	2,645	2,645	0.18	0.15	10.7	2,704
Medical Office Building	0.80	0.76	0.48	3.47	0.01	0.01	0.54	0.55	0.01	0.14	0.14	—	672	672	0.04	0.04	2.71	686
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.5	16.7	10.4	76.1	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,712	14,712	0.98	0.82	59.3	15,039
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	7.54	7.13	4.99	35.1	0.06	0.07	5.21	5.28	0.07	1.32	1.39	—	6,284	6,284	0.48	0.38	0.68	6,410
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.85	0.81	0.56	3.98	0.01	0.01	0.59	0.60	0.01	0.15	0.16	—	711	711	0.05	0.04	0.08	726
Arena	4.89	4.62	3.23	22.8	0.04	0.05	3.37	3.42	0.04	0.86	0.90	—	4,071	4,071	0.31	0.25	0.44	4,152
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	3.08	2.92	2.04	14.4	0.03	0.03	2.13	2.16	0.03	0.54	0.57	—	2,569	2,569	0.20	0.16	0.28	2,620
Medical Office Building	0.78	0.74	0.52	3.65	0.01	0.01	0.54	0.55	0.01	0.14	0.14	—	652	652	0.05	0.04	0.07	665
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.1	16.2	11.3	79.9	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,286	14,286	1.10	0.87	1.54	14,574
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	1.28	1.21	0.84	5.83	0.01	0.01	0.88	0.89	0.01	0.22	0.23	—	978	978	0.07	0.06	1.74	999
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.15	0.14	0.10	0.68	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	114	114	0.01	0.01	0.20	116
Arena	0.84	0.79	0.55	3.83	0.01	0.01	0.57	0.58	0.01	0.15	0.15	—	642	642	0.05	0.04	1.15	656
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.32	0.31	0.17	1.21	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	172	172	0.02	0.01	0.30	176
Medical Office Building	0.12	0.12	0.08	0.56	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	93.9	93.9	0.01	0.01	0.17	95.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.71	2.57	1.74	12.1	0.02	0.02	1.79	1.81	0.02	0.45	0.48	—	1,999	1,999	0.15	0.12	3.56	2,042

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	7.71	7.32	4.59	33.5	0.06	0.07	5.21	5.28	0.07	1.32	1.39	—	6,471	6,471	0.43	0.36	26.1	6,615

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.87	0.83	0.52	3.79	0.01	0.01	0.59	0.60	0.01	0.15	0.16	—	733	733	0.05	0.04	2.95	749
Arena	4.99	4.74	2.97	21.7	0.04	0.05	3.37	3.42	0.04	0.86	0.90	—	4,192	4,192	0.28	0.23	16.9	4,285
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	3.15	2.99	1.88	13.7	0.03	0.03	2.13	2.16	0.03	0.54	0.57	—	2,645	2,645	0.18	0.15	10.7	2,704
Medical Office Building	0.80	0.76	0.48	3.47	0.01	0.01	0.54	0.55	0.01	0.14	0.14	—	672	672	0.04	0.04	2.71	686
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.5	16.7	10.4	76.1	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,712	14,712	0.98	0.82	59.3	15,039
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	7.54	7.13	4.99	35.1	0.06	0.07	5.21	5.28	0.07	1.32	1.39	—	6,284	6,284	0.48	0.38	0.68	6,410
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.85	0.81	0.56	3.98	0.01	0.01	0.59	0.60	0.01	0.15	0.16	—	711	711	0.05	0.04	0.08	726
Arena	4.89	4.62	3.23	22.8	0.04	0.05	3.37	3.42	0.04	0.86	0.90	—	4,071	4,071	0.31	0.25	0.44	4,152
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	3.08	2.92	2.04	14.4	0.03	0.03	2.13	2.16	0.03	0.54	0.57	—	2,569	2,569	0.20	0.16	0.28	2,620
Medical Office Building	0.78	0.74	0.52	3.65	0.01	0.01	0.54	0.55	0.01	0.14	0.14	—	652	652	0.05	0.04	0.07	665
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.1	16.2	11.3	79.9	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,286	14,286	1.10	0.87	1.54	14,574
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	1.28	1.21	0.84	5.83	0.01	0.01	0.88	0.89	0.01	0.22	0.23	—	978	978	0.07	0.06	1.74	999
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Strip Mall	0.15	0.14	0.10	0.68	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	114	114	0.01	0.01	0.20	116
Arena	0.84	0.79	0.55	3.83	0.01	0.01	0.57	0.58	0.01	0.15	0.15	—	642	642	0.05	0.04	1.15	656
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.32	0.31	0.17	1.21	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	172	172	0.02	0.01	0.30	176
Medical Office Building	0.12	0.12	0.08	0.56	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	93.9	93.9	0.01	0.01	0.17	95.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.71	2.57	1.74	12.1	0.02	0.02	1.79	1.81	0.02	0.45	0.48	—	1,999	1,999	0.15	0.12	3.56	2,042

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Motel	—	—	—	—	—	—	—	—	—	—	—	—	2,729	2,729	0.44	0.05	—	2,755
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	47.4	47.4	0.01	< 0.005	—	47.9
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	56.4	56.4	0.01	< 0.005	—	56.9
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	23.1	23.1	< 0.005	< 0.005	—	23.4
Arena	—	—	—	—	—	—	—	—	—	—	—	—	27.1	27.1	< 0.005	< 0.005	—	27.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	356	356	0.06	0.01	—	359
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	58.3	58.3	0.01	< 0.005	—	58.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115	115	0.02	< 0.005	—	116
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,423	3,423	0.55	0.07	—	3,457
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Motel	—	—	—	—	—	—	—	—	—	—	—	—	2,729	2,729	0.44	0.05	—	2,755
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	47.4	47.4	0.01	< 0.005	—	47.9

Health Club	—	—	—	—	—	—	—	—	—	—	—	—	56.4	56.4	0.01	< 0.005	—	56.9
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	23.1	23.1	< 0.005	< 0.005	—	23.4
Arena	—	—	—	—	—	—	—	—	—	—	—	—	27.1	27.1	< 0.005	< 0.005	—	27.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	356	356	0.06	0.01	—	359
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	58.3	58.3	0.01	< 0.005	—	58.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115	115	0.02	< 0.005	—	116
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,423	3,423	0.55	0.07	—	3,457
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87	< 0.005	< 0.005	—	1.88
Motel	—	—	—	—	—	—	—	—	—	—	—	—	452	452	0.07	0.01	—	456
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	7.86	7.86	< 0.005	< 0.005	—	7.93
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	9.33	9.33	< 0.005	< 0.005	—	9.42
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	3.83	3.83	< 0.005	< 0.005	—	3.87
Arena	—	—	—	—	—	—	—	—	—	—	—	—	4.48	4.48	< 0.005	< 0.005	—	4.52

User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	58.9	58.9	0.01	< 0.005	—	59.5
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	9.66	9.66	< 0.005	< 0.005	—	9.75
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	19.0	19.0	< 0.005	< 0.005	—	19.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	567	567	0.09	0.01	—	572

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Motel	—	—	—	—	—	—	—	—	—	—	—	—	2,659	2,659	0.43	0.05	—	2,685
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	43.9	43.9	0.01	< 0.005	—	44.3
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	55.8	55.8	0.01	< 0.005	—	56.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	22.9	22.9	< 0.005	< 0.005	—	23.1

Arena	—	—	—	—	—	—	—	—	—	—	—	—	27.1	27.1	< 0.005	< 0.005	—	27.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	329	329	0.05	0.01	—	332
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	58.3	58.3	0.01	< 0.005	—	58.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115	115	0.02	< 0.005	—	116
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,323	3,323	0.54	0.07	—	3,355
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Motel	—	—	—	—	—	—	—	—	—	—	—	—	2,659	2,659	0.43	0.05	—	2,685
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	43.9	43.9	0.01	< 0.005	—	44.3
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	55.8	55.8	0.01	< 0.005	—	56.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	22.9	22.9	< 0.005	< 0.005	—	23.1
Arena	—	—	—	—	—	—	—	—	—	—	—	—	27.1	27.1	< 0.005	< 0.005	—	27.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	329	329	0.05	0.01	—	332
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	58.3	58.3	0.01	< 0.005	—	58.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115	115	0.02	< 0.005	—	116
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,323	3,323	0.54	0.07	—	3,355
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87	< 0.005	< 0.005	—	1.88
Motel	—	—	—	—	—	—	—	—	—	—	—	—	440	440	0.07	0.01	—	445
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	7.27	7.27	< 0.005	< 0.005	—	7.34
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	9.24	9.24	< 0.005	< 0.005	—	9.34
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	3.79	3.79	< 0.005	< 0.005	—	3.83
Arena	—	—	—	—	—	—	—	—	—	—	—	—	4.48	4.48	< 0.005	< 0.005	—	4.52
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	54.5	54.5	0.01	< 0.005	—	55.0
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	9.65	9.65	< 0.005	< 0.005	—	9.75
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	19.0	19.0	< 0.005	< 0.005	—	19.2

Total	—	—	—	—	—	—	—	—	—	—	—	—	550	550	0.09	0.01	—	556

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.0	27.0	< 0.005	< 0.005	—	27.1
Motel	0.60	0.30	5.48	4.61	0.03	0.42	—	0.42	0.42	—	0.42	—	6,544	6,544	0.58	0.01	—	6,562
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.4	79.4	0.01	< 0.005	—	79.6
Health Club	0.01	0.01	0.11	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	135	135	0.01	< 0.005	—	136
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.57	9.57	< 0.005	< 0.005	—	9.60
Arena	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.9	64.9	0.01	< 0.005	—	65.1
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.05	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	595	595	0.05	< 0.005	—	597
Medical Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	7,492	7,492	0.66	0.01	—	7,512
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.0	27.0	< 0.005	< 0.005	—	27.1
Motel	0.60	0.30	5.48	4.61	0.03	0.42	—	0.42	0.42	—	0.42	—	6,544	6,544	0.58	0.01	—	6,562
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.4	79.4	0.01	< 0.005	—	79.6
Health Club	0.01	0.01	0.11	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	135	135	0.01	< 0.005	—	136
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.57	9.57	< 0.005	< 0.005	—	9.60
Arena	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.9	64.9	0.01	< 0.005	—	65.1
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.05	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	595	595	0.05	< 0.005	—	597
Medical Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	7,492	7,492	0.66	0.01	—	7,512
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.48	4.48	< 0.005	< 0.005	—	4.49
Motel	0.11	0.06	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	—	1,083	1,083	0.10	< 0.005	—	1,086
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.1	13.1	< 0.005	< 0.005	—	13.2
Health Club	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.4	22.4	< 0.005	< 0.005	—	22.5
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.58	1.58	< 0.005	< 0.005	—	1.59
Arena	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.6	98.6	0.01	< 0.005	—	98.9
Medical Office Building	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.99	5.99	< 0.005	< 0.005	—	6.01
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.13	0.06	1.15	0.96	0.01	0.09	—	0.09	0.09	—	0.09	—	1,240	1,240	0.11	< 0.005	—	1,244

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.0	27.0	< 0.005	< 0.005	—	27.1
Motel	0.60	0.30	5.48	4.61	0.03	0.42	—	0.42	0.42	—	0.42	—	6,544	6,544	0.58	0.01	—	6,562
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.4	79.4	0.01	< 0.005	—	79.6
Health Club	0.01	0.01	0.11	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	135	135	0.01	< 0.005	—	136
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.57	9.57	< 0.005	< 0.005	—	9.60
Arena	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.9	64.9	0.01	< 0.005	—	65.1
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.05	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	595	595	0.05	< 0.005	—	597
Medical Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	7,492	7,492	0.66	0.01	—	7,512
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.0	27.0	< 0.005	< 0.005	—	27.1

Motel	0.60	0.30	5.48	4.61	0.03	0.42	—	0.42	0.42	—	0.42	—	6,544	6,544	0.58	0.01	—	6,562
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.4	79.4	0.01	< 0.005	—	79.6
Health Club	0.01	0.01	0.11	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	135	135	0.01	< 0.005	—	136
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.57	9.57	< 0.005	< 0.005	—	9.60
Arena	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.9	64.9	0.01	< 0.005	—	65.1
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.05	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	595	595	0.05	< 0.005	—	597
Medical Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	7,492	7,492	0.66	0.01	—	7,512
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.48	4.48	< 0.005	< 0.005	—	4.49
Motel	0.11	0.06	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	—	1,083	1,083	0.10	< 0.005	—	1,086
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.1	13.1	< 0.005	< 0.005	—	13.2
Health Club	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.4	22.4	< 0.005	< 0.005	—	22.5
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.58	1.58	< 0.005	< 0.005	—	1.59
Arena	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.6	98.6	0.01	< 0.005	—	98.9
Medical Office Building	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.99	5.99	< 0.005	< 0.005	—	6.01
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.13	0.06	1.15	0.96	0.01	0.09	—	0.09	0.09	—	0.09	—	1,240	1,240	0.11	< 0.005	—	1,244

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	18.0	18.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	5.36	5.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	6.49	5.99	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Total	29.8	29.3	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	18.0	18.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	5.36	5.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	23.3	23.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.28	3.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.98	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.07	0.99	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5
Total	5.33	5.25	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5

4.3.2. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	16.6	16.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.08	1.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	6.49	5.99	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Total	24.2	23.7	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	16.6	16.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.08	1.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	17.7	17.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.04	3.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	1.07	0.99	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5
Total	4.30	4.22	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.89	1.40	2.28	0.09	< 0.005	—	5.21
Motel	—	—	—	—	—	—	—	—	—	—	—	19.6	30.9	50.5	2.01	0.05	—	115
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.16	1.84	3.00	0.12	< 0.005	—	6.84
Health Club	—	—	—	—	—	—	—	—	—	—	—	1.13	1.79	2.92	0.12	< 0.005	—	6.67
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.12	1.83	0.07	< 0.005	—	4.18
Arena	—	—	—	—	—	—	—	—	—	—	—	3.96	6.25	10.2	0.41	0.01	—	23.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	8.72	13.8	22.5	0.90	0.02	—	51.3

Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.20	1.90	3.10	0.12	< 0.005	—	7.07
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.89	1.40	2.28	0.09	< 0.005	—	5.21
Motel	—	—	—	—	—	—	—	—	—	—	—	19.6	30.9	50.5	2.01	0.05	—	115
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.16	1.84	3.00	0.12	< 0.005	—	6.84
Health Club	—	—	—	—	—	—	—	—	—	—	—	1.13	1.79	2.92	0.12	< 0.005	—	6.67
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.12	1.83	0.07	< 0.005	—	4.18
Arena	—	—	—	—	—	—	—	—	—	—	—	3.96	6.25	10.2	0.41	0.01	—	23.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	8.72	13.8	22.5	0.90	0.02	—	51.3
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.20	1.90	3.10	0.12	< 0.005	—	7.07
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.15	0.23	0.38	0.02	< 0.005	—	0.86
Motel	—	—	—	—	—	—	—	—	—	—	—	3.24	5.12	8.36	0.33	0.01	—	19.1
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.19	0.30	0.50	0.02	< 0.005	—	1.13
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.19	0.30	0.48	0.02	< 0.005	—	1.10
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.12	0.19	0.30	0.01	< 0.005	—	0.69
Arena	—	—	—	—	—	—	—	—	—	—	—	0.66	1.04	1.69	0.07	< 0.005	—	3.86
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	1.44	2.28	3.72	0.15	< 0.005	—	8.50
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	0.20	0.31	0.51	0.02	< 0.005	—	1.17
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.19	9.76	16.0	0.64	0.02	—	36.4

4.4.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.79	1.25	2.04	0.08	< 0.005	—	4.66
Motel	—	—	—	—	—	—	—	—	—	—	—	17.3	27.3	44.5	1.78	0.04	—	102
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.05	1.66	2.71	0.11	< 0.005	—	6.18
Health Club	—	—	—	—	—	—	—	—	—	—	—	1.02	1.61	2.64	0.11	< 0.005	—	6.02
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.12	1.83	0.07	< 0.005	—	4.18
Arena	—	—	—	—	—	—	—	—	—	—	—	3.96	6.25	10.2	0.41	0.01	—	23.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	8.72	13.8	22.5	0.90	0.02	—	51.3
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.08	1.71	2.79	0.11	< 0.005	—	6.38
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.79	1.25	2.04	0.08	< 0.005	—	4.66
Motel	—	—	—	—	—	—	—	—	—	—	—	17.3	27.3	44.5	1.78	0.04	—	102
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.05	1.66	2.71	0.11	< 0.005	—	6.18
Health Club	—	—	—	—	—	—	—	—	—	—	—	1.02	1.61	2.64	0.11	< 0.005	—	6.02
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.12	1.83	0.07	< 0.005	—	4.18
Arena	—	—	—	—	—	—	—	—	—	—	—	3.96	6.25	10.2	0.41	0.01	—	23.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	8.72	13.8	22.5	0.90	0.02	—	51.3
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.08	1.71	2.79	0.11	< 0.005	—	6.38
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.13	0.21	0.34	0.01	< 0.005	—	0.77
Motel	—	—	—	—	—	—	—	—	—	—	—	2.86	4.51	7.37	0.29	0.01	—	16.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.17	0.27	0.45	0.02	< 0.005	—	1.02
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.17	0.27	0.44	0.02	< 0.005	—	1.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.12	0.19	0.30	0.01	< 0.005	—	0.69
Arena	—	—	—	—	—	—	—	—	—	—	—	0.66	1.04	1.69	0.07	< 0.005	—	3.86
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	1.44	2.28	3.72	0.15	< 0.005	—	8.50
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	0.18	0.28	0.46	0.02	< 0.005	—	1.06
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.73	9.04	14.8	0.59	0.01	—	33.7

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	1.34	0.00	1.34	0.13	0.00	—	4.68
Motel	—	—	—	—	—	—	—	—	—	—	—	119	0.00	119	11.9	0.00	—	416

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	12.8	0.00	12.8	1.28	0.00	—	44.9
Health Club	—	—	—	—	—	—	—	—	—	—	—	30.7	0.00	30.7	3.07	0.00	—	107
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.83	0.00	2.83	0.28	0.00	—	9.90
Arena	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	7.38	0.00	7.38	0.74	0.00	—	25.8
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.91	0.00	—	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	1.34	0.00	1.34	0.13	0.00	—	4.68
Motel	—	—	—	—	—	—	—	—	—	—	—	119	0.00	119	11.9	0.00	—	416
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	12.8	0.00	12.8	1.28	0.00	—	44.9
Health Club	—	—	—	—	—	—	—	—	—	—	—	30.7	0.00	30.7	3.07	0.00	—	107
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.83	0.00	2.83	0.28	0.00	—	9.90
Arena	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	7.38	0.00	7.38	0.74	0.00	—	25.8
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.91	0.00	—	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.77
Motel	—	—	—	—	—	—	—	—	—	—	—	19.7	0.00	19.7	1.97	0.00	—	68.9
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2.12	0.00	2.12	0.21	0.00	—	7.43
Health Club	—	—	—	—	—	—	—	—	—	—	—	5.09	0.00	5.09	0.51	0.00	—	17.8

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.47	0.00	0.47	0.05	0.00	—	1.64
Arena	—	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.04
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	1.22	0.00	1.22	0.12	0.00	—	4.27
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	4.82	0.00	4.82	0.48	0.00	—	16.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	33.6	0.00	33.6	3.36	0.00	—	118

4.5.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.67	0.00	0.67	0.07	0.00	—	2.34
Motel	—	—	—	—	—	—	—	—	—	—	—	59.5	0.00	59.5	5.94	0.00	—	208
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	6.41	0.00	6.41	0.64	0.00	—	22.4

Health Club	—	—	—	—	—	—	—	—	—	—	—	15.4	0.00	15.4	1.54	0.00	—	53.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.41	0.00	1.41	0.14	0.00	—	4.95
Arena	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.12
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	3.69	0.00	3.69	0.37	0.00	—	12.9
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	14.6	0.00	14.6	1.45	0.00	—	50.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.67	0.00	0.67	0.07	0.00	—	2.34
Motel	—	—	—	—	—	—	—	—	—	—	—	59.5	0.00	59.5	5.94	0.00	—	208
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	6.41	0.00	6.41	0.64	0.00	—	22.4
Health Club	—	—	—	—	—	—	—	—	—	—	—	15.4	0.00	15.4	1.54	0.00	—	53.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.41	0.00	1.41	0.14	0.00	—	4.95
Arena	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.12

User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	3.69	0.00	3.69	0.37	0.00	—	12.9
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	14.6	0.00	14.6	1.45	0.00	—	50.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.11	0.00	0.11	0.01	0.00	—	0.39
Motel	—	—	—	—	—	—	—	—	—	—	—	9.84	0.00	9.84	0.98	0.00	—	34.4
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.06	0.00	1.06	0.11	0.00	—	3.71
Health Club	—	—	—	—	—	—	—	—	—	—	—	2.54	0.00	2.54	0.25	0.00	—	8.90
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.23	0.00	0.23	0.02	0.00	—	0.82
Arena	—	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.02
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	0.61	0.00	0.61	0.06	0.00	—	2.14

Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	2.41	0.00	2.41	0.24	0.00	—	8.43
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	1.68	0.00	—	58.8

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,236	1,236
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.13	3.13
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.4	23.4
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,236	1,236
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.13	3.13
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.4	23.4
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	205	205
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.88	3.88
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	209	209

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	977	977
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.47	2.47
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.5	18.5

Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	977	977
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.47	2.47
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.5	18.5
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	162	162

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.07	3.07
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	165	165

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.7.2. Mitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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

4.9.2. Mitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	180	180	130	63,093	832	832	601	291,573
Arena	1,030	1,030	660	356,657	4,760	4,760	3,050	1,648,229
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	355	355	650	144,957	718	1,641	3,004	429,338
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medical Office Building	165	165	10.0	52,143	763	763	46.2	240,969
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motel	1,470	1,470	1,590	542,807	6,793	6,793	7,348	2,508,489

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	180	180	130	63,093	832	832	601	291,573
Arena	1,030	1,030	660	356,657	4,760	4,760	3,050	1,648,229
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	355	355	650	144,957	718	1,641	3,004	429,338
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medical Office Building	165	165	10.0	52,143	763	763	46.2	240,969
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motel	1,470	1,470	1,590	542,807	6,793	6,793	7,348	2,508,489

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	1,258,800	419,600	18,010

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	330

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	330

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	20,172	204	0.0330	0.0040	84,389
Motel	16,056	204	0.0330	0.0040	67,150
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
High Turnover (Sit Down Restaurant)	84,905	204	0.0330	0.0040	247,737
Health Club	30,258	204	0.0330	0.0040	126,583
Strip Mall	41,386	204	0.0330	0.0040	29,864
Arena	48,414	204	0.0330	0.0040	202,533
User Defined Recreational	0.00	204	0.0330	0.0040	0.00
Quality Restaurant	636,789	204	0.0330	0.0040	1,858,025
Health Club	70,603	204	0.0330	0.0040	295,360

Medical Office Building	104,357	204	0.0330	0.0040	112,940
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
Parking Lot	205,713	204	0.0330	0.0040	0.00
Motel	4,866,257	204	0.0330	0.0040	20,351,475

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	20,172	204	0.0330	0.0040	84,389
Motel	15,648	204	0.0330	0.0040	67,150
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
High Turnover (Sit Down Restaurant)	78,525	204	0.0330	0.0040	247,737
Health Club	29,971	204	0.0330	0.0040	126,583
Strip Mall	40,995	204	0.0330	0.0040	29,864
Arena	48,414	204	0.0330	0.0040	202,533
User Defined Recreational	0.00	204	0.0330	0.0040	0.00
Quality Restaurant	588,938	204	0.0330	0.0040	1,858,025
Health Club	69,933	204	0.0330	0.0040	295,360
Medical Office Building	104,316	204	0.0330	0.0040	112,940
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
Parking Lot	205,713	204	0.0330	0.0040	0.00
Motel	4,742,545	204	0.0330	0.0040	20,351,475

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

General Light Industry	462,500	0.00
Motel	25,367	0.00
Other Asphalt Surfaces	0.00	0.00
High Turnover (Sit Down Restaurant)	607,067	0.00
Health Club	177,429	0.00
Strip Mall	370,363	0.00
Arena	2,067,697	0.00
User Defined Recreational	0.00	0.00
Quality Restaurant	4,553,006	0.00
Health Club	414,002	0.00
Medical Office Building	627,403	0.00
Other Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	0.00
Motel	10,197,442	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	413,244	0.00
Motel	22,371	0.00
Other Asphalt Surfaces	0.00	0.00
High Turnover (Sit Down Restaurant)	548,182	0.00
Health Club	160,219	0.00
Strip Mall	370,363	0.00
Arena	2,067,697	0.00
User Defined Recreational	0.00	0.00
Quality Restaurant	4,553,006	0.00
Health Club	373,844	0.00
Medical Office Building	565,604	0.00

Other Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	0.00
Motel	8,993,124	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	2.48	—
Motel	0.55	—
Other Asphalt Surfaces	0.00	—
High Turnover (Sit Down Restaurant)	23.8	—
Health Club	17.1	—
Strip Mall	5.25	—
Arena	0.13	—
User Defined Recreational	0.00	—
Quality Restaurant	13.7	—
Health Club	39.9	—
Medical Office Building	54.0	—
Other Asphalt Surfaces	0.00	—
Parking Lot	0.00	—
Motel	220	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	1.24	—
Motel	0.27	—
Other Asphalt Surfaces	0.00	—

High Turnover (Sit Down Restaurant)	11.9	—
Health Club	8.55	—
Strip Mall	2.63	—
Arena	0.07	—
User Defined Recreational	0.00	—
Quality Restaurant	6.84	—
Health Club	19.9	—
Medical Office Building	27.0	—
Other Asphalt Surfaces	0.00	—
Parking Lot	0.00	—
Motel	110	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
Motel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Motel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Motel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Arena	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Arena	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Arena	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Quality Restaurant	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Quality Restaurant	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Quality Restaurant	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Motel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Motel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Motel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	2.00	18.0
Motel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	—	1.00
Motel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	2.00	18.0
Motel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	—	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	2.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	—	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0

Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	—	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
Arena	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0
Arena	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	—	1.00
Arena	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
Quality Restaurant	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	—	1.00
Quality Restaurant	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	2.00	18.0
Quality Restaurant	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	—	1.00
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	—	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0
Motel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	—	1.00
Motel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	2.00	18.0
Motel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
–	–

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	21.8	annual days of extreme heat
Extreme Precipitation	4.00	annual days with precipitation above 20 mm

Sea Level Rise	0.00	meters of inundation depth
Wildfire	24.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	5.51
AQ-DPM	5.08
Drinking Water	68.4
Lead Risk Housing	13.9
Pesticides	73.6
Toxic Releases	23.8
Traffic	5.54
Effect Indicators	—

CleanUp Sites	0.00
Groundwater	94.7
Haz Waste Facilities/Generators	94.1
Impaired Water Bodies	66.7
Solid Waste	93.8
Sensitive Population	—
Asthma	38.9
Cardio-vascular	21.2
Low Birth Weights	17.2
Socioeconomic Factor Indicators	—
Education	34.4
Housing	38.1
Linguistic	18.1
Poverty	42.9
Unemployment	18.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	64.60926472
Employed	54.30514564
Median HI	73.28371616
Education	—
Bachelor's or higher	47.5426665
High school enrollment	100
Preschool enrollment	58.10342615
Transportation	—

Auto Access	72.44963429
Active commuting	26.36981907
Social	—
2-parent households	95.03400488
Voting	87.36045169
Neighborhood	—
Alcohol availability	79.96920313
Park access	8.661619402
Retail density	1.142050558
Supermarket access	15.16745798
Tree canopy	9.970486334
Housing	—
Homeownership	79.44308995
Housing habitability	90.29898627
Low-inc homeowner severe housing cost burden	67.59912742
Low-inc renter severe housing cost burden	87.38611574
Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	69.44693956
Arthritis	0.0
Asthma ER Admissions	59.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	35.5

Cognitively Disabled	44.8
Physically Disabled	32.1
Heart Attack ER Admissions	74.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	39.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.4
SLR Inundation Area	0.0
Children	55.0
Elderly	20.2
English Speaking	70.4
Foreign-born	5.5
Outdoor Workers	16.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.9
Traffic Density	5.9
Traffic Access	0.0
Other Indices	—
Hardship	26.5
Other Decision Support	—

2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	69.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on provided information
Operations: Vehicle Data	Based on trip generation rates provided by CCTC

Hunter Ranch Resort 2030 (Mobile Separate) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

2.6. Operations Emissions by Sector, Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.3.2. Mitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.4.2. Mitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.5.2. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Resort 2030 (Mobile Separate)
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64888931974407, -120.62173458944159
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Light Industry	2.00	1000sqft	0.05	2,000	0.00	0.00	—	Laundry
Motel	1.00	Room	0.60	2,600	0.00	0.00	—	Lobby

Other Asphalt Surfaces	21.8	1000sqft	0.50	0.00	0.00	0.00	—	Golf Cart Facility
High Turnover (Sit Down Restaurant)	2.00	1000sqft	0.05	2,000	0.00	0.00	—	Restaurant #2
Health Club	3.00	1000sqft	0.07	3,000	0.00	0.00	—	Casitas Spa
Strip Mall	5.00	1000sqft	0.11	5,000	0.00	0.00	—	Retail Village
Arena	4.80	1000sqft	1.54	4,800	0.00	0.00	—	Event Center
User Defined Recreational	1.00	User Defined Unit	0.00	4,800	0.00	0.00	—	Maintenance Building
Quality Restaurant	15.0	1000sqft	0.34	15,000	0.00	0.00	—	Restaurant #3
Health Club	7.00	1000sqft	0.16	7,000	0.00	0.00	—	Lodge Spa
Medical Office Building	5.00	1000sqft	0.11	5,000	0.00	0.00	—	Lodge Medical
Other Asphalt Surfaces	43.6	1000sqft	1.00	0.00	0.00	0.00	—	Sport Courts
Parking Lot	599	Space	5.39	0.00	0.00	0.00	—	Parking (599)
Motel	402	Room	18.1	788,000	0.00	0.00	—	Rooms

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-2	Require Energy Efficient Appliances
Energy	E-7*	Require Higher Efficacy Public Street and Area Lighting
Water	W-4	Require Low-Flow Water Fixtures
Waste	S-1/S-2	Implement Waste Reduction Plan
Refrigerants	R-5	Reduce Service Leak Emissions
Area Sources	AS-1	Use Low-VOC Cleaning Supplies
Area Sources	AS-2	Use Low-VOC Paints

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

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	48.0	46.3	17.0	118	0.18	0.70	11.8	12.5	0.68	3.01	3.68	241	25,836	26,077	26.4	0.99	1,323	28,353
Mit.	42.4	40.7	17.0	118	0.18	0.70	11.8	12.5	0.68	3.01	3.68	136	25,731	25,868	15.9	0.98	1,058	27,616
% Reduced	12%	12%	—	—	—	—	—	—	—	—	—	43%	< 0.5%	1%	40%	1%	20%	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	41.2	39.9	17.6	85.2	0.18	0.64	11.8	12.5	0.63	3.01	3.64	241	25,260	25,501	26.5	1.04	1,265	27,737
Mit.	35.6	34.3	17.6	85.2	0.18	0.64	11.8	12.5	0.63	3.01	3.64	136	25,155	25,291	16.0	1.03	1,000	26,999
% Reduced	14%	14%	—	—	—	—	—	—	—	—	—	43%	< 0.5%	1%	39%	1%	21%	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	44.7	43.2	16.1	105	0.16	0.67	9.78	10.5	0.65	2.49	3.13	241	23,184	23,425	26.3	0.90	1,285	25,636
Mit.	39.1	37.5	16.1	105	0.16	0.67	9.78	10.5	0.65	2.49	3.13	136	23,079	23,216	15.8	0.89	1,020	24,898
% Reduced	13%	13%	—	—	—	—	—	—	—	—	—	43%	< 0.5%	1%	40%	1%	21%	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.17	7.88	2.94	19.1	0.03	0.12	1.79	1.91	0.12	0.45	0.57	39.8	3,838	3,878	4.35	0.15	213	4,244
Mit.	7.14	6.85	2.94	19.1	0.03	0.12	1.79	1.91	0.12	0.45	0.57	22.6	3,821	3,844	2.62	0.15	169	4,122
% Reduced	13%	13%	—	—	—	—	—	—	—	—	—	43%	< 0.5%	1%	40%	1%	21%	3%

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.5	16.7	10.4	76.1	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,712	14,712	0.98	0.82	59.3	15,039
Area	29.8	29.3	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,915	10,915	1.22	0.08	—	10,969
Water	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Total	48.0	46.3	17.0	118	0.18	0.70	11.8	12.5	0.68	3.01	3.68	241	25,836	26,077	26.4	0.99	1,323	28,353
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.1	16.2	11.3	79.9	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,286	14,286	1.10	0.87	1.54	14,574
Area	23.3	23.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,915	10,915	1.22	0.08	—	10,969
Water	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Total	41.2	39.9	17.6	85.2	0.18	0.64	11.8	12.5	0.63	3.01	3.64	241	25,260	25,501	26.5	1.04	1,265	27,737
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.8	14.1	9.53	66.4	0.12	0.14	9.78	9.92	0.13	2.49	2.61	—	12,075	12,075	0.92	0.73	21.5	12,336
Area	29.2	28.8	0.28	33.0	< 0.005	0.06	—	0.06	0.04	—	0.04	—	136	136	0.01	< 0.005	—	136
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,915	10,915	1.22	0.08	—	10,969
Water	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Total	44.7	43.2	16.1	105	0.16	0.67	9.78	10.5	0.65	2.49	3.13	241	23,184	23,425	26.3	0.90	1,285	25,636
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.71	2.57	1.74	12.1	0.02	0.02	1.79	1.81	0.02	0.45	0.48	—	1,999	1,999	0.15	0.12	3.56	2,042
Area	5.33	5.25	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5
Energy	0.13	0.06	1.15	0.96	0.01	0.09	—	0.09	0.09	—	0.09	—	1,807	1,807	0.20	0.01	—	1,816
Water	—	—	—	—	—	—	—	—	—	—	—	6.19	9.76	16.0	0.64	0.02	—	36.4
Waste	—	—	—	—	—	—	—	—	—	—	—	33.6	0.00	33.6	3.36	0.00	—	118
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	209	209
Total	8.17	7.88	2.94	19.1	0.03	0.12	1.79	1.91	0.12	0.45	0.57	39.8	3,838	3,878	4.35	0.15	213	4,244

2.6. Operations Emissions by Sector, Mitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.5	16.7	10.4	76.1	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,712	14,712	0.98	0.82	59.3	15,039
Area	24.2	23.7	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,814	10,814	1.20	0.08	—	10,868
Water	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Waste	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Total	42.4	40.7	17.0	118	0.18	0.70	11.8	12.5	0.68	3.01	3.68	136	25,731	25,868	15.9	0.98	1,058	27,616
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.1	16.2	11.3	79.9	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,286	14,286	1.10	0.87	1.54	14,574
Area	17.7	17.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,814	10,814	1.20	0.08	—	10,868
Water	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Waste	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Total	35.6	34.3	17.6	85.2	0.18	0.64	11.8	12.5	0.63	3.01	3.64	136	25,155	25,291	16.0	1.03	1,000	26,999
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.8	14.1	9.53	66.4	0.12	0.14	9.78	9.92	0.13	2.49	2.61	—	12,075	12,075	0.92	0.73	21.5	12,336
Area	23.6	23.1	0.28	33.0	< 0.005	0.06	—	0.06	0.04	—	0.04	—	136	136	0.01	< 0.005	—	136
Energy	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	10,814	10,814	1.20	0.08	—	10,868
Water	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Waste	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Total	39.1	37.5	16.1	105	0.16	0.67	9.78	10.5	0.65	2.49	3.13	136	23,079	23,216	15.8	0.89	1,020	24,898
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.71	2.57	1.74	12.1	0.02	0.02	1.79	1.81	0.02	0.45	0.48	—	1,999	1,999	0.15	0.12	3.56	2,042
Area	4.30	4.22	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5
Energy	0.13	0.06	1.15	0.96	0.01	0.09	—	0.09	0.09	—	0.09	—	1,790	1,790	0.20	0.01	—	1,799
Water	—	—	—	—	—	—	—	—	—	—	—	5.73	9.04	14.8	0.59	0.01	—	33.7
Waste	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	1.68	0.00	—	58.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	165	165
Total	7.14	6.85	2.94	19.1	0.03	0.12	1.79	1.91	0.12	0.45	0.57	22.6	3,821	3,844	2.62	0.15	169	4,122

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	7.71	7.32	4.59	33.5	0.06	0.07	5.21	5.28	0.07	1.32	1.39	—	6,471	6,471	0.43	0.36	26.1	6,615
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.87	0.83	0.52	3.79	0.01	0.01	0.59	0.60	0.01	0.15	0.16	—	733	733	0.05	0.04	2.95	749
Arena	4.99	4.74	2.97	21.7	0.04	0.05	3.37	3.42	0.04	0.86	0.90	—	4,192	4,192	0.28	0.23	16.9	4,285
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	3.15	2.99	1.88	13.7	0.03	0.03	2.13	2.16	0.03	0.54	0.57	—	2,645	2,645	0.18	0.15	10.7	2,704
Medical Office Building	0.80	0.76	0.48	3.47	0.01	0.01	0.54	0.55	0.01	0.14	0.14	—	672	672	0.04	0.04	2.71	686
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.5	16.7	10.4	76.1	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,712	14,712	0.98	0.82	59.3	15,039
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	7.54	7.13	4.99	35.1	0.06	0.07	5.21	5.28	0.07	1.32	1.39	—	6,284	6,284	0.48	0.38	0.68	6,410
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.85	0.81	0.56	3.98	0.01	0.01	0.59	0.60	0.01	0.15	0.16	—	711	711	0.05	0.04	0.08	726
Arena	4.89	4.62	3.23	22.8	0.04	0.05	3.37	3.42	0.04	0.86	0.90	—	4,071	4,071	0.31	0.25	0.44	4,152
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	3.08	2.92	2.04	14.4	0.03	0.03	2.13	2.16	0.03	0.54	0.57	—	2,569	2,569	0.20	0.16	0.28	2,620
Medical Office Building	0.78	0.74	0.52	3.65	0.01	0.01	0.54	0.55	0.01	0.14	0.14	—	652	652	0.05	0.04	0.07	665
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.1	16.2	11.3	79.9	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,286	14,286	1.10	0.87	1.54	14,574
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	1.28	1.21	0.84	5.83	0.01	0.01	0.88	0.89	0.01	0.22	0.23	—	978	978	0.07	0.06	1.74	999
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.15	0.14	0.10	0.68	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	114	114	0.01	0.01	0.20	116
Arena	0.84	0.79	0.55	3.83	0.01	0.01	0.57	0.58	0.01	0.15	0.15	—	642	642	0.05	0.04	1.15	656
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.32	0.31	0.17	1.21	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	172	172	0.02	0.01	0.30	176
Medical Office Building	0.12	0.12	0.08	0.56	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	93.9	93.9	0.01	0.01	0.17	95.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.71	2.57	1.74	12.1	0.02	0.02	1.79	1.81	0.02	0.45	0.48	—	1,999	1,999	0.15	0.12	3.56	2,042

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	7.71	7.32	4.59	33.5	0.06	0.07	5.21	5.28	0.07	1.32	1.39	—	6,471	6,471	0.43	0.36	26.1	6,615

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.87	0.83	0.52	3.79	0.01	0.01	0.59	0.60	0.01	0.15	0.16	—	733	733	0.05	0.04	2.95	749
Arena	4.99	4.74	2.97	21.7	0.04	0.05	3.37	3.42	0.04	0.86	0.90	—	4,192	4,192	0.28	0.23	16.9	4,285
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	3.15	2.99	1.88	13.7	0.03	0.03	2.13	2.16	0.03	0.54	0.57	—	2,645	2,645	0.18	0.15	10.7	2,704
Medical Office Building	0.80	0.76	0.48	3.47	0.01	0.01	0.54	0.55	0.01	0.14	0.14	—	672	672	0.04	0.04	2.71	686
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.5	16.7	10.4	76.1	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,712	14,712	0.98	0.82	59.3	15,039
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	7.54	7.13	4.99	35.1	0.06	0.07	5.21	5.28	0.07	1.32	1.39	—	6,284	6,284	0.48	0.38	0.68	6,410
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.85	0.81	0.56	3.98	0.01	0.01	0.59	0.60	0.01	0.15	0.16	—	711	711	0.05	0.04	0.08	726
Arena	4.89	4.62	3.23	22.8	0.04	0.05	3.37	3.42	0.04	0.86	0.90	—	4,071	4,071	0.31	0.25	0.44	4,152
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	3.08	2.92	2.04	14.4	0.03	0.03	2.13	2.16	0.03	0.54	0.57	—	2,569	2,569	0.20	0.16	0.28	2,620
Medical Office Building	0.78	0.74	0.52	3.65	0.01	0.01	0.54	0.55	0.01	0.14	0.14	—	652	652	0.05	0.04	0.07	665
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.1	16.2	11.3	79.9	0.14	0.16	11.8	12.0	0.15	3.01	3.16	—	14,286	14,286	1.10	0.87	1.54	14,574
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Motel	1.28	1.21	0.84	5.83	0.01	0.01	0.88	0.89	0.01	0.22	0.23	—	978	978	0.07	0.06	1.74	999
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Strip Mall	0.15	0.14	0.10	0.68	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	114	114	0.01	0.01	0.20	116
Arena	0.84	0.79	0.55	3.83	0.01	0.01	0.57	0.58	0.01	0.15	0.15	—	642	642	0.05	0.04	1.15	656
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.32	0.31	0.17	1.21	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	172	172	0.02	0.01	0.30	176
Medical Office Building	0.12	0.12	0.08	0.56	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	93.9	93.9	0.01	0.01	0.17	95.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.71	2.57	1.74	12.1	0.02	0.02	1.79	1.81	0.02	0.45	0.48	—	1,999	1,999	0.15	0.12	3.56	2,042

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Motel	—	—	—	—	—	—	—	—	—	—	—	—	2,729	2,729	0.44	0.05	—	2,755
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	47.4	47.4	0.01	< 0.005	—	47.9
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	56.4	56.4	0.01	< 0.005	—	56.9
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	23.1	23.1	< 0.005	< 0.005	—	23.4
Arena	—	—	—	—	—	—	—	—	—	—	—	—	27.1	27.1	< 0.005	< 0.005	—	27.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	356	356	0.06	0.01	—	359
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	58.3	58.3	0.01	< 0.005	—	58.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115	115	0.02	< 0.005	—	116
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,423	3,423	0.55	0.07	—	3,457
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Motel	—	—	—	—	—	—	—	—	—	—	—	—	2,729	2,729	0.44	0.05	—	2,755
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	47.4	47.4	0.01	< 0.005	—	47.9

Health Club	—	—	—	—	—	—	—	—	—	—	—	—	56.4	56.4	0.01	< 0.005	—	56.9
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	23.1	23.1	< 0.005	< 0.005	—	23.4
Arena	—	—	—	—	—	—	—	—	—	—	—	—	27.1	27.1	< 0.005	< 0.005	—	27.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	356	356	0.06	0.01	—	359
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	58.3	58.3	0.01	< 0.005	—	58.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115	115	0.02	< 0.005	—	116
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,423	3,423	0.55	0.07	—	3,457
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87	< 0.005	< 0.005	—	1.88
Motel	—	—	—	—	—	—	—	—	—	—	—	—	452	452	0.07	0.01	—	456
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	7.86	7.86	< 0.005	< 0.005	—	7.93
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	9.33	9.33	< 0.005	< 0.005	—	9.42
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	3.83	3.83	< 0.005	< 0.005	—	3.87
Arena	—	—	—	—	—	—	—	—	—	—	—	—	4.48	4.48	< 0.005	< 0.005	—	4.52

User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	58.9	58.9	0.01	< 0.005	—	59.5
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	9.66	9.66	< 0.005	< 0.005	—	9.75
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	19.0	19.0	< 0.005	< 0.005	—	19.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	567	567	0.09	0.01	—	572

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Motel	—	—	—	—	—	—	—	—	—	—	—	—	2,659	2,659	0.43	0.05	—	2,685
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	43.9	43.9	0.01	< 0.005	—	44.3
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	55.8	55.8	0.01	< 0.005	—	56.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	22.9	22.9	< 0.005	< 0.005	—	23.1

Arena	—	—	—	—	—	—	—	—	—	—	—	—	27.1	27.1	< 0.005	< 0.005	—	27.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	329	329	0.05	0.01	—	332
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	58.3	58.3	0.01	< 0.005	—	58.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115	115	0.02	< 0.005	—	116
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,323	3,323	0.54	0.07	—	3,355
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Motel	—	—	—	—	—	—	—	—	—	—	—	—	2,659	2,659	0.43	0.05	—	2,685
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	43.9	43.9	0.01	< 0.005	—	44.3
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	55.8	55.8	0.01	< 0.005	—	56.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	22.9	22.9	< 0.005	< 0.005	—	23.1
Arena	—	—	—	—	—	—	—	—	—	—	—	—	27.1	27.1	< 0.005	< 0.005	—	27.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	329	329	0.05	0.01	—	332
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	58.3	58.3	0.01	< 0.005	—	58.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115	115	0.02	< 0.005	—	116
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,323	3,323	0.54	0.07	—	3,355
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87	< 0.005	< 0.005	—	1.88
Motel	—	—	—	—	—	—	—	—	—	—	—	—	440	440	0.07	0.01	—	445
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	7.27	7.27	< 0.005	< 0.005	—	7.34
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	9.24	9.24	< 0.005	< 0.005	—	9.34
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	3.79	3.79	< 0.005	< 0.005	—	3.83
Arena	—	—	—	—	—	—	—	—	—	—	—	—	4.48	4.48	< 0.005	< 0.005	—	4.52
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	54.5	54.5	0.01	< 0.005	—	55.0
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	9.65	9.65	< 0.005	< 0.005	—	9.75
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	19.0	19.0	< 0.005	< 0.005	—	19.2

Total	—	—	—	—	—	—	—	—	—	—	—	—	550	550	0.09	0.01	—	556

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.0	27.0	< 0.005	< 0.005	—	27.1
Motel	0.60	0.30	5.48	4.61	0.03	0.42	—	0.42	0.42	—	0.42	—	6,544	6,544	0.58	0.01	—	6,562
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.4	79.4	0.01	< 0.005	—	79.6
Health Club	0.01	0.01	0.11	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	135	135	0.01	< 0.005	—	136
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.57	9.57	< 0.005	< 0.005	—	9.60
Arena	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.9	64.9	0.01	< 0.005	—	65.1
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.05	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	595	595	0.05	< 0.005	—	597
Medical Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	7,492	7,492	0.66	0.01	—	7,512
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.0	27.0	< 0.005	< 0.005	—	27.1
Motel	0.60	0.30	5.48	4.61	0.03	0.42	—	0.42	0.42	—	0.42	—	6,544	6,544	0.58	0.01	—	6,562
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.4	79.4	0.01	< 0.005	—	79.6
Health Club	0.01	0.01	0.11	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	135	135	0.01	< 0.005	—	136
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.57	9.57	< 0.005	< 0.005	—	9.60
Arena	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.9	64.9	0.01	< 0.005	—	65.1
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.05	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	595	595	0.05	< 0.005	—	597
Medical Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	7,492	7,492	0.66	0.01	—	7,512
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.48	4.48	< 0.005	< 0.005	—	4.49
Motel	0.11	0.06	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	—	1,083	1,083	0.10	< 0.005	—	1,086
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.1	13.1	< 0.005	< 0.005	—	13.2
Health Club	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.4	22.4	< 0.005	< 0.005	—	22.5
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.58	1.58	< 0.005	< 0.005	—	1.59
Arena	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.6	98.6	0.01	< 0.005	—	98.9
Medical Office Building	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.99	5.99	< 0.005	< 0.005	—	6.01
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.13	0.06	1.15	0.96	0.01	0.09	—	0.09	0.09	—	0.09	—	1,240	1,240	0.11	< 0.005	—	1,244

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.0	27.0	< 0.005	< 0.005	—	27.1
Motel	0.60	0.30	5.48	4.61	0.03	0.42	—	0.42	0.42	—	0.42	—	6,544	6,544	0.58	0.01	—	6,562
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.4	79.4	0.01	< 0.005	—	79.6
Health Club	0.01	0.01	0.11	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	135	135	0.01	< 0.005	—	136
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.57	9.57	< 0.005	< 0.005	—	9.60
Arena	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.9	64.9	0.01	< 0.005	—	65.1
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.05	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	595	595	0.05	< 0.005	—	597
Medical Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	7,492	7,492	0.66	0.01	—	7,512
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.0	27.0	< 0.005	< 0.005	—	27.1

Motel	0.60	0.30	5.48	4.61	0.03	0.42	—	0.42	0.42	—	0.42	—	6,544	6,544	0.58	0.01	—	6,562
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.4	79.4	0.01	< 0.005	—	79.6
Health Club	0.01	0.01	0.11	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	135	135	0.01	< 0.005	—	136
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.57	9.57	< 0.005	< 0.005	—	9.60
Arena	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.9	64.9	0.01	< 0.005	—	65.1
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.05	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	595	595	0.05	< 0.005	—	597
Medical Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.69	0.35	6.28	5.27	0.04	0.48	—	0.48	0.48	—	0.48	—	7,492	7,492	0.66	0.01	—	7,512
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.48	4.48	< 0.005	< 0.005	—	4.49
Motel	0.11	0.06	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	—	1,083	1,083	0.10	< 0.005	—	1,086
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.1	13.1	< 0.005	< 0.005	—	13.2
Health Club	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.4	22.4	< 0.005	< 0.005	—	22.5
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.58	1.58	< 0.005	< 0.005	—	1.59
Arena	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.6	98.6	0.01	< 0.005	—	98.9
Medical Office Building	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.99	5.99	< 0.005	< 0.005	—	6.01
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.13	0.06	1.15	0.96	0.01	0.09	—	0.09	0.09	—	0.09	—	1,240	1,240	0.11	< 0.005	—	1,244

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	18.0	18.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	5.36	5.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	6.49	5.99	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Total	29.8	29.3	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	18.0	18.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	5.36	5.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	23.3	23.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.28	3.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.98	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.07	0.99	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5
Total	5.33	5.25	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5

4.3.2. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	16.6	16.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.08	1.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	6.49	5.99	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Total	24.2	23.7	0.31	36.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	150	150	0.01	< 0.005	—	151
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	16.6	16.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.08	1.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	17.7	17.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.04	3.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	1.07	0.99	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5
Total	4.30	4.22	0.05	6.02	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.5

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.89	1.40	2.28	0.09	< 0.005	—	5.21
Motel	—	—	—	—	—	—	—	—	—	—	—	19.6	30.9	50.5	2.01	0.05	—	115
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.16	1.84	3.00	0.12	< 0.005	—	6.84
Health Club	—	—	—	—	—	—	—	—	—	—	—	1.13	1.79	2.92	0.12	< 0.005	—	6.67
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.12	1.83	0.07	< 0.005	—	4.18
Arena	—	—	—	—	—	—	—	—	—	—	—	3.96	6.25	10.2	0.41	0.01	—	23.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	8.72	13.8	22.5	0.90	0.02	—	51.3

Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.20	1.90	3.10	0.12	< 0.005	—	7.07
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.89	1.40	2.28	0.09	< 0.005	—	5.21
Motel	—	—	—	—	—	—	—	—	—	—	—	19.6	30.9	50.5	2.01	0.05	—	115
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.16	1.84	3.00	0.12	< 0.005	—	6.84
Health Club	—	—	—	—	—	—	—	—	—	—	—	1.13	1.79	2.92	0.12	< 0.005	—	6.67
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.12	1.83	0.07	< 0.005	—	4.18
Arena	—	—	—	—	—	—	—	—	—	—	—	3.96	6.25	10.2	0.41	0.01	—	23.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	8.72	13.8	22.5	0.90	0.02	—	51.3
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.20	1.90	3.10	0.12	< 0.005	—	7.07
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	37.4	59.0	96.3	3.84	0.09	—	220
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.15	0.23	0.38	0.02	< 0.005	—	0.86
Motel	—	—	—	—	—	—	—	—	—	—	—	3.24	5.12	8.36	0.33	0.01	—	19.1
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.19	0.30	0.50	0.02	< 0.005	—	1.13
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.19	0.30	0.48	0.02	< 0.005	—	1.10
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.12	0.19	0.30	0.01	< 0.005	—	0.69
Arena	—	—	—	—	—	—	—	—	—	—	—	0.66	1.04	1.69	0.07	< 0.005	—	3.86
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	1.44	2.28	3.72	0.15	< 0.005	—	8.50
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	0.20	0.31	0.51	0.02	< 0.005	—	1.17
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.19	9.76	16.0	0.64	0.02	—	36.4

4.4.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.79	1.25	2.04	0.08	< 0.005	—	4.66
Motel	—	—	—	—	—	—	—	—	—	—	—	17.3	27.3	44.5	1.78	0.04	—	102
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.05	1.66	2.71	0.11	< 0.005	—	6.18
Health Club	—	—	—	—	—	—	—	—	—	—	—	1.02	1.61	2.64	0.11	< 0.005	—	6.02
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.12	1.83	0.07	< 0.005	—	4.18
Arena	—	—	—	—	—	—	—	—	—	—	—	3.96	6.25	10.2	0.41	0.01	—	23.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	8.72	13.8	22.5	0.90	0.02	—	51.3
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.08	1.71	2.79	0.11	< 0.005	—	6.38
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.79	1.25	2.04	0.08	< 0.005	—	4.66
Motel	—	—	—	—	—	—	—	—	—	—	—	17.3	27.3	44.5	1.78	0.04	—	102
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.05	1.66	2.71	0.11	< 0.005	—	6.18
Health Club	—	—	—	—	—	—	—	—	—	—	—	1.02	1.61	2.64	0.11	< 0.005	—	6.02
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.12	1.83	0.07	< 0.005	—	4.18
Arena	—	—	—	—	—	—	—	—	—	—	—	3.96	6.25	10.2	0.41	0.01	—	23.3
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	8.72	13.8	22.5	0.90	0.02	—	51.3
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.08	1.71	2.79	0.11	< 0.005	—	6.38
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	34.6	54.6	89.3	3.56	0.09	—	204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.13	0.21	0.34	0.01	< 0.005	—	0.77
Motel	—	—	—	—	—	—	—	—	—	—	—	2.86	4.51	7.37	0.29	0.01	—	16.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.17	0.27	0.45	0.02	< 0.005	—	1.02
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.17	0.27	0.44	0.02	< 0.005	—	1.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.12	0.19	0.30	0.01	< 0.005	—	0.69
Arena	—	—	—	—	—	—	—	—	—	—	—	0.66	1.04	1.69	0.07	< 0.005	—	3.86
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	1.44	2.28	3.72	0.15	< 0.005	—	8.50
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	0.18	0.28	0.46	0.02	< 0.005	—	1.06
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.73	9.04	14.8	0.59	0.01	—	33.7

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	1.34	0.00	1.34	0.13	0.00	—	4.68
Motel	—	—	—	—	—	—	—	—	—	—	—	119	0.00	119	11.9	0.00	—	416

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	12.8	0.00	12.8	1.28	0.00	—	44.9
Health Club	—	—	—	—	—	—	—	—	—	—	—	30.7	0.00	30.7	3.07	0.00	—	107
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.83	0.00	2.83	0.28	0.00	—	9.90
Arena	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	7.38	0.00	7.38	0.74	0.00	—	25.8
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.91	0.00	—	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	1.34	0.00	1.34	0.13	0.00	—	4.68
Motel	—	—	—	—	—	—	—	—	—	—	—	119	0.00	119	11.9	0.00	—	416
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	12.8	0.00	12.8	1.28	0.00	—	44.9
Health Club	—	—	—	—	—	—	—	—	—	—	—	30.7	0.00	30.7	3.07	0.00	—	107
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.83	0.00	2.83	0.28	0.00	—	9.90
Arena	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	7.38	0.00	7.38	0.74	0.00	—	25.8
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.91	0.00	—	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.77
Motel	—	—	—	—	—	—	—	—	—	—	—	19.7	0.00	19.7	1.97	0.00	—	68.9
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2.12	0.00	2.12	0.21	0.00	—	7.43
Health Club	—	—	—	—	—	—	—	—	—	—	—	5.09	0.00	5.09	0.51	0.00	—	17.8

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.47	0.00	0.47	0.05	0.00	—	1.64
Arena	—	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.04
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	1.22	0.00	1.22	0.12	0.00	—	4.27
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	4.82	0.00	4.82	0.48	0.00	—	16.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	33.6	0.00	33.6	3.36	0.00	—	118

4.5.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.67	0.00	0.67	0.07	0.00	—	2.34
Motel	—	—	—	—	—	—	—	—	—	—	—	59.5	0.00	59.5	5.94	0.00	—	208
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	6.41	0.00	6.41	0.64	0.00	—	22.4

Health Club	—	—	—	—	—	—	—	—	—	—	—	15.4	0.00	15.4	1.54	0.00	—	53.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.41	0.00	1.41	0.14	0.00	—	4.95
Arena	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.12
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	3.69	0.00	3.69	0.37	0.00	—	12.9
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	14.6	0.00	14.6	1.45	0.00	—	50.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.67	0.00	0.67	0.07	0.00	—	2.34
Motel	—	—	—	—	—	—	—	—	—	—	—	59.5	0.00	59.5	5.94	0.00	—	208
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	6.41	0.00	6.41	0.64	0.00	—	22.4
Health Club	—	—	—	—	—	—	—	—	—	—	—	15.4	0.00	15.4	1.54	0.00	—	53.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.41	0.00	1.41	0.14	0.00	—	4.95
Arena	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.12

User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	3.69	0.00	3.69	0.37	0.00	—	12.9
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	14.6	0.00	14.6	1.45	0.00	—	50.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	355
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.11	0.00	0.11	0.01	0.00	—	0.39
Motel	—	—	—	—	—	—	—	—	—	—	—	9.84	0.00	9.84	0.98	0.00	—	34.4
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.06	0.00	1.06	0.11	0.00	—	3.71
Health Club	—	—	—	—	—	—	—	—	—	—	—	2.54	0.00	2.54	0.25	0.00	—	8.90
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.23	0.00	0.23	0.02	0.00	—	0.82
Arena	—	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.02
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	0.61	0.00	0.61	0.06	0.00	—	2.14

Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	2.41	0.00	2.41	0.24	0.00	—	8.43
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	1.68	0.00	—	58.8

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,236	1,236
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.13	3.13
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.4	23.4
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,236	1,236
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.13	3.13
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.4	23.4
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,263	1,263
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	205	205
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.88	3.88
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	209	209

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	977	977
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.47	2.47
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.5	18.5

Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	977	977
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.47	2.47
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.5	18.5
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	999	999
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Motel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	162	162

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.07	3.07
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	165	165

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.7.2. Mitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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

4.9.2. Mitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	180	180	130	63,093	832	832	601	291,573
Arena	1,030	1,030	660	356,657	4,760	4,760	3,050	1,648,229
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	355	355	650	144,957	718	1,641	3,004	429,338
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medical Office Building	165	165	10.0	52,143	763	763	46.2	240,969
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motel	1,470	1,470	1,590	542,807	6,793	6,793	7,348	2,508,489

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	180	180	130	63,093	832	832	601	291,573
Arena	1,030	1,030	660	356,657	4,760	4,760	3,050	1,648,229
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	355	355	650	144,957	718	1,641	3,004	429,338
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medical Office Building	165	165	10.0	52,143	763	763	46.2	240,969
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motel	1,470	1,470	1,590	542,807	6,793	6,793	7,348	2,508,489

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	1,258,800	419,600	18,010

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	330

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	330

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	20,172	204	0.0330	0.0040	84,389
Motel	16,056	204	0.0330	0.0040	67,150
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
High Turnover (Sit Down Restaurant)	84,905	204	0.0330	0.0040	247,737
Health Club	30,258	204	0.0330	0.0040	126,583
Strip Mall	41,386	204	0.0330	0.0040	29,864
Arena	48,414	204	0.0330	0.0040	202,533
User Defined Recreational	0.00	204	0.0330	0.0040	0.00
Quality Restaurant	636,789	204	0.0330	0.0040	1,858,025
Health Club	70,603	204	0.0330	0.0040	295,360

Medical Office Building	104,357	204	0.0330	0.0040	112,940
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
Parking Lot	205,713	204	0.0330	0.0040	0.00
Motel	4,866,257	204	0.0330	0.0040	20,351,475

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	20,172	204	0.0330	0.0040	84,389
Motel	15,648	204	0.0330	0.0040	67,150
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
High Turnover (Sit Down Restaurant)	78,525	204	0.0330	0.0040	247,737
Health Club	29,971	204	0.0330	0.0040	126,583
Strip Mall	40,995	204	0.0330	0.0040	29,864
Arena	48,414	204	0.0330	0.0040	202,533
User Defined Recreational	0.00	204	0.0330	0.0040	0.00
Quality Restaurant	588,938	204	0.0330	0.0040	1,858,025
Health Club	69,933	204	0.0330	0.0040	295,360
Medical Office Building	104,316	204	0.0330	0.0040	112,940
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
Parking Lot	205,713	204	0.0330	0.0040	0.00
Motel	4,742,545	204	0.0330	0.0040	20,351,475

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

General Light Industry	462,500	0.00
Motel	25,367	0.00
Other Asphalt Surfaces	0.00	0.00
High Turnover (Sit Down Restaurant)	607,067	0.00
Health Club	177,429	0.00
Strip Mall	370,363	0.00
Arena	2,067,697	0.00
User Defined Recreational	0.00	0.00
Quality Restaurant	4,553,006	0.00
Health Club	414,002	0.00
Medical Office Building	627,403	0.00
Other Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	0.00
Motel	10,197,442	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	413,244	0.00
Motel	22,371	0.00
Other Asphalt Surfaces	0.00	0.00
High Turnover (Sit Down Restaurant)	548,182	0.00
Health Club	160,219	0.00
Strip Mall	370,363	0.00
Arena	2,067,697	0.00
User Defined Recreational	0.00	0.00
Quality Restaurant	4,553,006	0.00
Health Club	373,844	0.00
Medical Office Building	565,604	0.00

Other Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	0.00
Motel	8,993,124	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	2.48	—
Motel	0.55	—
Other Asphalt Surfaces	0.00	—
High Turnover (Sit Down Restaurant)	23.8	—
Health Club	17.1	—
Strip Mall	5.25	—
Arena	0.13	—
User Defined Recreational	0.00	—
Quality Restaurant	13.7	—
Health Club	39.9	—
Medical Office Building	54.0	—
Other Asphalt Surfaces	0.00	—
Parking Lot	0.00	—
Motel	220	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	1.24	—
Motel	0.27	—
Other Asphalt Surfaces	0.00	—

High Turnover (Sit Down Restaurant)	11.9	—
Health Club	8.55	—
Strip Mall	2.63	—
Arena	0.07	—
User Defined Recreational	0.00	—
Quality Restaurant	6.84	—
Health Club	19.9	—
Medical Office Building	27.0	—
Other Asphalt Surfaces	0.00	—
Parking Lot	0.00	—
Motel	110	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
Motel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Motel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Motel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Arena	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Arena	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Arena	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Quality Restaurant	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Quality Restaurant	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Quality Restaurant	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Motel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Motel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Motel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	2.00	18.0
Motel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	—	1.00
Motel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	2.00	18.0
Motel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	—	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	2.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	—	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0

Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	—	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
Arena	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0
Arena	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	—	1.00
Arena	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
Quality Restaurant	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	—	1.00
Quality Restaurant	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	2.00	18.0
Quality Restaurant	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	—	1.00
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	—	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	2.00	18.0
Motel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	—	1.00
Motel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	2.00	18.0
Motel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	2.00	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
–	–

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	21.8	annual days of extreme heat
Extreme Precipitation	4.00	annual days with precipitation above 20 mm

Sea Level Rise	0.00	meters of inundation depth
Wildfire	24.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	5.51
AQ-DPM	5.08
Drinking Water	68.4
Lead Risk Housing	13.9
Pesticides	73.6
Toxic Releases	23.8
Traffic	5.54
Effect Indicators	—

CleanUp Sites	0.00
Groundwater	94.7
Haz Waste Facilities/Generators	94.1
Impaired Water Bodies	66.7
Solid Waste	93.8
Sensitive Population	—
Asthma	38.9
Cardio-vascular	21.2
Low Birth Weights	17.2
Socioeconomic Factor Indicators	—
Education	34.4
Housing	38.1
Linguistic	18.1
Poverty	42.9
Unemployment	18.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	64.60926472
Employed	54.30514564
Median HI	73.28371616
Education	—
Bachelor's or higher	47.5426665
High school enrollment	100
Preschool enrollment	58.10342615
Transportation	—

Auto Access	72.44963429
Active commuting	26.36981907
Social	—
2-parent households	95.03400488
Voting	87.36045169
Neighborhood	—
Alcohol availability	79.96920313
Park access	8.661619402
Retail density	1.142050558
Supermarket access	15.16745798
Tree canopy	9.970486334
Housing	—
Homeownership	79.44308995
Housing habitability	90.29898627
Low-inc homeowner severe housing cost burden	67.59912742
Low-inc renter severe housing cost burden	87.38611574
Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	69.44693956
Arthritis	0.0
Asthma ER Admissions	59.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	35.5

Cognitively Disabled	44.8
Physically Disabled	32.1
Heart Attack ER Admissions	74.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	39.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.4
SLR Inundation Area	0.0
Children	55.0
Elderly	20.2
English Speaking	70.4
Foreign-born	5.5
Outdoor Workers	16.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.9
Traffic Density	5.9
Traffic Access	0.0
Other Indices	—
Hardship	26.5
Other Decision Support	—

2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	69.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on provided information
Operations: Vehicle Data	Based on trip generation rates provided by CCTC

Hunter Ranch Mobile Only 2025 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Mobile Only 2025
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64655780157254, -120.61773696506904
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	1.00	Dwelling Unit	0.32	1,950	11,713	—	2.00	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.2	15.9	3.29	28.1	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	0.28	745	746	0.69	0.29	0.07	850
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	15.7	15.3	3.69	36.2	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	0.28	761	761	0.82	0.32	0.02	877
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.2	10.9	2.54	24.0	0.01	0.01	0.01	0.02	0.01	< 0.005	0.02	0.28	544	545	0.57	0.22	0.03	625
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.04	1.99	0.46	4.38	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	90.1	90.2	0.09	0.04	0.01	103

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.2	15.8	3.28	28.1	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	—	728	728	0.66	0.29	0.06	832

Area	0.06	0.06	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.2	16.2	< 0.005	< 0.005	—	16.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Waste	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	16.2	15.9	3.29	28.1	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	0.28	745	746	0.69	0.29	0.07	850
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	15.7	15.3	3.68	36.2	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	—	744	744	0.79	0.32	< 0.005	859
Area	0.06	0.06	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.2	16.2	< 0.005	< 0.005	—	16.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Waste	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	15.7	15.3	3.69	36.2	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	0.28	761	761	0.82	0.32	0.02	877
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.1	10.9	2.53	23.9	0.01	0.01	0.01	0.02	0.01	< 0.005	0.01	—	528	528	0.54	0.22	0.02	607
Area	0.06	0.06	< 0.005	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.14	0.14	< 0.005	< 0.005	—	0.14
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.2	16.2	< 0.005	< 0.005	—	16.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Waste	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	11.2	10.9	2.54	24.0	0.01	0.01	0.01	0.02	0.01	< 0.005	0.02	0.28	544	545	0.57	0.22	0.03	625
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.03	1.98	0.46	4.37	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	87.4	87.4	0.09	0.04	< 0.005	100
Area	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.02	0.02	< 0.005	< 0.005	—	0.02
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.68	2.68	< 0.005	< 0.005	—	2.69

Water	—	—	—	—	—	—	—	—	—	—	—	0.01	0.08	0.09	< 0.005	< 0.005	—	0.13
Waste	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.13
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	2.04	1.99	0.46	4.38	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	90.1	90.2	0.09	0.04	0.01	103

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	3.39	3.39	< 0.005	< 0.005	—	3.42
Total	—	—	—	—	—	—	—	—	—	—	—	—	3.39	3.39	< 0.005	< 0.005	—	3.42
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	3.39	3.39	< 0.005	< 0.005	—	3.42
Total	—	—	—	—	—	—	—	—	—	—	—	—	3.39	3.39	< 0.005	< 0.005	—	3.42
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56	< 0.005	< 0.005	—	0.57
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56	< 0.005	< 0.005	—	0.57

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.12	2.12	< 0.005	< 0.005	—	2.12
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.12	2.12	< 0.005	< 0.005	—	2.12

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Total	0.06	0.06	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.06	0.06	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Products	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.02	0.02	< 0.005	< 0.005	—	0.02
Total	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.02	0.02	< 0.005	< 0.005	—	0.02

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Total	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Total	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.01	0.08	0.09	< 0.005	< 0.005	—	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	0.01	0.08	0.09	< 0.005	< 0.005	—	0.13

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Total	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Total	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.13

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	4,027	0.00	0.00	1,049,896	15.9	0.00	0.00	4,156

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
3948.75	1,316	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	330

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	6,063	204	0.0330	0.0040	39,900

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	30,222	194,188

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	0.41	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	21.8	annual days of extreme heat
Extreme Precipitation	4.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	24.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	5.51
AQ-DPM	5.08
Drinking Water	68.4
Lead Risk Housing	13.9
Pesticides	73.6
Toxic Releases	23.8
Traffic	5.54
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	94.7
Haz Waste Facilities/Generators	94.1
Impaired Water Bodies	66.7
Solid Waste	93.8
Sensitive Population	—
Asthma	38.9
Cardio-vascular	21.2
Low Birth Weights	17.2
Socioeconomic Factor Indicators	—
Education	34.4
Housing	38.1
Linguistic	18.1
Poverty	42.9
Unemployment	18.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	64.60926472
Employed	54.30514564
Median HI	73.28371616
Education	—
Bachelor's or higher	47.5426665
High school enrollment	100
Preschool enrollment	58.10342615
Transportation	—
Auto Access	72.44963429
Active commuting	26.36981907
Social	—
2-parent households	95.03400488
Voting	87.36045169
Neighborhood	—
Alcohol availability	79.96920313
Park access	8.661619402
Retail density	1.142050558
Supermarket access	15.16745798
Tree canopy	9.970486334
Housing	—
Homeownership	79.44308995
Housing habitability	90.29898627
Low-inc homeowner severe housing cost burden	67.59912742
Low-inc renter severe housing cost burden	87.38611574

Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	69.44693956
Arthritis	0.0
Asthma ER Admissions	59.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	35.5
Cognitively Disabled	44.8
Physically Disabled	32.1
Heart Attack ER Admissions	74.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	39.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.4
SLR Inundation Area	0.0

Children	55.0
Elderly	20.2
English Speaking	70.4
Foreign-born	5.5
Outdoor Workers	16.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.9
Traffic Density	5.9
Traffic Access	0.0
Other Indices	—
Hardship	26.5
Other Decision Support	—
2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	69.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Hunter Ranch Mobile Only 2030 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hunter Ranch Mobile Only 2030
Operational Year	2030
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	24.6
Location	35.64655780157254, -120.61773696506904
County	San Luis Obispo
City	Paso Robles
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3304
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	1.00	Dwelling Unit	0.32	1,950	11,713	—	2.00	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.8	13.6	2.69	22.4	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	0.28	678	678	0.54	0.26	0.05	768
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.5	13.2	3.01	28.7	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	0.28	690	690	0.64	0.28	0.01	790
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.59	9.39	2.07	19.1	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	0.28	495	495	0.45	0.19	0.02	564
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.75	1.71	0.38	3.48	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	81.9	81.9	0.07	0.03	< 0.005	93.4

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.8	13.5	2.68	22.4	0.01	0.02	0.01	0.03	0.01	< 0.005	0.02	—	661	661	0.51	0.26	0.03	750

Area	0.06	0.06	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.2	16.2	< 0.005	< 0.005	—	16.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Waste	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	13.8	13.6	2.69	22.4	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	0.28	678	678	0.54	0.26	0.05	768
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.4	13.2	3.00	28.7	0.01	0.02	0.01	0.03	0.01	< 0.005	0.02	—	673	673	0.61	0.28	< 0.005	772
Area	0.06	0.06	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.2	16.2	< 0.005	< 0.005	—	16.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Waste	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	13.5	13.2	3.01	28.7	0.01	0.02	0.01	0.03	0.02	< 0.005	0.02	0.28	690	690	0.64	0.28	0.01	790
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.53	9.33	2.06	19.0	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	478	478	0.42	0.19	0.01	546
Area	0.06	0.06	< 0.005	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.14	0.14	< 0.005	< 0.005	—	0.14
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.2	16.2	< 0.005	< 0.005	—	16.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Waste	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	9.59	9.39	2.07	19.1	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	0.28	495	495	0.45	0.19	0.02	564
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.74	1.70	0.38	3.47	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	79.1	79.1	0.07	0.03	< 0.005	90.4
Area	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.02	0.02	< 0.005	< 0.005	—	0.02
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.68	2.68	< 0.005	< 0.005	—	2.69

Water	—	—	—	—	—	—	—	—	—	—	—	0.01	0.08	0.09	< 0.005	< 0.005	—	0.13
Waste	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.13
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	1.75	1.71	0.38	3.48	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	81.9	81.9	0.07	0.03	< 0.005	93.4

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	3.39	3.39	< 0.005	< 0.005	—	3.42
Total	—	—	—	—	—	—	—	—	—	—	—	—	3.39	3.39	< 0.005	< 0.005	—	3.42
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	3.39	3.39	< 0.005	< 0.005	—	3.42
Total	—	—	—	—	—	—	—	—	—	—	—	—	3.39	3.39	< 0.005	< 0.005	—	3.42
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56	< 0.005	< 0.005	—	0.57
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56	< 0.005	< 0.005	—	0.57

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.12	2.12	< 0.005	< 0.005	—	2.12
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.12	2.12	< 0.005	< 0.005	—	2.12

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	< 0.005	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Total	0.06	0.06	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.06	0.06	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Products	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.02	0.02	< 0.005	< 0.005	—	0.02
Total	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.02	0.02	< 0.005	< 0.005	—	0.02

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Total	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Total	—	—	—	—	—	—	—	—	—	—	—	0.06	0.51	0.57	0.01	< 0.005	—	0.76
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.01	0.08	0.09	< 0.005	< 0.005	—	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	0.01	0.08	0.09	< 0.005	< 0.005	—	0.13

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Total	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Total	—	—	—	—	—	—	—	—	—	—	—	0.22	0.00	0.22	0.02	0.00	—	0.78
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	0.04	0.00	0.04	< 0.005	0.00	—	0.13

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	4,027	0.00	0.00	1,049,896	15.9	0.00	0.00	4,156

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
3948.75	1,316	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	330

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	6,063	204	0.0330	0.0040	39,900

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	30,222	194,188

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	0.41	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	21.8	annual days of extreme heat
Extreme Precipitation	4.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	24.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	5.51
AQ-DPM	5.08
Drinking Water	68.4
Lead Risk Housing	13.9
Pesticides	73.6
Toxic Releases	23.8
Traffic	5.54
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	94.7
Haz Waste Facilities/Generators	94.1
Impaired Water Bodies	66.7
Solid Waste	93.8
Sensitive Population	—
Asthma	38.9
Cardio-vascular	21.2
Low Birth Weights	17.2
Socioeconomic Factor Indicators	—
Education	34.4
Housing	38.1
Linguistic	18.1
Poverty	42.9
Unemployment	18.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	64.60926472
Employed	54.30514564
Median HI	73.28371616
Education	—
Bachelor's or higher	47.5426665
High school enrollment	100
Preschool enrollment	58.10342615
Transportation	—
Auto Access	72.44963429
Active commuting	26.36981907
Social	—
2-parent households	95.03400488
Voting	87.36045169
Neighborhood	—
Alcohol availability	79.96920313
Park access	8.661619402
Retail density	1.142050558
Supermarket access	15.16745798
Tree canopy	9.970486334
Housing	—
Homeownership	79.44308995
Housing habitability	90.29898627
Low-inc homeowner severe housing cost burden	67.59912742
Low-inc renter severe housing cost burden	87.38611574

Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	69.44693956
Arthritis	0.0
Asthma ER Admissions	59.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	35.5
Cognitively Disabled	44.8
Physically Disabled	32.1
Heart Attack ER Admissions	74.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	39.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.4
SLR Inundation Area	0.0

Children	55.0
Elderly	20.2
English Speaking	70.4
Foreign-born	5.5
Outdoor Workers	16.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.9
Traffic Density	5.9
Traffic Access	0.0
Other Indices	—
Hardship	26.5
Other Decision Support	—
2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	69.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Appendix B

Biological Resources Assessment and Kit Fox Habitat Evaluation

BIOLOGICAL RESOURCES ASSESSMENT

Hunter Ranch Golf Course
Paso Robles, San Luis Obispo County, California
(APN: 025-701-004)

Prepared for:
John King
King Ventures
285 Bridge Street
San Luis Obispo, California, 93401

Prepared by:
Terra Verde Environmental Consulting, LLC
3765 South Higuera Street, Suite 102
San Luis Obispo, California 93401

January 2022

"As a County-approved biologist, I hereby certify that this Biological Resources Assessment was prepared according to the guidelines established by the County of San Luis Obispo Department of Planning and Building and that the statements furnished in the report and associated maps are true and correct to the best of my knowledge and belief; and I further certify that I was present throughout the site visit(s) associated with this report."

Signature

25 January 2022
Date

This page intentionally left blank.

EXECUTIVE SUMMARY

This Biological Resources Assessment was prepared by Terra Verde Environmental Consulting, LLC (Terra Verde) at the request of John King (applicant) in support of a Conditional Use Permit from the City of Paso de Robles (City) for the further development of an existing 18-hole golf course (Hunter Ranch Golf Course). The proposed project is located at 4041 Highway 46 East in the City of Paso de Robles, San Luis Obispo County, California (APN: 025-701-004). The proposed project consists of dividing the property into two parcels and developing them both simultaneously in four phases. Developments include the remodeling of an existing structure, construction of new casitas, vacation rentals, pools, restaurants, maintenance building, lodge and spa, retail village, and associated access roads, parking, and utilities. The proposed total disturbance area is approximately 12 acres within the approximate 200-acre property.

Terra Verde staff conducted a field survey of the proposed project site and surrounding areas on December 2, 2021. The survey area included the limits of proposed disturbance, the remaining property area, an approximate 100-foot buffer on all sides where access was feasible, and a visual scan of the surrounding areas. The survey included an inventory of botanical and wildlife species observed, a jurisdictional analysis of aquatic resources identified on site, and an assessment of habitat, focusing on the potential for special-status species to occur.

No special-species status plant or wildlife species were observed during the field survey. However, the survey was conducted outside of the typical blooming period for most special-status plant species with the potential to occur on site. One California Department of Fish and Wildlife Sensitive Natural Community, coastal and valley freshwater marsh, was observed in the survey area. Additionally, several mature blue oak (*Quercus douglasii*) trees were documented within the survey area.

Terra Verde determined that suitable habitat exists for 18 special-status botanical species and 13 special-status wildlife species, as well as migratory nesting birds. Further, U.S. Fish and Wildlife Service-designated critical habitat for vernal pool fairy shrimp (VPFS; *Branchinecta lynchi*) overlaps the entire project area. Eleven potential wetlands, which may provide suitable habitat for VPFS, were identified and mapped. The project is also located within the County of San Luis Obispo-designated San Joaquin kit fox (SJKF; *Vulpes macrotis mutica*) 3:1 mitigation area. Multiple ephemeral drainages and a pond are located within the property.

As the project is currently designed, the potential for impacts to biological resources is considered low. However, direct impacts to special-status botanical species could occur during construction or long-term operations of the proposed project if present, including individual plants or portions of the seed bank. Impacts to and/or removal of individual oak trees could occur based on the proposed design plans. Direct and indirect impacts are proposed within potentially suitable habitat for VPFS. Direct impacts to special-status wildlife could result from construction-related disturbances such as trampling or crushing from equipment. Direct and/or indirect impacts to drainages and/or wetland features may occur during project implementation. A

formal waters and wetland delineation may be required to determine jurisdiction of each feature for appropriate permitting. A series of avoidance, minimization, and mitigation measures have been recommended to reduce potential impacts to a less than significant level.

TABLE OF CONTENTS

EXECUTIVE SUMMARY iii

1.0 INTRODUCTION 1

1.1 Purpose of the Biological Resources Assessment 1

1.2 Existing Conditions 1

2.0 METHODOLOGY 2

2.1 Sufficiency of Biological Data 3

3.0 RESULTS 4

3.1 Habitats and Resources Observed 4

3.1.1 Soils 4

3.1.2 Hydrologic Features 5

3.1.3 Vegetation Communities and Land Cover Types 10

3.1.3 Wildlife 13

3.2 Sensitive Resources 13

3.2.1 Special-status Plant Species 13

3.2.2 Special-status Wildlife Species 19

3.2.3 Sensitive Habitats 26

3.3 Habitat Connectivity 27

4.0 IMPACT ASSESSMENT 27

4.1 Summary of Potential Impacts 27

4.1.1 Impacts to Special-status Plants 28

4.1.2 Impacts to Special-status Wildlife 28

4.1.3 Impacts to Sensitive Habitats 30

4.2 Recommended Avoidance, Minimization, and Mitigation Measures 30

4.2.1 General Measures 31

4.2.2 Avoidance and Minimization of Impacts to Oak Trees 32

4.2.3 Measures to Address Impacts to Sensitive Habitats 33

4.2.4 Measures to Address Impacts to Special-status Wildlife 33

5.0 CONCLUSION 36

6.0 REFERENCES 37

Appendix A – Figures
Figure 1: Project Vicinity
Figure 2: Survey Area
Figure 3: 5-mile CNDDB and Critical Habitat
Figure 4: Soils
Figure 5a-d: Hydrologic Resources
Figure 6: Vegetation Communities
Appendix B – Preliminary Site Plans (Dated August 2021)
Appendix C – Regionally Occurring Special-status Species
Appendix D – Botanical and Wildlife Species Observed
Appendix E – Representative Site Photographs

1.0 INTRODUCTION

This Biological Resources Assessment was prepared by Terra Verde Environmental Consulting, LLC (Terra Verde) at the request of John King (applicant) in support of a Conditional Use Permit from the City of Paso de Robles (City) for the further development of an existing 18-hole golf course (Hunter Ranch Golf Course). The proposed project is located at 4041 Highway 46 East in the City of Paso de Robles, San Luis Obispo County, California (APN: 025-701-004) (see Appendix A – Figure 1: Project Vicinity).

The proposed project consists of dividing the approximate 200-acre property into two parcels and developing them both simultaneously in four phases. Developments include the conversion of an existing maintenance building to an event center and the construction of 92 casitas, 33 vacation rentals, 5 golf villas, 2 restaurants, 120-unit lodge and spa, retail village, a new maintenance building, and associated utilities, access roads, and parking. The total disturbance area for the proposed project is approximately 12 acres; however, half of the disturbance footprint occurs within previously developed land (e.g., golf greens). The remaining development is proposed within remnant, impacted woodland and grassland habitats (see Appendix B – Preliminary Site Plans).

1.1 Purpose of the Biological Resources Assessment

The purpose of this report is to identify sensitive biological resources that occur or have potential to occur within the proposed project site and surrounding areas. A sensitive resource is defined here as one that is of management concern to local, county, state, and/or federal resource agencies. Recommended avoidance, minimization, and mitigation measures are included in Section 4.2, to reduce any potential impacts to sensitive biological resources to the extent feasible. As necessary, this BRA may be used to support the City's environmental review process and future project permitting.

1.2 Existing Conditions

The proposed project is located within the Estrella U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle, within the City of Paso Robles. The project site is located approximately 3.25 miles east of the Highway 101 and 46 East intersection, in the Upper Salinas River Valley. The surrounding landscape consists primarily of active vineyards, cattle grazing land, rural residential developments, and patches of remnant oak woodland associated with Dry Creek and Huer Huero Creek corridors. Hunter Ranch Golf Course is bordered by Highway 46 East and the Sensorio Field of Lights development to the north, vineyards to the east, cattle grazing land and vineyards to the south, and the Vina Robles Amphitheater to the west. The majority of the property is an existing golf course with patches of remnant oak woodland (see Appendix A – Figure 2: Survey Area). Nine unnamed ephemeral drainages, some of which are tributaries to Dry Creek, are present on the property. In addition, one pond, three swales, and eleven wetlands

were observed and mapped. Elevations on site range from approximately 815 to 930 feet (248 to 283 meters). A review of historical aerial imagery indicates that the golf course was developed and has remained active since 1994 (Google Earth Pro 1989 – 2021).

2.0 METHODOLOGY

Prior to conducting field surveys, Terra Verde staff completed a background review of relevant resources pertaining to sensitive resources known to occur in the project vicinity, which included the following:

- Aerial photographs (Google Earth Pro 1989 – 2021) and preliminary site plans (see Appendix B)
- USGS topographic map of the Estrella 7.5-minute quadrangle (USGS 2021)
- Online Soil Survey of San Luis Obispo County, California (Natural Resources Conservation Service [NRCS] 2021)
- Consortium of California Herbaria (CCH) online database of plant collections (CCH 2021)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants for the Estrella 7.5-minute quadrangle and the eight surrounding quadrangles (Cholame Hills, Creston, Paso Robles, Ranchito Canyon, San Miguel, Shandon, Shedd Canyon, Templeton) (CNPS 2021a).
- California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) list of state and federally listed special-status species documented within the Estrella 7.5-minute quadrangle and the eight surrounding quadrangles (CDFW 2021a)
- CNDDB map of special-status species that have been documented within a 5-mile radius of the project site (CDFW 2021a) (See Appendix A – Figure 3: 5-mile CNDDB and Critical Habitat)
- United States Fish and Wildlife Service (USFWS) Critical Habitat for Threatened and Endangered Species Report (USFWS 2021a) (See Appendix A – Figure 3)
- USFWS National Wetland Inventory (NWI), Wetlands Mapper (USFWS 2021b)

A list of regionally occurring special-status species was compiled based on records reported in the scientific database queries (see Appendix C – Regionally Occurring Special-status Species). This species list was used to inform the field survey effort, and to determine an appropriate survey period for special-status botanical species with potential to occur on site.

Following the review of literature and scientific databases, Terra Verde botanist Amy Golub-Tse and wildlife biologist Sara Snyder conducted a field survey of the property on December 2, 2021. The survey consisted of a habitat assessment and vegetation classification, botanical and wildlife species inventory, jurisdictional analysis, and an analysis of the potential for special-status botanical and wildlife species to occur on site. The total approximate 200-acre survey area included the footprint of the proposed project site, remaining property area, and a 100-foot

buffer on all sides where access was feasible, as well as a visual scan of the surrounding habitat features (see Appendix A – Figure 2).

The survey was conducted on foot to ensure complete visual coverage of the survey area. During the survey, all botanical and wildlife species observed, including those detected by indirect sign (i.e., tracks, scat, skeletal remains, dens, burrows, or vocalizations) were documented (see Appendix D - Botanical and Wildlife Species Observed). Botanical species identifications and taxonomic nomenclature followed *The Jepson Manual: Vascular Plants of California*, 2nd edition (Baldwin et al. 2012), as well as taxonomic updates provided in the Jepson eFlora Project (Jepson Flora Project 2021). Vegetation communities were characterized and classified using the second edition of *A Manual of California Vegetation* (MCV) classification system (Sawyer et al. 2009), as well as updates included in MCV Online (CNPS 2021b). MCV vegetation community classifications were also compared to community descriptions for CDFW-designated sensitive natural communities. The jurisdictional analyses included mapping the linear extent of water and wetland features that may be under the jurisdiction of regulatory agencies including CDFW, the Central Coast Regional Water Quality Control Board (RWQCB), and the U.S. Army Corps of Engineers (Corps) where present. However, a formal delineation of waters and wetlands was not completed.

The habitat requirements for each regionally occurring special-status species identified in the scientific database queries were analyzed and compared to the type and quality of habitats observed on site during the field survey. The potential for many species to occur within the project site was eliminated due to lack of suitable habitat, elevation, appropriate soils/substrate, and/or known distribution of the species. Special-status species for which suitable habitat was identified are discussed in-depth in the following section, and those determined to have no potential to occur based upon a lack of suitable habitat are not discussed (see Appendix C for a complete list of regionally occurring species that were evaluated).

2.1 Sufficiency of Biological Data

The field survey and background research completed by Terra Verde are of sufficient detail and biological expertise to identify potentially occurring special-status wildlife species and identify habitats that have the potential to support sensitive resources and/or special-status species. However, surveys did not take place during the typical blooming period (e.g., April – June) for most potentially occurring special-status botanical species. As such, an appropriately-timed botanical survey is recommended. Visibility and conditions were suitable for the detection of common and special-status botanical and wildlife species during the field survey, if present.

Migratory and transient wildlife species, such as many avian species and large mammals, may only be seasonally present within the project area. Further, some species are nocturnal, and/or highly transient and, therefore, may have not been detected during the survey effort. As such, recommendations have been made for the avoidance of special-status species deemed to have potential to occur, based on an assessment of habitat present at the site.

3.0 RESULTS

The following section provides a summary and analysis of the results of the background research and field survey. The discussion includes a description of soils, terrestrial and aquatic habitat types, direct and indirect observations of wildlife and botanical species, and a discussion of the potential for special-status species to occur. Any anticipated impacts to existing wildlife corridors and habitat connectivity are also considered.

3.1 Habitats and Resources Observed

The survey area is dominated by heavily modified/landscaped and maintained golf course and developed areas (see Appendix E – Representative Site Photographs). Five soil units, nine ephemeral drainages, three swales, eleven wetlands, a pond, and six natural vegetation communities were documented within the survey area. Although suitable habitat for various common and special-status plants and wildlife exists within the habitat types observed, the proposed project footprint and surrounding areas have been subjected to regular anthropogenic disturbances (e.g., rural residential development, agriculture, etc.). Historical and current land management practices have greatly reduced the potential for sensitive biological resources within the property.

3.1.1 Soils

The NRCS online soil report revealed five soil units within the survey area (see Appendix A – Figure 4: Soils). The primary characteristics of these soil units are described below.

Soil Unit 102: Arbuckle-Positas complex, 9 to 15 percent slopes

The parent material of this soil type is alluvium from mixed rock sources and consists of Arbuckle and Positas soils at 40 and 30 percent. The drainage class of this unit is well drained, and it is composed mostly of fine sandy loam and clay loam over gravelly, sandy clay loam. This soil type tends to occur on toeslopes and terraces below 1,500 feet elevation. This soil type is not considered prime farmland.

Soil Unit 104: Arbuckle-Positas complex, 30 to 50 percent slopes

The parent material of this soil type is alluvium from mixed rock sources and consists of Arbuckle and Positas soils at 40 and 30 percent, respectively. The drainage class of this unit is well drained, and it is composed mostly of fine sandy loam and clay loam over gravelly, sandy clay loam. This soil type tends to occur on toeslopes and terraces below 1,500 feet elevation. This soil type is not considered prime farmland.

Soil Unit 106: Arbuckle-San Ysidro complex, 2 to 9 percent slopes

This soil type consists of Arbuckle soils and San Ysidro soils at 40 and 20 percent, respectively. The drainage class of this unit is moderately well drained, and it is composed mostly of sandy loam and sandy clay loam. The parent material of this soil type is alluvium derived from mixed

rock sources. This soil type tends to occur on terraces, toeslopes, and tread at elevations between 600 to 1,500 feet. This soil unit is classified as farmland of statewide importance.

Soil Unit 189: Rincon clay loam, 9 to 15 percent slopes, MLRA 14
The parent material of this soil type is clayey alluvium from sedimentary rock. The drainage class of this unit is well drained, and it is composed mostly of clay loam. This soil type tends to occur on alluvial fans and terraces below 2,740 feet. This soil type is not considered prime farmland.

Soil Unit 200: Sesame sandy loam, 9 to 30 percent slopes
This soil type consists primarily of Sesame soil at 75 percent. The drainage class of this soil type is well drained, and it is composed primarily of sandy loam and sandy clay loam over weathered bedrock. The parent material of this soil type is residuum weathered from granitic rock. This soil type tends to occur on hills at elevations between 1,000 and 2,000 feet. This soil type is not considered prime farmland.

3.1.2 Hydrologic Features

A total of nine ephemeral drainages, 11 wetlands, three swales, and a pond were identified within the survey area. Some of the drainages flow to or are tributaries of Dry Creek (see Appendix A – Figure 5: Hydrologic Resources). Each of the hydrologic features and their associated jurisdiction are described in further detail below; however, it should be noted that the assessment was preliminary and a formal jurisdictional determination and wetland delineation were not performed as a part of the assessment (see Table 1 – Summary of Jurisdictional Aquatic Features).

Table 1. Summary of Jurisdictional Aquatic Features

Feature ID	Feature Type	Feature Designation*	Agency Jurisdiction*
Drainage 1	Ephemeral	Waters of the state	CDFW, RWQCB
Drainage 2	Ephemeral	Waters of the state	CDFW, RWQCB
Drainage 3	USGS blue line; ephemeral	Waters of the state, Waters of the U.S.	CDFW, RWQCB, Corps
Drainage 4	Ephemeral	Waters of the state	CDFW, RWQCB
Drainage 5	Ephemeral	Waters of the state, Waters of the U.S. (in part)	CDFW, RWQCB, Corps (in part)
Drainage 6	Ephemeral	Waters of the state Waters of the U.S. (in part)	CDFW, RWQCB, Corps
Drainage 7	Ephemeral	Waters of the state, Waters of the U.S.	CDFW, RWQCB, Corps
Drainage 8	Ephemeral	-	-

Feature ID	Feature Type	Feature Designation*	Agency Jurisdiction*
Drainage 9	Ephemeral	Waters of the state, Waters of the U.S.	CDFW, RWQCB, Corps
Swale 1	Ephemeral	-	-
Swale 2	Ephemeral	-	-
Swale 3	Ephemeral	-	-
Wetland 1	In-channel feature associated with Drainage 1	Waters of the state	CDFW, RWQCB
Wetland 2	Isolated	-	-
Wetland 3	In-channel feature associated with Drainage 2	Waters of the state	CDFW, RWQCB
Wetland 4	Isolated feature	-	-
Wetland 5	Isolated feature	-	-
Wetland 6	Isolated feature	-	-
Wetland 7	Isolated feature	-	-
Wetland 8	In-channel feature	Waters of the state, Waters of the U.S.	CDFW, RWQCB, Corps
Wetland 9	In-channel feature	Waters of the state, Waters of the U.S.	CDFW, RWQCB, Corps
Wetland 10	In-channel feature	Waters of the state, Waters of the U.S.	CDFW, RWQCB, Corps
Wetland 11	Isolated feature	-	-
Pond	In-channel impoundment	Waters of the state, Waters of the U.S.	CDFW, RWQCB, Corps

*A formal delineation of waters and wetlands was not completed; jurisdictional determinations are based on the field assessments completed by Terra Verde and are subject to concurrence from the relevant agencies.

Drainage 1 is an ephemeral drainage that flows west and then south along the northern edge of the site, into a detention basin, and outlets into a storm drain (see Appendix E – Photo 6 and Photo 7). This feature has a clearly defined bed and bank, including evidence of Ordinary High Water Mark (OHWM) along portions of its length but unknown connectivity to traditionally navigable waters. As such, it is assumed this drainage would be considered waters of the state under jurisdiction of the CDFW and RWQCB. Further investigation into its hydrologic connectivity to traditionally navigable waters would be needed to verify if it falls under federal jurisdiction.

Drainage 2 is an ephemeral drainage that flows southwest along the northern edge of the site and outlets into Drainage 1 (see Appendix E – Photo 8). This feature has a clearly defined bed and bank, including evidence of OHWM along portions of its length but unknown connectivity to traditionally navigable waters. As such, it is assumed this drainage would be considered waters

of the state under jurisdiction of the CDFW and RWQCB. Further investigation into its hydrologic connectivity to traditionally navigable waters would be needed to verify if it falls under federal jurisdiction

Drainage 3 is an ephemeral drainage that flows west across the southern portion of the site and eventually outlets into Dry Creek northwest of the site, which leads to the Salinas River and then the traditionally navigable waters of the Pacific Ocean (see Appendix E – Photo 9 and Photo 10). The pond near the western edge of the site was created as an impoundment within the channel of Drainage 3. Water pools for extended periods of time in three locations within the channel upstream of the pond, creating three in-channel wetlands (Wetlands 8-10). Drainage 3 has a clearly defined bed and bank, including evidence of OHWM along most of its length, and has a significant nexus to traditionally navigable waters. As such, it is assumed this drainage would be considered waters of the state under jurisdiction of the CDFW and RWQCB, and waters of the U.S. under the jurisdiction of the Corps.

Drainage 4 is an ephemeral drainage that flows northwest from the southern edge of the site and outlets into Drainage 3 (see Appendix E – Photo 11). This feature has a clearly defined bed and bank along most of its length but lacks evidence of OHWM. As such, it is assumed this drainage would be considered waters of the state under jurisdiction of the CDFW and RWQCB.

Drainage 5 is an ephemeral drainage that flows northwest from the southern edge of the site and outlets through a culvert into Drainage 3 (see Appendix E – Photo 12). It has intermittent definition of bed and bank, and sections of the upper reach show evidence of an OHWM. Based on the above, it is assumed that the drainage would be considered waters of the state under jurisdiction of the CDFW and RWQCB, and portions considered waters of the U.S. under the jurisdiction of the Corps.

Drainage 6 is an ephemeral drainage that flows northwest from the southern edge of the site and outlets through a culvert into the pond, which is hydrologically connected to Drainage 3 and the traditionally navigable waters of the Pacific Ocean (see Appendix E – Photo 13). The upper section of the drainage is incised with a clearly defined bed and bank and evidence of OHWM. The lower section becomes less incised, but clearly shows evidence of debris wracking from water flow. Based on the above, it is assumed this drainage would be considered waters of the state under jurisdiction of the CDFW and RWQCB, and portions considered waters of the U.S. under the jurisdiction of the Corps.

Drainage 7 is an ephemeral drainage that flows north from the southern edge of the site and outlets through a culvert into the pond, which is hydrologically connected to Drainage 3 and the traditionally navigable waters of the Pacific Ocean (see Appendix E – Photo 14). This feature has a clearly defined bed and bank, including evidence of intermittent OHWM. As such, it is assumed this drainage would be considered waters of the state under jurisdiction of the CDFW and RWQCB, and portions considered waters of the U.S. under the jurisdiction of the Corps.

Drainage 8 is an ephemeral drainage that flows north from the southern edge of the site, but eventually loses definition just before reaching Drainage 3 (see Appendix E – Photo 15). Anthropogenic activities in this area such as old access roads have modified the hydrology and connectivity to Drainage 3. This feature may have historically exhibited a defined bed and bank; however, in its current condition it lacks a well-defined bed and bank and/or clear evidence of connectivity and flow. Based on the above, this feature is likely not jurisdictional.

Drainage 9 is an ephemeral drainage that flows southwest along the northwest corner of the site and outlets into Drainage 3 just west of the site boundary (see Appendix E – Photo 16). This feature has a clearly defined bed and bank, including evidence of OHWM throughout. As such, it is assumed this drainage would be considered waters of the state under jurisdiction of the CDFW and RWQCB and waters of the U.S. under the jurisdiction of the Corps.

Swale 1 is an isolated ephemeral feature within the eastern portion of the site that is downstream of Wetland 7, flows southwest, and outlets onto a fairway (see Appendix E – Photo 17). This feature lacks a defined bed and bank and does not exhibit an OHWM. As such, this feature is likely not jurisdictional.

Swale 2 is an isolated ephemeral feature along the eastern edge of the site that flows southwest and ends at a constructed berm across the channel (see Appendix E – Photo 18). This feature is erosional and appears to enter the property as runoff from the adjacent property. The feature lacks a well defined bed and bank and does not exhibit an OHWM. As such, this feature is likely not jurisdictional.

Swale 3 is an ephemeral feature in the western portion of the site that flows southwest into Drainage 6 (see Appendix E – Photo 19). This feature has a defined bed and bank but lacks OHWM. As such, it is assumed this swale would be considered waters of the state under jurisdiction of the CDFW and RWQCB.

Wetland 1 is an in-channel feature associated with Drainage 1 that occurs in a portion of the upper reach that is wide and flat (see Appendix E – Photo 20). This wetland was identified and mapped using field observations of topography, vegetation, and flow patterns. However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 2 is an isolated depressional feature adjacent to the storm drain inlet at the downstream end of Drainage 1 (see Appendix E – Photo 21). The wetland feature does not appear to have direct connectivity to Drainage 1. This wetland was identified and mapped using field observations of topography, vegetation, and flow patterns. However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 3 is an in-channel feature associated with Drainage 2 that occurs in a portion of the channel that is wide and flat just upstream of a culvert inlet that leaves the property at the property boundary adjacent to Highway 46 (see Appendix E – Photo 22). This wetland was identified and mapped using field observations of topography, vegetation, and flow patterns.

However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 4 is an isolated feature within a topographic low point (see Appendix E – Photo 23). This wetland was identified and mapped using field observations of topography, vegetation, and hydrologic indicators. However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 5 is an isolated feature that appears to collect water that flows off the slope in the northern corner of the site (see Appendix E – Photo 24). There is some erosional features upslope of the wetland, and the area is vegetated with cattails and a willow suggesting an adequate supply of water is present to support wetland plants. Although the feature appeared to be isolated, it should be noted that a jurisdictional drainage is present on the adjacent property. Due to a lack of access, it was not feasible to assess hydrologic connectivity of this isolated feature to the drainage nor assess the drainages jurisdiction. Further investigation may be warranted to determine jurisdiction of this feature. This wetland was identified and mapped using field observations of topography, vegetation, and flow patterns. However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 6 is an isolated feature within a topographic low point (see Appendix E – Photo 25). This wetland was identified and mapped using field observations of topography, vegetation, and hydrologic indicators. However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 7 is located within a topographic low point in association with upper limits of Swale 3. This feature appears to collect runoff from the adjacent property (see Appendix E – Photo 26). This wetland was identified and mapped using field observations of topography, vegetation, and hydrologic indicators. However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 8 is an in-channel feature associated with Drainage 3 (see Appendix E – Photo 27). This is a section of Drainage 3 that ponds and supports wetland vegetation. This wetland was identified and mapped using field observations of topography, vegetation, and flow patterns. However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 9 is an in-channel feature associated with Drainage 3 (see Appendix E – Photo 9 and Photo 28). This is a section of Drainage 3 that ponds and supports a well-developed patch of cattails. This wetland was identified and mapped using field observations of topography, vegetation, and flow patterns. However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 10 is an in-channel feature associated with Drainage 3, in a portion of the channel that is wide and flat just upstream of the pond (see Appendix E – Photo 29). This wetland was identified and mapped using field observations of topography, vegetation, and flow patterns.

However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

Wetland 11 is an isolated feature within a topographic low point that may have been the historic channel for Drainage 3 downstream of the dam that created the pond. This feature supports a patch of mature willows and was identified and mapped using field observations of topography, vegetation, and flow patterns. However, the current mapped limits of this feature are approximate, as a formal wetland delineation has not been completed.

The pond is located within the western section of the site and is an in-channel impoundment associated with Drainage 3 (see Appendix E – Photo 5). The edge of the pond is vegetated in tule (*Schoenoplectus acutus* var. *occidentalis*) and a patch of cottonwoods (*Platanus racemosa*) along the eastern shore. The extent of the pond was mapped using aerial imagery and the current mapped limits of this feature are approximate.

3.1.3 Vegetation Communities and Land Cover Types

Vegetation communities and land cover types were assessed, classified, and mapped based on vegetation composition, structure, and density, with consideration of known land management practices (see Appendix A – Figure 6: Vegetation Communities). The survey area totaled 202 acres. Natural vegetation communities identified in the survey area included wild oats and annual brome grasslands, cattail marshes, Fremont cottonwood forest, hardstem and California bulrush marshes, and blue oak woodland. Other land cover types identified in the survey area included disturbed, developed, and golf course.

A total of 69 vascular plant species were identified in the survey area, of which 26 (38 percent) were non-native. The natural vegetation communities are described below, and illustrated in Figure 6 of Appendix A.

Wild Oats and Annual Brome Grasslands (18.5 acres)

Annual grassland habitat is present in patches along the edges of the site and between the golf course footprint and patches of blue oak woodland (see Appendix A – Figure 6 and Appendix E – Photo 2). This community is dominated by wild oat (*Avena* sp.) and soft chess (*Bromus hordeaceus*) with rigput brome (*Bromus diandrus*), and red brome (*Bromus rubens*).

This species composition was used to determine the community classification, which most closely corresponds with the *Avena* spp. – *Bromus* spp. Semi Natural Herbaceous Alliance (wild oats and annual brome grasslands) in the MCV classification system. This community is widespread and may occur in any topographic setting in foothills, waste places, rangelands, and openings in woodlands at elevations below 7,200 feet (2,200 meters). This community provides habitat for nesting birds, burrowing mammals and their predators, herbivores, and other wildlife.

Blue Oak Woodland (70.7 acres)
This community occurs in large and small patches interspersed within the golf course and along the edges of the site (see Appendix E – Photo 2). It is dominated by blue oak, with some patches having a dense understory of annual grasses and forbs and some patches with mostly bare understory due to golf course activities.

This species composition was used to determine the community classification, which most closely corresponds with the *Quercus douglasii* Forest and Woodland Alliance (blue oak woodland and forest) in the MCV classification system. This community typically occurs in valley bottoms, foothills, and rocky outcrops in shallow or low fertility soils that are moderately to excessively drained at elevations between 30 – 1,900 meters. This community provides habitat for nesting birds, small mammals, and other wildlife.

Arroyo Willow Thickets (0.4 acres)
This community occurs in small patches along or adjacent to Drainage 3. This community is comprised of arroyo willow (*Salix lasiolepis*) within scattered annual grasses and forbs in the understory in areas where water is not present.

This species composition was used to determine the community classification, which most closely corresponds with the *Salix lasiolepis* Shrubland Alliance (arroyo willow thickets) in the MCV classification system. This community occurs in streambanks and benches, slope seeps, and stringers along drainages at elevations below 7,120 feet (2,170 meters). This community provides habitat for nesting birds, small mammals, and other wildlife.

Fremont Cottonwood Forest (1.0 acres)
This community occurs in patches along Drainage 4 and along the eastern shore of the pond. The individuals along Drainage 4 appear to be planted. Fremont cottonwood trees (*Populus fremontii* subsp. *fremontii*) form the dominant overstory cover. The understory and upland edge are mostly open, dominated with scattered annual grasses and forbs.

This species composition was used in determining the community classification, which most closely corresponds with the *Populus fremontii – Fraxinus velutina – Salix gooddingii* Forest & Woodland Alliance (Fremont cottonwood forest and woodland) in the MCV classification system. This community typically occurs on floodplains, along low-gradient rivers, perennial or seasonally intermittent streams, and valleys with dependable surface waters below 2,400 meters, and provides high suitability habitat for various common and special-status species.

Cattail Marshes (0.2 acres)
This community occurs in association with a portion of Drainage 3 and Wetland 5 (see Appendix E – Photo 9, 24, and 28). Within Drainage 3 this community occurs within a section of the channel that contained ponded water at the time of the survey. Within Wetland 5, cattails dominate the middle of the feature with the edges vegetated in field mustard (*Hirschfeldia incana*) and scattered coyote brush (*Baccharis pilularis*).

This species composition was used in determining the community classification, which closely corresponds with the *Typha (angustifolia, domingensis, latifolia)* Herbaceous Alliance (cattail marshes) in the MCV classification system. This community occurs in semi-permanently flooded freshwater or brackish marshes at elevations below 1,148 feet (350 meters). In addition, this community composition corresponds to the description for Coastal and Valley Freshwater Marsh, a CDFW sensitive natural community.

Hardstem and California Bulrush Marshes (0.5)
This community occurs in large patches along the shores of the Pond and is made up primarily of common tule (*Schoenoplectus acutus* var. *occidentalis*) (see Appendix E – Photo 5).

This species composition was used in determining the community classification, which most closely corresponds with the *Schoenoplectus* (*acutus, californicus*) Herbaceous Alliance (hardstem and California bulrush marshes) in the MCV classification system. This community occurs in fresh to brackish water along stream edges, bars, shores, lakes, ditches, and in river mouth estuaries at elevations below 8,202 feet (2,500 meters), and may provide valuable habitat for nesting birds, reptiles, small mammals, and other wildlife. In addition, this community composition corresponds with the description for Coastal and Valley Freshwater Marsh, a CDFW sensitive natural community.

Disturbed (3.0 acres)
This land cover type occurs in three patches along the southern edge of the site (see Appendix E – Photo 3 and 4). The western most patch consists of bare mineral soil. The middle patch is an area where the grass clippings and other green waste from the golf course maintenance is stockpiled and had been recently macerated and tilled under. The eastern most patch is an area that had been recently graded and consists of bare mineral soil.

This land cover type does not classify as a vegetation community in the MCV classification system and provides only marginal habitat for nesting birds, small mammals, and other wildlife.

Developed (4.6 acre)
This land cover type corresponds to the existing buildings, parking lots, maintenance yard, and paved primary access roads off of State Route 46.

This land cover type does not correspond to a natural vegetation community in the MCV and provides low quality habitat for wildlife.

Golf Course (103.1 acres)
This land cover type makes up the majority of the site and corresponds to the areas of maintained greens and fairways and associated infrastructure, including paved and dirt cart paths (see Appendix E – Photo 1). Individual blue oaks and ornamental trees are scattered throughout.

This land cover type does not correspond to a natural vegetation community in the MCV and provides low quality habitat for wildlife but may support nesting birds.

3.1.3 Wildlife

The habitat within and adjacent to the survey area is suitable for a variety of common and special-status wildlife species. Blue oak woodland provides nesting opportunities for various raptor and passerine bird species; refugia and food resources for mammals, amphibians, and reptiles; and browsing opportunities for herbivores. Grassland habitat on site is suitable for ground-nesting birds; transient, foraging wildlife; and burrowing mammals. The freshwater pond, ephemeral drainages, and wetlands in the survey area provides suitable aquatic habitat and refugia for a variety of birds, small mammals, invertebrates, and some amphibian, reptile, and fish species.

No special-status wildlife species were observed during the field survey. However, numerous avian species, as well as other terrestrial wildlife, were observed throughout the survey area. USFWS-designated critical habitat for vernal pool fairy shrimp (USFWS 2021a) overlaps the proposed project site. A comprehensive list of all wildlife species observed during the surveys is included in Appendix D – Botanical and Wildlife Species Observed.

3.2 Sensitive Resources

Based on the results of the background research, it was determined that 44 regionally occurring special-status plant species and 29 special-status wildlife species may occur within the proposed project site. The habitat requirements for each of these species were compared to the type and quality of habitat documented during the field survey. Following this assessment, it was determined that suitable habitat is present on site for 18 of the regionally occurring special-status plant species and 13 of the regionally occurring special-status wildlife species. These sensitive resources are discussed below.

3.2.1 Special-status Plant Species

Based on a review of the relevant literature and an assessment of site conditions, Terra Verde determined that there is suitable habitat on site for 18 special-status botanical species. In addition to species listed on the federal and California Endangered Species Acts, special-status plant species include those that are assigned a California Rare Plant Rank (CRPR) by the California Native Plant Society. Species are assigned a listing status based on the degree of rarity (Lists 1A through 4) and threat level (0.1, 0.2, and 0.3) (CNPS 2021a). Additionally, individual oak trees (*Quercus* spp.) and oak woodlands are considered a sensitive resource by the State of California and the City.

A description of the life history, range, and conservation status for each special-status species with potential to occur is included below. The December 2021 field survey was completed outside of the appropriate blooming period for the 18 special-status species with potential to occur on site.

Indian Valley Spineflower (*Aristocapsa insignis*), CRPR 1B.2
Indian Valley spineflower is an annual herb known to occur in the inner South Coast Ranges, from southern Monterey County through eastern San Luis Obispo County. This species typically occurs in foothill woodland on sandy soil at elevations ranging from 980 to 1,900 feet (300 to 600 meters). The typical blooming period is from May to June (Jepson Flora Project 2021). Threats to this species include land development (CNPS 2021a). According to CNDDB records (CDFW 2021a), the nearest documented occurrence of this species is from 1885 and located 11 miles north of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Salinas Milkvetch (*Astragalus macrodon*), CRPR 4.3
Salinas milkvetch is a perennial herb that is endemic to the Inner South Coast Ranges of California. This species typically occurs in eroded shale or sandstone soils or serpentine alluvium in association with various vegetation communities including grassland, chaparral, and woodland. It has been documented at elevations ranging from 656 to 5,085 feet (200 to 1,550 meters) and may tolerate some disturbance. The typical blooming period is from April to June (Jepson Flora 2021). Threats to this species are not well documented (CNPS 2021 2021a). According to CCH records (2021), the most recent documented occurrence of this species is from 2003 and located 6.5 miles west of the project location. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Dwarf Calycadenia (*Calycadenia villosa*), CRPR 1B.1
Dwarf calycadenia is an annual herb that is known to occur along the length of the outer South Coast Ranges, from northern Monterey County to central Santa Barbara County. This species typically occurs in association with grassland and openings in foothill woodland on dry, rocky hills and ridges at elevations ranging from 820 to 2,788 feet (250 to 850 meters). The typical blooming period is from May to September (Jepson Flora Project 2021). Threats to this species include urbanization, vehicle traffic, grazing, alteration of fire regimes, and competition with non-native plants (CNPS 2021a). According to CNDDB records (CDFW 2021a), the nearest occurrence of this species is 8.7 miles south of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Hardham's Evening-primrose (*Camissoniopsis hardhamiae*), CRPR 1B.2
Hardham's evening-primrose is an annual herb that is known to occur along the inner and outer South Coast Ranges. This species typically occurs in association with chaparral, cismontane woodland, and disturbed oak woodland in sandy soils ranging from 790 to 1,900

feet (240 to 600 meters). The typical blooming period is from March to May (Jepson Flora Project 2021). Threats to this species include road construction in San Luis Obispo County, grazing, mining, military activities, non-native plants, road maintenance, and vehicles (CNPS 2021a). According to CNDDB records (CDFW 2021a), the nearest documented occurrence of this species is 13.9 miles north of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

San Luis Obispo Owl's-clover (*Castilleja densiflora* subsp. *obispoensis*), CRPR 1B.2
San Luis Obispo owl's-clover is an annual herb that is endemic to San Luis Obispo County. It is known to occur mostly in coastal areas along the outer South Coast Ranges from just south of Ragged Point to Avila Beach, with several populations in the Irish Hills. This species typically grows in coastal grasslands at elevations up to 1,300 feet (400 meters) and may be somewhat tolerant of disturbance. The typical blooming period is from March to June (Jepson Flora Project 2021). Threats to San Luis Obispo owl's-clover include development and grazing (CNPS 2021a). According to CCH records (2021), the nearest documented occurrence is 1.3 miles northwest of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Lemmon's Jewelflower (*Caulanthus lemmonii*), CRPR 1B.2
Lemmon's jewelflower is an annual herb that is endemic to California. It is known to occur throughout the inner and outer South Coast Ranges and along the western foothills of the San Joaquin Valley, with unconfirmed populations extending east along the Transverse Ranges and into the northwest corner of the Mojave Desert. This species typically grows in grassland, chaparral, and scrub communities at elevations ranging from 262 to 3,600 feet (80 to 1,100 meters). The typical blooming period is from March to May (Jepson Flora Project 2021). Threats to Lemmon's jewelflower include development, grazing, and vehicle traffic (CNPS 2021a). According to CNDDB records (CDFW 2021a), the nearest occurrence of this species is from 1960 and located 1.5 miles east of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Douglas' Spineflower (*Chorizanthe douglasii*), CRPR 4.3
Douglas' spineflower is an annual herb that is endemic to the inner and outer South Coast Ranges of California. This species typically occurs in sandy or gravelly soils at elevations between 984 and 5,250 feet (300 and 1,600 meters). The typical blooming period for this species is April through July (Jepson Flora Project 2021). According to CCH records (2021), the most recent documented occurrence of this species is from 1989 and located 7.6 miles west

of the project location. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Straight-awned Spineflower (*Chorizanthe rectispina*), CRPR 1B.3
Straight-awned spineflower is an annual herb that is known to occur in a few, disjunct populations throughout the outer South Coast Ranges of Monterey and San Luis Obispo counties. This species typically grows in open sandy or gravelly soil, and may be associated with openings of cismontane woodland, chaparral, and coastal scrub at elevations between 656 and 1,968 feet (200 and 600 meters). The typical blooming period is from May to July (Jepson Flora Project 2021). Documented threats to this species include development and competition from non-native plants (CNPS 2021a). According to CNDDB records (CDFW 2021a), the nearest occurrence of this species is 12 miles north of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Yellow-flowered Eriastrum (*Eriastrum luteum*), CRPR 1B.2
Yellow-flowered eriastrum is an annual herb that is endemic to California. It is known to occur along the inner South Coast Ranges in San Luis Obispo and Monterey Counties. This species typically occurs on drying slopes in sandy or gravelly soils in association with chaparral and woodland habitats. This species has been documented at elevations below 3,281 feet (1,000 meters). The typical blooming period for this species is from May to June (Jepson Flora 2021). Documented threats to this species include vehicles and grazing and potential threats include development (CNPS 2021a). According to CNDDB records (CDFW 2021a), the nearest documented occurrence of this species is approximately 9.7 miles west of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Elegant Wild Buckwheat (*Eriogonum elegans*), CRPR 4.3
Elegant wild buckwheat is an annual herb that is endemic to California. It is known to occur in the San Francisco Bay Area, inner and outer South Coast Ranges, and the Western Transverse Ranges. This species occurs in sandy and gravelly soils in cismontane woodland and valley and foothill grassland at elevations ranging from 650 to 4,000 feet (200 to 1200 meters). The typical blooming period for this species is from May to November (Jepson Flora 2021). According to CNDDB records (CDFW 2021a), the nearest documented occurrence of this species is approximately 7.7 miles north of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Trumpet-throated Gilia (*Gilia tenuiflora* subsp. *amplifaucalis*), CRPR 4.3
Trumpet-throated gilia is an annual herb that is known to occur in the inner South Coast Range. The species occurs in sandy soil of dry creeks and floodplains throughout cismontane woodland and valley and foothill grassland at elevations from 1,280 to 2955 feet (390 to 900 meters). This species blooms between March and April (Jepson Flora 2021). According to CCH records (2021), the nearest documented occurrence of this species is approximately 3 miles west of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Santa Lucia Dwarf Rush (*Juncus luciensis*), CRPR 1B.2
Santa Lucia dwarf rush is an annual herb that is known from several populations along the central and southern coast, as well as areas in the northeast portion of the state from Lake Tahoe to the Modoc Plateau. This species typically occurs in a variety of seasonally and perennially wet habitats, including seeps, meadows, vernal pools, along streams, and in roadside ditches. It is known to occur at elevations ranging from 984 to 6,234 feet (300 to 1,900 meters). The typical blooming period for this species is from April to August (Jepson Flora 2021). Potential threats to this species include development and grazing (CNPS 2021a). According to CNDDB records (CDFW 2021a), the nearest documented occurrence of this species is approximately 2.6 miles north of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Ferris' Goldfields (*Lasthenia ferrisiae*), CRPR 4.2
Ferris' goldfields is an annual herb that is endemic to California. It is found primarily in the Sacramento Valley and San Joaquin Valley with some known occurrences in the inner South Coast Ranges. This species grows in vernal pools at elevations ranging from 65 to 2295 feet (20 to 700 meters). The typical blooming period for this species is from February to May. Threats to this species include development, agriculture, vehicles, and foot traffic (CNPS 2021a). According to CCH records (2021), the nearest occurrence of this species is 18 miles east of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Salinas Valley Goldfields (*Lasthenia leptalea*), CRPR 4.3
Salinas Valley goldfields is an annual herb that is known to occur in the outer South Coast Ranges of Monterey and San Luis Obispo Counties. This species occurs in the openings of woodland communities at elevations below 1,640 feet (500 meters). The typical blooming period is from February to May (Jepson Flora 2021). Threats to this species are not well

documented but may include development (CNPS 2021a). According to CCH records (2021) the nearest documented occurrence of this species is approximately 10.7 miles south of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Spring Lessingia (*Lessingia tenuis*), CRPR 4.3
Spring lessingia is an annual herb that is endemic to California with populations scattered throughout the inner and outer South Coast Ranges, the inner Western Transverse Ranges, and portions of the San Francisco Bay Area. This species typically occurs in openings in chaparral and woodland habitat at elevations ranging from 164 to 7,218 feet (50 to 2,200 meters). The typical blooming period for this species is from May to July (Jepson Flora 2021). Potential threats to this species include feral pigs, grazing, and alteration of fire regimes (CNPS 2021a). According to CCH records (2021), the nearest documented occurrence of this species is approximately 3.7 miles north of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Jones' Bush-mallow (*Malacothamnus jonesii*), CRPR 4.3
Jones' bush-mallow is a perennial shrub that is endemic to California. It is found in the outer South Coast Range of California. This species typically occurs in open chaparral in foothill woodland at elevations between 820 and 2,700 feet (250 and 830 meters). The typical blooming period for this species is May through July (Jepson Flora Project 2021). According to CCH records (2021), the nearest occurrence of this species is 1.1 mile west of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Spreading Navarretia (*Navarretia fossalis*), Federal Threatened, CRPR 1B.1
Spreading navarretia is an annual herb that is endemic to California and northern Baja California. The known range is concentrated along the south coast from Los Angeles to San Diego County, with one known occurrence in the Inner South Coast Ranges of San Luis Obispo County. This species grows in ditches and vernal pools at elevations ranging from 98 to 4,260 feet (30 to 1,300 meters). The typical blooming period for spreading navarretia is from April to June (Jepson Flora Project 2021). Threats to this species include development and urbanization, agriculture, grazing, and hydrologic alterations (CNPS 2021a). According to CNDDB records (CDFW 2021a), the nearest occurrence of this species is 8.9 miles southeast of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

Shining Navarretia (*Navarretia nigelliformis* subsp. *radians*), CRPR 1B.2

Shining navarretia is an annual herb that is limited to populations in the Inner South Coast Ranges. This species grows in vernal pools and clay depressions at elevations ranging from 490 to 3,280 feet (150 to 1,000 meters). The typical blooming period for shining navarretia is from May to July (Jepson Flora Project 2021). Threats to this species include development, grazing, and competition from non-native species. According to CNDDB records (CDFW 2021a), the nearest occurrence of this species is 0.5 miles south of the survey area. This species was not detected during the survey effort, which occurred outside of its typical blooming period, and suitable habitat is present within the non-developed portions of the proposed project area. As such, this species may occur within the survey area.

3.2.2 Special-status Wildlife Species

Based on a review of the relevant literature and an assessment of site conditions, it was determined that suitable habitat for 14 special-status wildlife species occurs within the survey area, in addition to nesting habitat for migratory bird species. In addition to species listed on the federal and California Endangered Species Acts, special-status wildlife species include those that are on the CDFW Special Animals List (CDFW 2021b). The following paragraphs provide a description for all the special-status wildlife species for which suitable habitat was identified on site, and recommendations for the avoidance, minimization, and mitigation of impacts to these species are included in Section 4.2.

Sensitive Amphibian Species

California Red-legged Frog (CRLF; *Rana draytonii*), Federal Threatened (FT) / State Species of Special Concern (SSC)

CRLF is endemic to California and northern Baja California, historically ranging from Mendocino County south along the coast to Baja and east from the Northern Sacramento Valley to the foothills of the Sierra Nevada at elevations up to 5,000 feet. This species requires permanent or semi-permanent bodies of water, such as lakes, streams, and ponds with emergent vegetation. They use lowland and grassland areas to hunt and forage for food. Adult frogs consume invertebrates, mice, fish, frogs, and larvae of other amphibians. Tadpoles are thought to consume algae floating on the water's surface or growing on rocks and plants. Breeding typically occurs over a one-to-two-week period between late November and early April (depending on local environmental conditions) and females lay egg masses in the water which the male externally fertilizes. The egg masses are often attached to aquatic vegetation and tadpoles hatch approximately four weeks later. Most tadpoles metamorphose in four to seven months, but some will do so the next summer. Current threats to extant populations of red-legged frogs include nonnative predators, such as bullfrogs and centrarchid fishes, urban and agricultural development, and pesticide pollution (Nafis 2021).

According to CNDDB records (CDFW 2021a), the nearest observation of CRLF is a record from 2016, 9.5 miles southwest of the project site. No CRLF were observed during the field survey.

However, the pond within the property, adjacent to the proposed development areas, provides suitable aquatic habitat for CRLF. This species is known to disperse up to two miles from aquatic habitat and thus may also be found in upland areas outside the banks of aquatic habitat areas (USFWS 2010). The quality of habitat at the site is degraded as a result of current and historical land uses, but low suitable aquatic habitat remains for this species.

Western Spadefoot Toad (*Spea hammondii*), SSC

Western spadefoot toad generally inhabits lowlands, sandy washes, and river floodplains but also may be found in woodlands, grasslands, and chaparral where soils are sandy and loose. This species occupies small mammal burrows or uses the hardened spades on its feet to burrow underground where it remains buried for most of the year, only emerging at night during the rainy season to breed in ephemeral pools, sand or gravel washes, and small streams that are often seasonal. However, occurrences of western spadefoot eggs and larvae have been recorded in a variety of permanent and temporary wetlands, both natural and altered, including rivers, creeks, artificial ponds, livestock ponds, sedimentation and flood control ponds, irrigation and roadside ditches, roadside puddles, tire ruts, and borrow pits (CDFW 2021a). Seasonal pools and other breeding locations must stay inundated for at least 30 days for larvae to survive. Threats to this species include loss, degradation, and fragmentation of breeding and upland habitats (Nafis 2021).

According to CNDDB records (CDFW 2021a), the nearest observation of spadefoot toad is a record from 2017, 2.2 miles west of the project site. No western spadefoot toads were observed during the field survey. However, the pond within the property, adjacent to the proposed development areas, and short duration ponding within drainages may provide suitable aquatic habitat for spadefoot toad. The quality of habitat at the site is degraded as a result of current and historical land uses, but low suitable aquatic habitat remains for this species.

Sensitive Mammal Species

American Badger (*Taxidea taxus*), SSC

The range of American badger covers most of North America. They range throughout California except the North Coast region (Del Norte, Humboldt, Mendocino, Sonoma, and Marin counties). They prefer open and arid habitats such as grasslands, meadows, savannahs, open-canopy desert scrub, and open chaparral. They are predators of fossorial rodents and are adept at excavating deep burrows to access their prey. As such, where badgers are present, the landscape is dotted with large soil tailings, which are normally half-moon shaped. American badger shelter in burrows they have excavated and, while they are known to traverse a relatively small home range (up to 2.5 acres), they move among burrows frequently. They can be active at all times of day but are primarily nocturnal. This species occurs at elevations up to 12,000 feet (3,650 meters). Mating typically occurs from May

through September but, because of delayed implantation, cubs are not born until early spring. Habitat conversion is a threat to this species (Zeiner et al. 1988 – 1990a).

According to CNDDB records (CDFW 2021a), the nearest observation of American badger is a record from 2003, 7.0 miles southwest of the project site. No sign of badgers, such as characteristic claw marks on the interior sides of den entrances, horizontally oriented elliptical den openings, and frequent prey excavations, was observed during the field survey. However, the grassland within and adjacent to the project site provides suitable habitat for American badger, including a small mammal prey base. There is potential to encounter this species on site.

San Joaquin Kit Fox (*Vulpes macrotis mutica*), Federal Endangered (FE) / State Threatened (ST)

San Joaquin kit fox is endemic to the San Joaquin Valley and adjacent arid valleys of central California. Highly suitable habitats for kit fox are characterized by sparsely vegetated saltbush scrublands and grasslands dominated by red brome (*Bromus madritensis*) on flat or gently rolling terrain (Brown et al. 2021). The three remaining core populations of SJKF are in 1) Carrizo Plain Natural Area in San Luis Obispo County; 2) natural lands of western Kern County; and 3) the Ciervo-Panoche Natural Area of western Fresno and eastern San Benito Counties (USFWS 1998). The kit fox is adapted to arid climates and primarily preys on small mammals and invertebrates. Kit foxes extensively use dens for protection from the elements, predators, and rearing pups. Mating occurs between December and March and pups are born after a 48- to 52-day gestation period. The pups are reared in the den and begin to emerge approximately one month after birth, and most disperse by August. Kit foxes are primarily nocturnal but may be observed during the day, basking outside the den entrance or taking short excursions. Kit foxes excavate their own dens, enlarge burrows of other species, such as giant kangaroo rats, or den in manmade features, such as culverts. They occupy numerous den sites throughout the year. Many factors have contributed to the decline of SJKF. By the 1950's, loss, degradation, and fragmentation of habitats in the San Joaquin Valley were the primary factors of decline. Many other sources of mortality pose a threat to maintaining viable populations of this species, including disease, parasites, predation, and many human-induced factors such as shooting, trapping, poisoning, electrocution, and vehicle strikes (Brown et al. 2021).

According to CNDDB (CDFW 2021a), the two nearest records of SJKF are 1.6 and 2.2 miles southwest of the project site (from 1991 and 1990, respectively). Historical and ongoing land management and agricultural development within and around the project site has substantially modified the landscape. However, areas supporting ruderal herbaceous vegetation and a small mammal prey base on site provide marginally suitable habitat for SJKF. There are no known extant populations of SJKF in the project vicinity, but the proposed project is situated in a travel corridor between the historical core population at Camp Roberts California Army National Guard Installation (Camp Roberts) and the core population in

eastern San Luis Obispo County/Western Kern County. The project site is also located within a County of San Luis Obispo-designated SJKF mitigation area.

Sensitive Reptile Species

Northern California Legless Lizard (*Anniella pulchra*), SSC
Northern California legless lizard is known to occur from the northern end of the San Joaquin Valley, south through the inner and outer South Coast Ranges at elevations up to 5,900 feet (1,800 meters) (Nafis 2021). This species requires sandy or loose loamy soils within coastal dune scrub, coastal sage scrub, chaparral, woodland, riparian, or forest habitats. It requires cover such as logs, leaf litter, or rocks and will cover itself with loose soil. Little is known about the specific behavior and ecology of this species, but it is thought to be diurnal and breed between the months of March and July, giving birth to live young in the early fall. Population declines have been attributed to agricultural development, sand mining, use of off-road recreational vehicles, and habitat loss through spread of invasive, non-native vegetation such as ice plant (*Carpobrotus* sp.) (Zeiner et al. 1988 – 1990b).

According to CNDDB records (CDFW 2021a), the nearest documented occurrence of this species is a historical record from 1954, approximately 1.4 miles west of the project site. Oak woodlands and riparian habitat on site may provide suitable habitat for this species.

San Joaquin Coachwhip (*Masticophis flagellum ruddocki*), SSC
San Joaquin coachwhip occurs in dry, treeless areas such as grasslands and saltbush scrub. This species seeks refuge under objects such as rocks, as well as under shrubs or in rodent burrows. Their range extends from the Sacramento Valley, south to Kern County and west to the Inner South Coast Ranges. Suitable habitat lies at elevations ranging from 65 to 3,000 feet (20 to 900 meters). Coachwhips are dormant during the winter and resume activity in late spring. This snake is especially tolerant of high temperatures and is active during the day. San Joaquin coachwhips are oviparous and lay a clutch of 4 to 20 eggs in early summer. It feeds on a variety of animals, including small mammals, bats, lizards, and birds. Because this species tends to bask on roadways and scavenge on roadkill, vehicle strikes are a common threat. Threats also include extensive habitat loss and fragmentation, especially conversion of large areas of suitable habitat to agricultural use in the San Joaquin Valley and urban development in areas of the inner Coast Ranges (Nafis 2021).

According to CNDDB (CDFW 2021a), the nearest observation of San Joaquin coachwhip was approximately 11.5 miles northwest of the project alignment. Within the survey area, open, ruderal fields with small mammal burrows provide suitable habitat and forage opportunity for this species. Further, this species may be found basking along paved roads.

Southwestern Pond Turtle (*Actinemys marmorata*), SSC
Western pond turtles historically ranged from Baja California north to British Columbia, generally west of the Sierra Nevada and Cascade Range. This genus has been divided into two proposed new species, Southwestern pond turtle and Northwestern pond turtle, with the

division occurring roughly near the Bay Area of California (Stebbins and McGinnis 2018). This species inhabits many types of permanent and ephemeral aquatic habitats, including sloughs, rivers, ponds, lakes, vernal pools, and marshes, as well as human-constructed water bodies such as irrigation ditches and impoundments that provide adequate basking sites (e.g., logs, rocks, mats of floating vegetation, or open mud banks), emergent vegetation, and underwater refugia (e.g., rocks or submerged vegetation) (Spinks et al. 2003). The turtles also spend significant time on land, frequently moving between aquatic and upland habitats to nest, aestivate, and overwinter. Nests are usually partially or completely concealed beneath soil, moss, detritus, and leaf and needle litter and located within 165 feet of the water's edge. Though, females have been observed moving overland more than 1,300 feet to find suitable nesting sites. Substantial population declines, largely due to habitat loss, streambed alteration, and fragmentation of aquatic and nesting habitats, have been observed throughout most of the species' range (Stebbins and McGinnis 2018, Bury and Germano 2008). The release of the more fecund pet red-eared sliders (*Trachemys scripta elegans*) into aquatic environments is another perpetual threat to the species.

According to CNDDB records (CDFW 2021a), the nearest observation of pond turtle is a record from 2006, 4.0 miles southwest of the project site. No southwestern pond turtles were observed during the field survey. However, the pond within the property, adjacent to the proposed development areas, may provide suitable aquatic habitat for southwestern pond turtle. The quality of habitat at the site is degraded as a result of current and historical land uses, but low suitable aquatic habitat remains for this species.

Sensitive Invertebrate Species

Vernal Pool Fairy Shrimp (VPFS; *Branchinecta lynchi*), Federal Threatened
VPFS typically occupy vernal pools, which are defined as shallow depressions in relatively flat grassland areas, lined with an impervious claypan, that hold rainwater for a period of weeks to months. This species remains dormant until triggered by adequate moisture and heat to complete a short-lived life cycle. Breeding is dependent on precipitation and therefore generally occurs between December and May. Research has shown that VPFS occur throughout the Central Valley from Shasta to Tulare County and along the Coast Ranges from Solano to Santa Barbara County. Habitat loss due to agricultural and urban development pose the greatest threats to the species.

According to CNDDB (CDFW 2021a), the nearest observations of VPFS is approximately 350 meters north of the project site. The project is located within USFWS-designated critical habitat for VPFS. Although no VPFS were observed during the December 2021 survey, wetlands observed on site have the potential to provide suitable habitat for VPFS. Specifically, Wetlands 3, 4, and 6 are likely to provide the most suitable habitat out of the 11 mapped wetlands (refer to Appendix A – Figure 5).

Migratory Nesting Birds and Sensitive Avian Species

Burrowing Owl (*Athene cunicularia*), SSC
Burrowing owls generally inhabit open grasslands, prairies, and fields with short-stature vegetation, but may also occupy agricultural and developed areas (Shuford et al. 2008). This species typically uses the burrows of ground squirrels and other small mammals for shelter, protection from predators, and nesting. Burrowing owls are typically nocturnal, but they can be seen roosting outside of burrow entrances during the day. Courtship and mating may begin as early as late December in California and continue into early spring. Incubation lasts 28–30 days and young disperse to nearby burrows by early fall. The primary threats to burrowing owls are the elimination of burrowing mammals through control programs and habitat loss caused by development (Klute et al. 2003). Breeding and wintering populations of burrowing owls are known to occur in the project region, but they more commonly inhabit coastal areas during the non-breeding season. The ruderal, herbaceous portion of the site supports underground cover and a prey base for this species.

According to CNDDB (2021a) records, burrowing owls have been observed approximately 10.3 miles northwest of the project site. Additionally, local biological knowledge supports the species is present within one mile of the project. The quality of habitat at the site is substantially degraded as a result of current and historical land uses, but some suitable habitat is present for this species.

Horned Lark (*Eremophila alpestris actia*), State Watch List
California horned lark inhabits open areas, such as grasslands and agricultural fields. Nests are typically built on the ground in shallow depressions made of roots, grass, and hair. They typically breed between March and August, incubation is approximately 10 to 14 days, and young leave the nest at 9 to 12 days. They are year-long residents in California and become gregarious following breeding, forming large flocks that forage and roost together (Zeiner et al. 1998–1990c). Loss of habitat and destruction of nests through earth moving activities are major threats.

According to CNDDB (CDFW 2021a) records, the nearest observation of horned lark was 15.1 miles northwest of the project site. However, local biological knowledge supports that this species is present with numerous observations throughout the city and rural areas of Paso de Robles. Suitable nesting habitat is present for this species within the grassy openings of the oak woodland of the project site.

Golden Eagle (*Aquila chrysaetos*), State Fully Protected (FP)
Golden eagle is designated by CDFW as a Fully Protected species (i.e., no permitted take or possession at any time), and is also protected under the federal Bald and Golden Eagle Protection Act (USFWS 2021c). Golden eagles typically occur in open and semi-open habitats, most commonly in mountainous areas where large trees for nesting and open hunting grounds with prey are abundant. Golden eagles typically feed on small mammals, and will nest in trees, on cliffs, or other steep escarpments. The typical nesting period for golden

eagles is from January 1 through September 15. This species is threatened by loss of forage and nesting habitat, secondary pesticide poisoning, and collisions with man-made structures (Zeiner et al. 1988-1990d).

According to the CNDDB (CDFW 2021a), the nearest documented occurrence of golden eagle is located approximately 1.8 miles northwest of the project site. The oak trees within and adjacent to the project site may provide suitable nesting habitat for this species. In addition, the ground squirrels observed on site provide a suitable prey source. Golden eagle may forage within the grassland habitat in the survey area but have a low potential to nest within the project area due to on-going disturbances (e.g., property maintenance, golfers, etc.).

Swainson's Hawk (*Buteo swainsoni*), ST
Swainson's hawk habitat typically consists of open desert, grasslands, riparian areas, or cropland with large, scattered trees or small stands. Foraging occurs in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures. This species winters in Central and South America, then migrates north to nest throughout interior California. Declines in breeding pairs have been attributed to loss of nesting habitat (Zeiner et al. 1988-1990e).

According to CNDDB records (CDFW 2021a), the nearest documented nesting occurrence for this species is a 2016 record approximately 8.1-miles east of the project site. This is the western most record of all the occurrences in San Luis Obispo County, with other nests documented to the east along the Highway 46 corridor (CDFW 2021a). No large stick nests were observed during the field survey. Swainson's hawk may forage within the grassland habitat in the survey area but have a low potential to nest within the project area due to on-going disturbances (e.g., property maintenance, golfers, etc.).

Tricolored Blackbird (*Agelaius tricolor*), SSC
Tricolored blackbird nesting habitat typically consists of freshwater marshes dominated by cattails or tules, as well as nettles, thistles, or willows. The species' basic requirements for selecting breeding sites are open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few kilometers of the nesting colony. They have been documented foraging in crops such as rice, alfalfa, irrigated pastures, and ripening or cut grain fields, as well as annual grasslands, cattle feedlots, and dairies. Tricolored blackbirds also forage in remnant native habitats, including wet and dry vernal pools and other seasonal wetlands, riparian scrub habitats, and open marsh borders. The greatest threats to this species are direct loss and degradation of habitat, most notably through urbanization and conversion of grasslands and pastures to vineyards (Zeiner et al. 1988-1990f).

According to CNDDB (CDFW 2021a) records, the nearest observation of tricolored blackbird was 4.3 miles south of the project site. Although marginal nesting habitat is present within the vegetation associated with the pond in the project site, it most likely lacks the area and density required to support a nesting tricolored blackbird colony.

Migratory Nesting Birds

In addition to those species protected by the state or federal government, all native avian species are protected by state and federal legislature, most notably the Migratory Bird Treaty Act (MBTA) and the CDFW Fish and Game Code. Collectively, these regulations make it unlawful to collect, sell, pursue, hunt, or kill native migratory birds, their eggs, nests, or any parts thereof. Avian species are expected to occur within the project area during all seasons and throughout construction of the proposed project. The potential to encounter and disrupt these species is generally highest between February 1 and August 31, when nests are likely to be active, with eggs and/or young present. The individual oak trees in the survey area present the highest quality habitat for nesting birds, but open grasslands may also provide nesting habitat for various ground-nesting species. Raptors are particularly drawn to large trees and structures, and they are generally less tolerant of disturbances than other species.

3.2.3 Sensitive Habitats

Federal and State Waters and Wetlands

As described above, a pond, nine ephemeral drainages, three swales, and 11 wetlands are present within the project area. Although no impacts are proposed to the pond, any impacts to the drainages or wetlands that fall under the jurisdiction of the CDFW, RWQCB, and/or Corps will require appropriate regulatory agency permits and mitigation, per their requirements. Further, recommendations are provided for the avoidance and minimization of impacts to jurisdictional features during construction in Section 4.2 below.

USFWS-designated Critical Habitats

The entire project area falls within USFWS-designated critical habitat for VPFS (Carrizo Vernal Pool Region, Paso Robles core area). The USFWS designated critical habitat for VPFS in 2005. As described by the USFWS (2005), the essential physical and biological features (formerly known as Primary Constituent Elements [PCE's]) are characteristics of habitat required to support VPFS, and they include:

1. Topographic features characterized by mounds, swales, and depressions with a matrix of surrounding uplands that result in complexes of continuously, or intermittently, flowing surface water in the swales connecting the pools.
2. Depressional features including isolated vernal pools with underlying restrictive soil layers that become inundated during winter rains and that continuously hold water for a minimum of 18 days, in all but the driest years.
3. Sources of food, expected to be detritus occurring in the pools, contributed by overland flow from the pools' watershed, or the result of biological processes within the pools themselves.
4. Structure within the pools consisting of organic and inorganic materials, such as living and dead plants from plant species adapted to seasonally inundated environments, rocks, and other organic debris that may be transported into the pools.

Wetlands 3, 4, and 6 have the potential to provide the essential physical and biological features of critical habitat for this species, and are therefore assumed to be occupied critical habitat, which is regulated by the USFWS per the Endangered Species Act (ESA). As such, proposed impacts will require consultation with USFWS.

No other critical habitat occurs within the survey area.

CDFW Sensitive Natural Communities

One sensitive natural community, coastal and valley freshwater marsh, was documented within the survey area. This community was observed in Drainage 3, Wetland 5, and along the edges of the Pond as Cattail Marsh, and Hardstem and California Bulrush Marsh vegetation communities. (see Appendix A – Figures 5 and 6).

County-designated SJKF Mitigation Area

The proposed project site is located in the County of San Luis Obispo-designated SJKF 3:1 mitigation area. CDFW coordinated with the County of San Luis Obispo to develop mitigation measures that, when implemented, will avoid take and reduce long term impacts due to the loss of SJKF habitat to an insignificant level. The County's standard SJKF avoidance, minimization, and mitigation measures are included as recommendations in Section 4.2.

3.3 Habitat Connectivity

Maintaining connectivity between areas of suitable habitat is critical for the survival and reproduction of plants and wildlife. Intact habitats benefit plants by ensuring proper dispersal of pollen and seeds, which sustains or grows the population and contributes to the genetic health of the species. Wildlife need contiguous habitats to attain sufficient food resources for their energetic demands; to locate proper resting, burrowing, and/or nesting sites; to facilitate long-distance travel or migration to seek out mates or resources; and for the safe and successful dispersal of young. The project site is in a semi-rural area of Paso Robles, near the City limit, surrounded by an active golf course, existing agricultural operations, rural residential and commercial developments, and active airport operations. Existing barriers to migration to and from non-developed portions of the project site, particularly for wildlife, are influenced by the high density of agriculture in the region, which typically correlates with a high frequency of land manipulation, wildlife-exclusion fences, and pest management activities. The proposed project as planned may reduce the quality of natural habitat on site but is not expected to substantially increase the current level of habitat fragmentation in the region nor is it expected to create a significant barrier to wildlife movement.

4.0 IMPACT ASSESSMENT

4.1 Summary of Potential Impacts

The proposed project has the potential to directly and/or indirectly impact sensitive habitats, special-status wildlife, migratory nesting birds, mature oak trees, and special-status botanical

species. Direct impacts to wildlife could result from injury or death via construction-related disturbances such as vehicle strikes or crushing of underground refugia from equipment or other construction activities such as grading, vegetation trimming or removal, and excavation. Long-term direct impacts to wildlife could result from operational activities. Indirect impacts could result from construction noise, harassment, dust emissions, or other disruptions during construction. Impacts to botanical species could result from removal of individuals or disturbance to seed banks, if present.

An assessment of anticipated impacts to sensitive biological resources caused by the proposed project are below.

4.1.1 Impacts to Special-status Plants

Special-status Plants

No special-status botanical species were documented within the survey area during the December 2021 field survey. However, the proposed project may impact special-status species, if present. As such, an appropriately timed survey (i.e., April – May) would be necessary prior to the completion of the environmental review process to confirm presence or absence of these special-status botanical species and appropriate mitigation measures to offset impacts, as necessary.

Oak Trees

Mature oak trees are located within the property and potential impacts are unknown based on the current design plans. Oak tree removals and/or impacts, including trimming and/or disturbance within the critical root zone, may be required for project implementation. Impacts to individual oak trees and oak woodland habitat are regulated under California Public Resources Code 21083.4 and the City of El Paso de Robles Oak Tree Preservation Ordinance No. 835 (City 2002). Implementation of oak tree protection measures will be required during construction (e.g., protective fencing) in accordance with Municipal Code Sections 10.01.090 (Safeguarding Trees During Construction) and 10.01.070 (Preservation and Maintenance of Existing Oak Trees). In addition, mitigation for impacted oak trees will be required.

4.1.2 Impacts to Special-status Wildlife

Special-status Amphibians

Amphibians can be slow-moving, cryptic, and most active during inclement weather events, particularly rain storms and at night, presenting crushing hazards in the presence of relatively fast-moving equipment. All special-status amphibians presumed to be on the project site rely heavily on burrows or emergent vegetation for shelter from the elements, protection from predators, and/or seasonal estivation. Heavy equipment and ground disturbing activities may collapse burrow systems or completely remove them, if present, resulting in injury or death of the inhabitants or exclusion by the removal of a vital resource. Vegetation onsite provides habitat for the prey species of amphibians. If CRLF and/or western spadefoot toad occur on or near the

project site, they will be particularly vulnerable during the rainy season when they are most actively moving through upland areas.

Special-status Mammals

If American badger or SJKF occur at the site, there is potential for direct or indirect impacts to occur during construction. Construction poses several risks to wildlife, such as vehicle strikes, and crushing by equipment, and destruction of resources (e.g., burrows or dens). Further, construction may impact or deter use of valuable habitat (e.g., burrows or dens), yielding it unsuitable for special-status mammals. Increased short- and long-term anthropogenic activity in the vicinity of viable populations has potential to indirectly impact these species as a result of permanent habitat conversion, increased light pollution, and primary and secondary exposure to residential-use chemicals including rodenticides.

Special-status Reptiles

The proposed project site provides suitable habitat for northern California legless lizard, San Joaquin coachwhip, and southwestern pond turtle. Construction activities pose risks for direct and indirect impacts to special-status reptiles. For example, reptiles basking on roadways will be especially vulnerable to vehicle strikes. Reptiles can be slow-moving, both because of behavioral adaptations to be camouflaged from predators and because of their ectothermic nature. This trait presents crushing hazards in the presence of relatively fast-moving equipment or even foot traffic. All special-status reptiles presumed to be on the project site rely heavily on burrows or emergent vegetation for shelter from the elements, protection from predators, and/or reproduction. Heavy equipment and ground disturbing activities may collapse burrow systems or completely remove them, resulting in injury or death of the inhabitants or exclusion by the removal of a vital resource. Vegetation may also be removed as a result of construction activities. Ectotherms rely on vegetative cover for temperature regulation and, further, vegetation provides critical habitat for prey species of reptiles.

Special-status Invertebrates

The current project design impacts potential habitat for VPFS. If VPFS are present, direct impacts to this species may occur during construction of the proposed development features. Additionally, indirect impacts may occur if construction activities result in the alteration or degradation of hydrologic patterns in proximity to the potential vernal pool. Furthermore, introduction of sediment via erosion and runoff from project areas into adjacent habitat could be deleterious to the vernal pool habitat area and VPFS, if present.

Sensitive and Nesting Birds

Direct impacts to burrowing owl, horned lark, golden eagle, Swainson's hawk, tricolored blackbird, and other bird species are most likely to occur if construction activities take place during the typical avian nesting season, generally February 1 through August 31, and as early as January 1 for golden eagles. Direct and indirect impacts may occur if tree trimming or removal is required. For example, these actions can destroy nests, remove nesting habitat, or cause disturbance that may lead to nest failure or otherwise harass nesting, resident, or transient birds.

4.1.3 Impacts to Sensitive Habitats

Federal and State Waters and Wetlands

Direct and/or indirect impacts to the drainages on site may occur during the implementation of the proposed project. Direct impacts may occur during utility installation, if culverts are replaced/upgraded, or new crossings are planned. In addition, indirect impacts to these features could result from erosion, sedimentation, and/or discharges of hazardous materials, such as fuel, from construction equipment.

USFWS-designated Critical Habitats

The wetlands within the survey area may provide the physical and/or biological features essential for the conservation of VPFS. As currently designed, direct impacts to Wetlands 4 and 6 will occur. Additionally, indirect impacts to Wetland 3 may occur if construction activities result in the alteration or degradation of hydrologic patterns on site. Furthermore, introduction of sediment via erosion and runoff from project areas into adjacent habitat could be deleterious to the potential VPFS habitat area.

CDFW Sensitive Natural Communities

Coastal and Valley Freshwater Marsh was identified and mapped within Drainage 3, Wetland 5, and along the edges of the Pond. No direct impacts are currently proposed to these features. However, indirect impacts to this CDFW Sensitive Natural Community could result from erosion, sedimentation, and/or discharge of hazardous materials, such as fuel, from construction equipment.

County-designated SJKF Mitigation Area

The project's location within the County-designated 3:1 mitigation area requires implementation of mitigation measures pursuant to the County Guide to SJKF Mitigation Procedures under CEQA. Construction and implementation of the proposed project will result in permanent and temporary impacts to disturbed grassland and oak woodland areas on site. For projects 40 acres or larger, completion of a SJKF habitat evaluation form must be completed to evaluate the habitat quality and assist CDFW with the appropriate mitigation requirements. Mitigation must be fulfilled by contribution to the preservation of habitat through a conservation easement agreement, compensation to a pre-determined mitigation bank (presently Palo Prieto Conservation Bank), or payment of an in-lieu fee to the San Francisco office of The Nature Conservancy.

4.2 Recommended Avoidance, Minimization, and Mitigation Measures

The following avoidance, minimization, and mitigation measures are recommended to reduce the anticipated impacts to the maximum extent feasible.

4.2.1 General Measures

Measure 1: Environmental Awareness Training

An environmental awareness training shall be presented to all construction personnel by a qualified biologist prior to the start of any project activities. The training shall include color photographs and a description of the ecology of all special-status species known or with potential to occur, as well as other sensitive resources requiring avoidance during construction. The training shall also include a description of protection measures required by discretionary permits, an overview of the Federal and State Endangered Species Acts, and implications of noncompliance with these regulations. This will include an overview of the required avoidance, minimization, and mitigation measures. A sign-in sheet with the name and signature of the qualified biologist who presented the training, and the names and signatures of the environmental awareness trainees will be kept. A fact sheet conveying the information provided in the environmental awareness training will be provided to all project personnel.

Measure 2: Site Maintenance and General Operations

The following general measures are recommended to minimize impacts during active construction:

- The use of heavy equipment and vehicles shall be limited to the proposed project limits and defined staging areas/access points. The boundaries of each work area shall be clearly defined and marked with high visibility fencing. No work shall occur outside these limits.
- Project plans, drawings, and specifications shall show the boundaries of all sensitive resource areas and the location of erosion and sediment controls, delineation of construction limits, and other pertinent measures to ensure the protection of sensitive habitats and resources.
- Staging of equipment and materials shall occur in designated areas with appropriate demarcation and perimeter controls. No staging areas shall be located within 100 feet of sensitive habitat or aquatic resources.
- Secondary containment, such as drip pans, shall be used to prevent leaks and spills of potential contaminants.
- Washing of concrete, paint, or equipment, and refueling and maintenance of equipment shall occur only in designated staging areas. These activities will occur at a minimum of 100 feet from sensitive habitat or aquatic resources, including drainages. Sandbags and/or absorbent pads and spill control kits shall always be available on site to clean up and contain fuel spills and other contaminants.
- Construction equipment shall be inspected by the operator daily to ensure that equipment is in good working order and no fuel or lubricant leaks are present.
- Plastic monofilament netting (erosion control matting) or similar material will not be used on site due to the potential to entangle special-status wildlife. Acceptable substitutes are coconut coir matting, biodegradable fiber rolls, or tackified hydroseeding compounds.

- The use of pesticides (including rodenticides) and herbicides on the property shall be in compliance with all local, state, and federal regulations to avoid primary and secondary poisoning of sensitive species that may be using the site.
- After completion of the project's construction, all protective fencing/flagging used to delineate sensitive biological resources shall be removed from the project area and disposed of in appropriate waste receptacles or reused.

Measure 3: Lighting

Any permanent lighting introduced for new developments shall be positioned and/or shielded to avoid direct lighting of off-site natural habitat features suitable for special-status species (i.e., adjacent grassland and oak woodland).

4.2.2 Avoidance and Minimization of Impacts to Oak Trees

Measure 4: Oak Tree Avoidance and Protection

To the maximum extent feasible, impacts to oak trees shall be avoided and minimized. The following avoidance and minimization measures shall be implemented to address potential impacts to or removal of oak trees:

- The canopy edge and trunk location of oak trees located within 50 feet of proposed construction shall be surveyed and placed on all plan sets. The tree map shall be used to identify impacts and will inform the mitigation plan, if required.
- Impacts to oak tree canopy or sensitive root zone should be avoided to the extent feasible.
- Prior to ground-breaking, tree protection fencing shall be installed as close to the outer limit of the sensitive root zone as practicable for construction operations to protect trees located within 50 feet of construction that will be preserved. The fencing shall be in place throughout the duration of construction. Demarcation such as t-posts and a minimum of two strands of yellow rope are adequate.
- No grading or staging shall occur within the fenced areas around protected trees.
- A certified arborist will be hired for removal of existing roots and branch trimming per International Society of Arboriculture (ISA) standards. Any roots exposed during construction shall be covered with a layer of soil to match existing topography.
- An oak tree survey shall be completed once development plans are finalized; if direct or indirect impacts will occur, they shall be assessed by a licensed arborist or qualified botanist prior to final inspection and reported to the City.

Measure 5: Oak Tree Mitigation

In the event of oak tree removals or impacts during project implementation, the owner shall provide mitigation (on-site if feasible) per the City's guidelines, typically 4:1 for removals and 2:1 for impacted trees. A mitigation plan shall be prepared that details the methods and requirements for oak tree mitigation. The plan shall be provided to the City for approval prior to project implementation. At a minimum, the plan shall:

- Include a detailed inventory of the species and quantity of all oak trees to be removed or impacted.
- Discuss the proposed construction methods, construction schedule, and the implementation schedule of activities proposed as part of the plan.
- Quantify and describe the anticipated impacts to individual oak trees and/or oak woodland habitat, as applicable.
- Identify all appropriate methods for fulfillment of required mitigation (e.g., on-site plantings, conservation easement, or in-lieu fee).
- Describe detailed planting methods, as appropriate.
- Identify suitable areas for establishment of new oak trees and/or protection of existing oak woodland habitat, as appropriate.
- Describe short-term and long-term monitoring protocols and/or vegetative growth performance criteria for mitigation success.

The plan shall be prepared by a qualified botanist or arborist and be submitted to the City for approval prior to the start of construction.

4.2.3 Measures to Address Impacts to Sensitive Habitats

Measure 6: Jurisdictional Waters

In addition to Measure 2, the following recommendations have been provided to protect drainages and aquatic resources on site.

- Prior to project impact of these areas, all applicable agency permits with jurisdiction over the project area (i.e., CDFW, RWQCB, and/or Corps) shall be obtained. Additional mitigation measures may be required by these agencies and shall be implemented as necessary throughout the project.
- To prevent erosion and sedimentation into drainages during construction, an erosion and sedimentation control plan shall be developed and implemented. It shall outline Best Management Practices (BMPs) for short-term, temporary stabilization. Acceptable stabilization methods include the use of weed-free, natural fiber (i.e., non-monofilament) rolls, jute or coir netting, and/or other industry standards. Erosion control devices shall be installed and maintained for the duration of the project. BMPs shall be installed and maintained for the duration of the project.
- Construction activity within 100 feet of drainages shall only occur when appropriate BMPs are in place to protect aquatic features from indirect impacts.

4.2.4 Measures to Address Impacts to Special-status Wildlife

Measure 7: Pre-construction Survey for American Badger and San Joaquin Kit Fox

A qualified biologist shall conduct a pre-construction survey within 30 days prior to the start of initial project activities to ensure American badger and SJKF are not present within proposed work areas. If potential dens are discovered, they shall be monitored with a remote camera or tracking medium for at least three days to determine if they are occupied. If the qualified biologist

determines that a den may be active, a no-entry exclusion buffer shall be established within 50 feet of the den and the appropriate resource agencies shall be contacted for further guidance. If active dens are found during the breeding and rearing season, no activity shall occur within 200 feet (American badger) or 500 feet (SJKF) of the den without agency guidance and approval. Exclusion buffers shall be prominently flagged and encircle the den. If an exclusion buffer is not feasible, the applicant will contact the City for further guidance prior to initial project activities. The results of the survey shall be provided to the City prior to initial project activities. If construction lapses beyond 30 days from the survey, an additional survey will be required.

Measure 8: County Standard Mitigation of Impacts to San Joaquin Kit Fox Habitat

In accordance with the County Guide to SJKF Mitigation Procedures under CEQA, the project shall adopt the Standard Kit Fox CEQA Mitigation Measures and shall include these measures on development plans. The following summarizes those that are applicable to this project:

- The applicant shall mitigate for the loss of SJKF habitat either by:
    1. Establishing a conservation easement on-site or off-site in a suitable San Luis Obispo County location and provide a non-wasting endowment for management and monitoring of the property in perpetuity;
    2. Depositing funds into an approved in-lieu fee program; or
    3. Purchasing credits in an approved conservation bank in San Luis Obispo County.
- A maximum 25 mile-per-hour speed limit shall be required at the project site during construction activities.
- All construction activities shall cease at dusk and not start before dawn.
- A qualified biologist shall be on-site immediately prior to initiation of project activities to inspect for any large burrows (e.g., known and potential dens) and to ensure no wildlife are injured during project activities. If dens are encountered, they should be avoided as discussed below.
- Exclusion zone boundaries shall be established around all known and potential SJKF dens.
- All excavations deeper than 2 feet shall be completely covered at the end of each working day or provided with one or more escape ramps constructed of earth fill or wooden planks every 200 feet.
- All pipes, culverts, or similar structures with a diameter of four inches or greater, stored overnight at the project site shall be inspected for SJKF and other wildlife before burying, capping, or moving. If a kit fox is found within material stored onsite, the material will not be moved until the kit fox has left on its own.
- All food-related trash shall be removed from the site at the end of each workday as to not attract SJKF fox to the project site.
- Project-related equipment shall be prohibited outside of designated work areas and access routes.
- Disturbance to burrows shall be avoided to the greatest extent feasible.

- No rodenticides or herbicides shall be applied in the project area.
- No firearms shall be allowed on the project site.
- No pets, such as dogs or cats, shall be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
- Permanent fences shall allow for SJKF passage through or underneath (i.e., an approximate four-inch passage gap shall remain at ground level).

Measure 9: Surveys and Monitoring for Special-status Amphibians and Reptiles

A qualified biologist shall conduct a pre-construction survey immediately prior to the start of work to ensure special-status amphibians and reptiles are not present within proposed work areas. During the survey, the biologist shall gently disturb or rake the scrub understory and upper layers of oak tree duff to uncover or rouse northern California legless lizards. Construction monitoring shall be conducted by a qualified biologist during all initial ground disturbing and vegetation removal activities (e.g., grading, grubbing, vegetation trimming) within suitable habitat. If these species are found during pre-construction surveys or monitoring, they shall be allowed to leave the work area on their own volition or be hand captured and relocated to suitable habitat outside of the area of impact, if permitted. To minimize the potential for impacts to dispersing amphibians, work within 100 feet of hydrologic features shall occur during dry conditions, as feasible. If work within 100 feet of drainages or the pond is scheduled to start during the typical rainy season (October through April), when western spadefoot toads and CRLF are most likely to be dispersing through upland habitat, a follow up survey shall be conducted following any rain event of 0.25 inch or greater. All vehicles, equipment, and materials staged on site overnight shall be inspected by a designated member of the construction crew. If special-status wildlife is found within the work area, it shall be allowed to leave on its own volition and, as appropriate, the resource agencies shall be contacted.

Measure 10: Vernal Pool Fairy Shrimp Critical Habitat

The boundaries of potential VPFS habitat areas on site and associated watersheds shall be included on all project plans. The limits of all workspaces, access routes, and staging areas shall also be included on project plans and clearly delineated in the field with brightly colored flagging and/or fencing. In addition, a biologist familiar with vernal pool characteristics and associated watersheds shall conduct occasional site inspections to document compliance with species and permit protection measures, including maintenance of workspace delineation fencing. Weekly biological monitoring reports shall be submitted to the City. If compliance deficiencies are identified during monitoring, the deficiency shall be documented, and follow-up actions will be required under the direction of the City representative to alleviate the compliance concern. In addition to the protection measures identified in Measures 1 and 2 above, these measures provide protection for VPFS by ensuring that no unanticipated impacts occur within suitable habitat for this species.

Approximately 0.01 acre of vernal pool habitat will be permanently impacted as a result of development. These impacts will need to be mitigated for in accordance with the project's permit conditions.

Measure 11: Pre-construction Survey and Avoidance Measures for Nesting Birds

To protect nesting birds, if work is planned to occur between February 1 and August 31, a qualified biologist shall survey the area for nesting birds within one week prior to activity beginning on site. In addition, if work is planned to occur as early as January 1, a qualified biologist shall complete a focused survey for nesting golden eagles within one-quarter mile of the project site, as feasible based on access. Surveys for raptors shall be conducted within a 250-foot radius of the project site. If any active non-listed raptor nests are observed, these nests and nest trees shall be protected, and a no-work buffer of 250 feet shall be established until the young have fledged and are no longer reliant on the nest tree or parental care, or the nest is no longer active. Surveys for other non-listed avian species shall be conducted within a 50-foot radius of the project site. If any active nests are observed, these nests and nest trees shall be protected with a 50-foot no-work buffer. All activity will remain outside of the designated buffers until a qualified biologist has determined that the young have fledged or that proposed construction activities would not cause adverse impacts to the nest, adults, eggs, or young. If work activities are deemed to not be a threat to a given nest within a buffer zone, a qualified biologist may monitor the nest during work to ensure that the nesting birds are not disturbed (e.g., showing signs of stress or changes in behavior as a result of work activity). If special-status avian species are identified and nesting within the work area, no work will begin until an appropriate buffer is determined in consultation with CDFW, and/or the USFWS.

5.0 CONCLUSION

As currently designed, the project will potentially impact drainages on site, particularly as a result of access roads and utility installation, as well as temporary and permanent impacts within potential habitat for VPFS. In addition, impacts to and removal of individual oak trees and/or oak woodland habitat is anticipated. Habitat connectivity is not expected to be significantly degraded. No special-status species were observed directly within the project area; however, it was determined that there is potential for up to 18 special-status botanical species and 13 special-status wildlife species, as well as nesting birds, to be present within the project site. Implementation of the recommended avoidance, minimization, and mitigation measures will reduce impacts to sensitive resources to a less than significant level.

6.0 REFERENCES

Baldwin, Bruce G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken. 2012. *The Jepson Manual: Vascular Plants of California,* Second Edition. University of California Press. Berkeley, California.

Brown, N. L., C. D. Johnson, P. D. Kelly, D. F. Williams. 2021. Endangered Species Recovery Program species profile for San Joaquin kit fox (*Vulpes macrotis mutica*). < http:// esrp.csustan.edu/speciesprofiles/profile.php?sp=vuma>. Most recently accessed November 2021.

Bury, R. B., and D. J. Germano. 2008. *Actinemys marmorata* (Baird and Girard 1852)—western pond turtle, Pacific pond turtle. Pages 1.1–1.9 in G. J. Rhodin, C. H. Pritchard, P. P. van Dijk, R. A. Saumure, K. A. Buhlmann, and J. B. Iverson, editors, Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. Chelonian Research Monographs No. 5. Chelonian Research Foundation, Lunenberg, Massachusetts.

California Department of Fish and Wildlife. 2021a. California Natural Diversity Database: RareFind 5. Accessible online with subscription at: http://www.dfg.ca.gov/biogeodata/cnddb/ mapsanddata.asp. Most recently accessed November 2021.

_____.2021b. California Natural Diversity Database: Special Animals List. Available online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406. Most recently accessed November 2021.

California Native Plant Society, Rare Plant Program. 2021a. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Available Online at: http://www.rareplants.cnps.org. CNPS, Sacramento, California. Most recently accessed November 2021.

_____2021b. A Manual of California Vegetation, Online Edition. Available at: http://www.cnps.org/vegetation. CNPS, Sacramento, California. Most recently accessed November 2021.

Consortium of California Herbaria. 2021. Regents of the University of California. Available online at: http://ucjeps.berkeley.edu/consortium/. Most recently accessed November 2021.

Google Earth Pro V 7.3.3.7786. 1994 – 2021. San Luis Obispo County, California. 35.540361°, -120.865994°. DigitalGlobe. Most recently accessed November 2021.

Jepson Flora Project, Regents of the University of California. 2021. Jepson eFlora. Available online at: http://ucjeps.berkeley.edu/eflora/. Most recently accessed November 2021.

Klute, D. S., L. W. Ayers, M. T. Green, W. H. Howe, S. L. Jones, J. A. Shaffer, S. R. Sheffield, and T. S. Zimmerman. 2003. Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003, Washington, D.C.

Nafis, G. 2021. California Herps - A Guide to the Amphibians and Reptiles of California. Available at: http://www.californiaherps.com. Most recently accessed November 2021.

Natural Resources Conservation Service, U.S. Department of Agriculture. 2021. Available Online at: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Most recently accessed November 2021.

Sawyer, John O., T. Keeler-Wolf, and J. M. Evens. 2009. *A Manual of California Vegetation, Second Edition.* California Native Plant Society Press: Sacramento, California.

Shuford, W.D. and T. Gardali, eds. 2008. Burrowing Owl account from California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds No. I. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento. Available online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=10405. Most recently accessed November 2021.

Spinks, P. Q., G. B. Pauly, J. J. Crayon, and H. B. Shaffer. 2003. Survival of the western pond turtle (*Emys marmorata*) in an urban California environment. Biological Conservation 113(2):257–267.

Stebbins, R. C., S. M. McGinnis. 2020. Peterson Field Guide to Western Reptiles and Amphibians. Fourth Edition. Houghton Mifflin Harcourt Company, New York, New York.

United States Geological Survey. 2021. The National Map. San Luis Obispo County, 35.642, -120.640. Available online at: https://viewer.nationalmap.gov/advanced-viewer/. Most recently accessed November 2021.

United States Fish and Wildlife Service. 1998. Recovery Plan for Upland Species of the San Joaquin Valley, California. Region 1, Portland, OR. Available online at: https://ecos.fws.gov/docs/recovery_plans/1998/980930a.pdf. Most recently accessed November 2021.

United States Fish and Wildlife Service. 2005. Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon; Evaluation of Economic Exclusions from August 2003 Final Designation; Final Rule. Federal Register 70(154):46923—46999.

_____.2021a. USFWS Threatened and Endangered Species Active Critical Habitat Report. Available online at: http://crithab.fws.gov/ecp/report/table/critical-habitat.html. Most recently accessed November 2021.

_____.2021b. National Wetland Inventory, Wetlands Mapper. Available online at: https://www.fws.gov/wetlands/Data/Mapper.html. Most recently accessed November 2021.

_____.2021c. Bald and Golden Eagle Protection. Available online at: Act.https://www.fws.gov/midwest/midwestbird/eaglepermits/bagepa.html. Most recently accessed November 2021.

Vaughan, T. A., T. J. O'Shea. 1976. Roosting ecology of the pallid bat, *Antrozous pallidu*s. Journal of Mammalogy 57:19—42.

Verts, B. J., L. N. Carraway. 1998. Land Mammals of Oregon. University of California Press, Berkeley and Los Angeles, California. 668 pp.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990a. *Life History Account for American Badger*. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California.

_____.1988 – 1990b. *Life History Account for California Legless Lizard*. California's Wildlife. Vol. I – III. California Department of Fish and Game, Sacramento, California.

_____.1988-1990c. *Life History Account for Horned Lark*. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California.

_____.1988-1990d. *Life History Account for Golden Eagle*. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California.

_____.1988-1990e. *Life History Account for Swainson's Hawk*. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California.

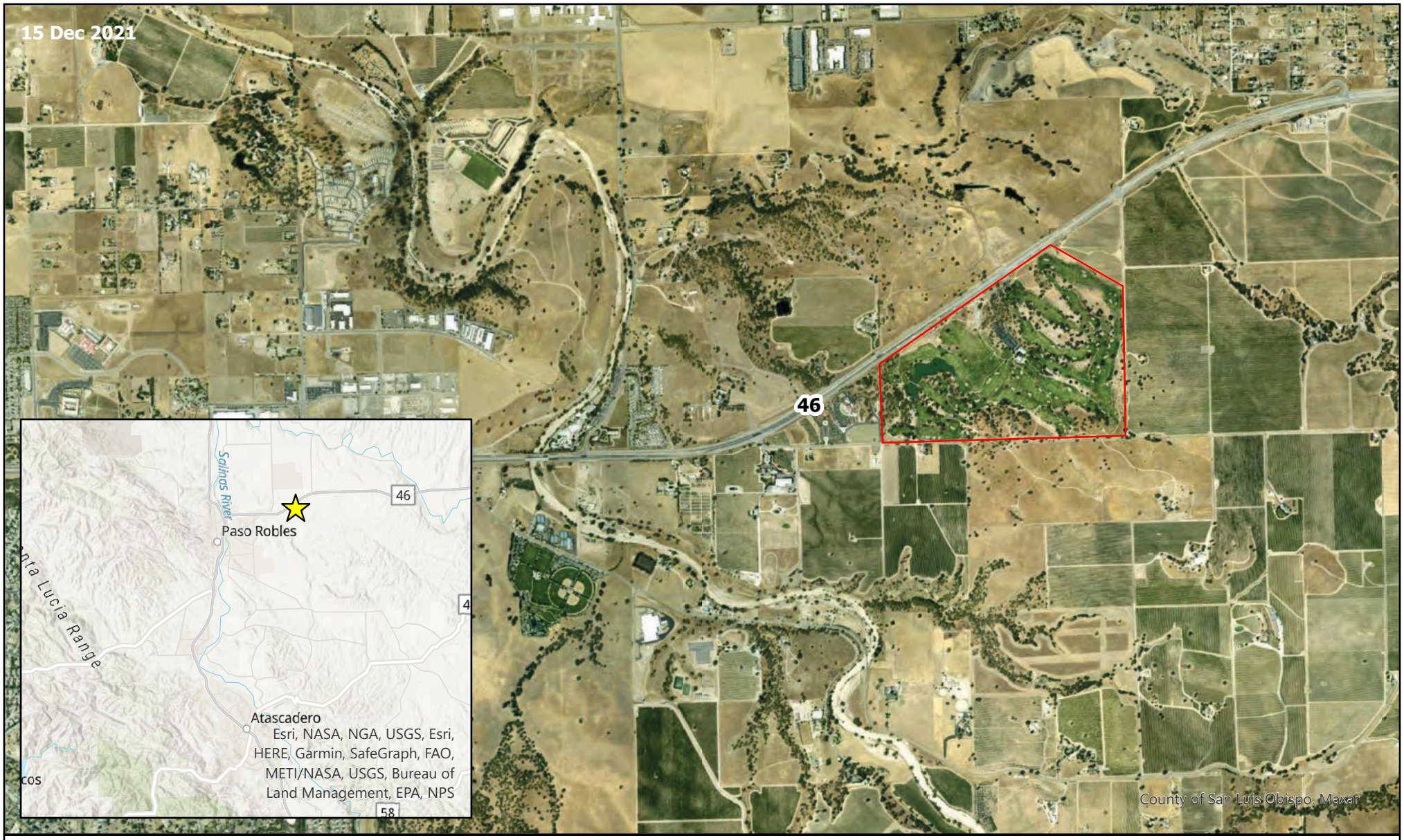
_____.1988 – 1990f. *Life History Account for Tricolored Blackbird*. California's Wildlife. Vol. I – III. California Department of Fish and Game, Sacramento, California.

This page intentionally left blank.

APPENDIX A – FIGURES

Figure 1: Project Vicinity
Figure 2: Survey Area
Figure 3: 5-mile CNDDB and Critical Habitat
Figure 4: Soils
Figure 5a-d: Hydrologic Resources
Figure 6: Vegetation Communities

This page intentionally left blank.



Project Location

Survey Area

Hunter Ranch Golf Course
Biological Resources Assessment
Figure 1. Project Vicinity

0 0.5 1 2 Miles

N

TERRA • VERDE

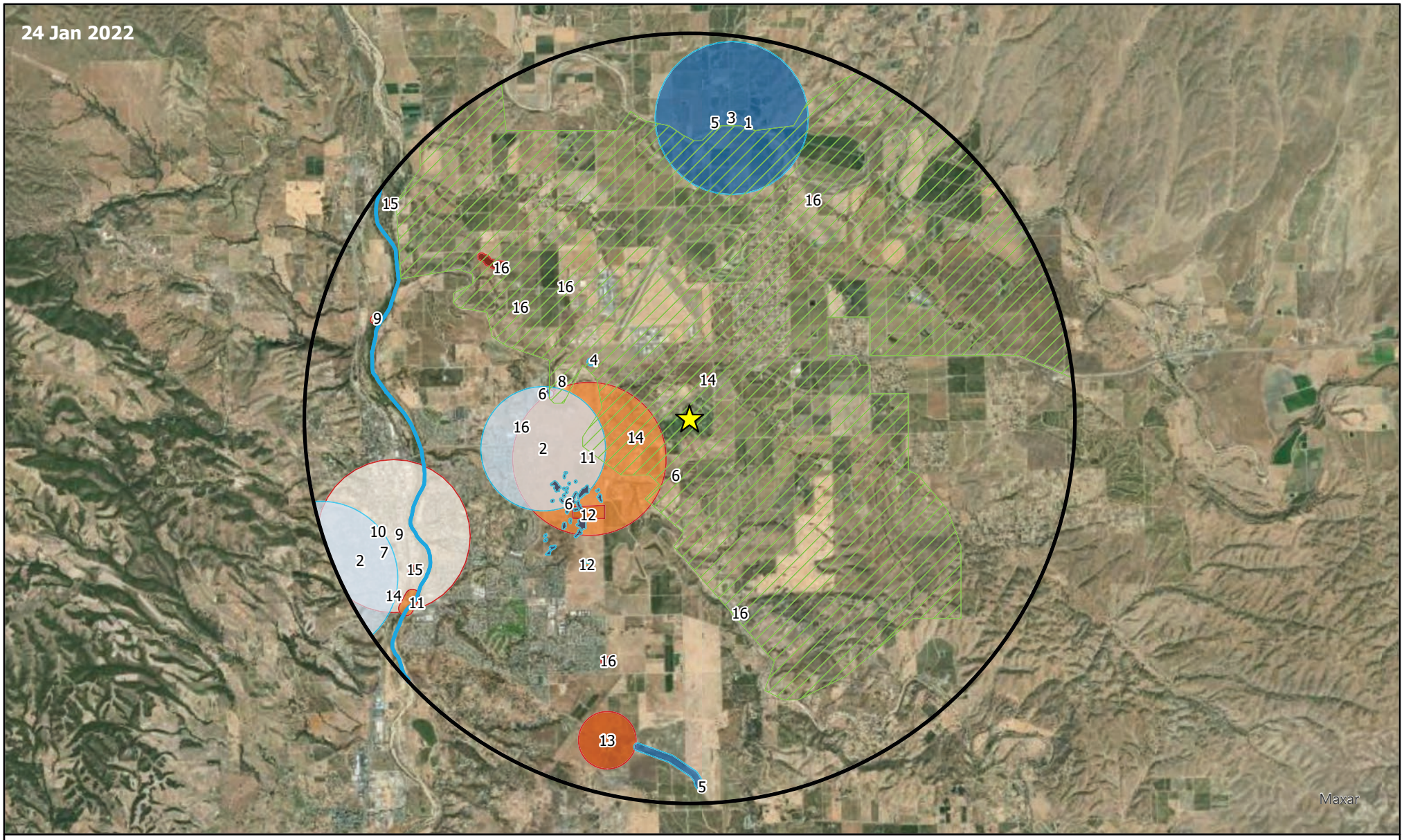
Hunter Ranch Golf Course
Biological Resources Assessment
Figure 2. Survey Area

Survey Area

0 500 1,000 2,000 Feet

N

TERRA • VERDE



Project Location
5-mile Buffer
Vernal Pool Fairy Shrimp Critical Habitat
Steelhead Critical Habitat

Botanical Occurrences
01 - Jared's pepper-grass
02 - Lemmon's jewelflower
03 - Oval-leaved snapdragon
04 - San Luis Obispo owl's-clover
05 - Santa Lucia dwarf rush
06 - Shining navarretia

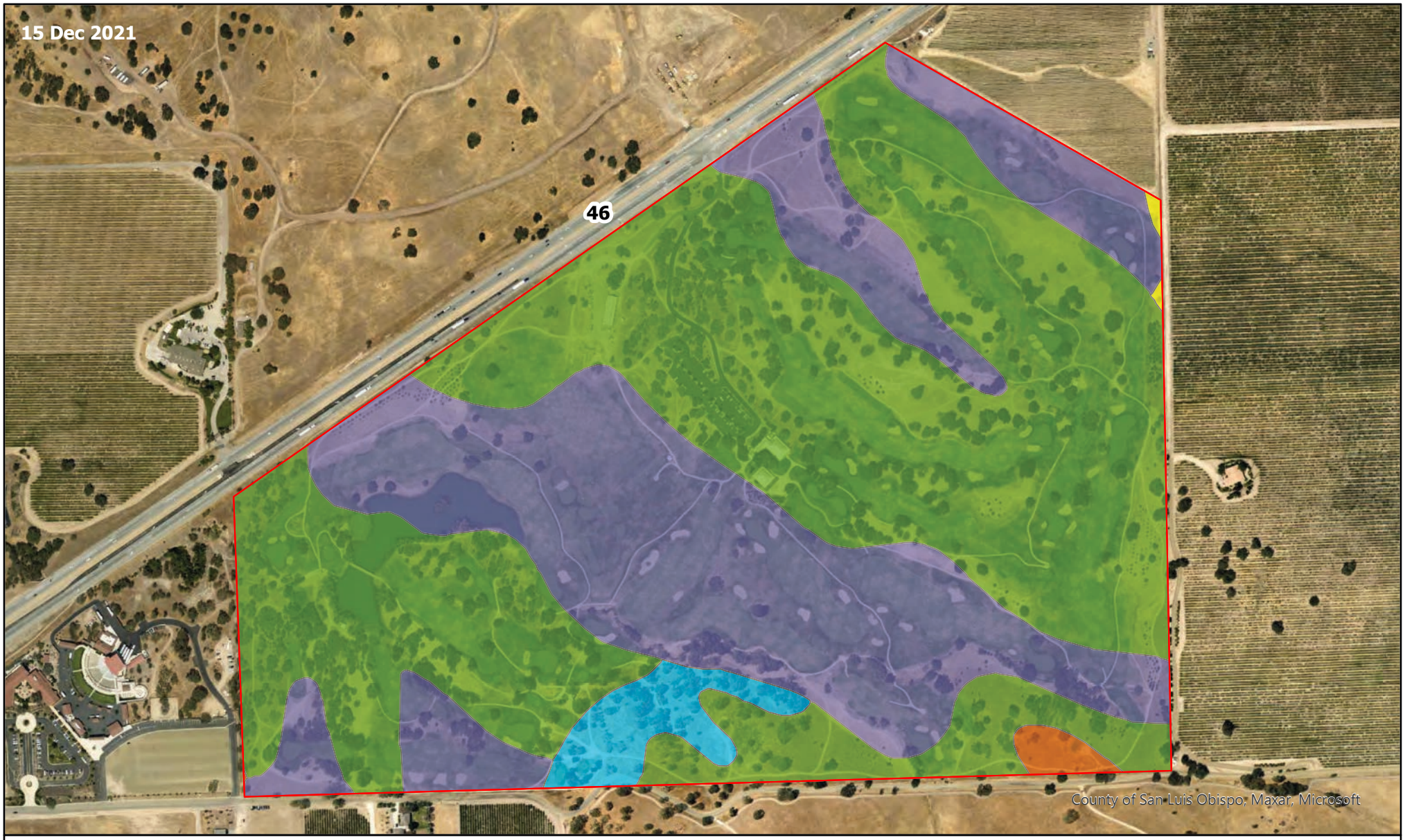
Wildlife Occurrences
07 - Atascadero June beetle
08 - Golden eagle
09 - Least Bell's vireo
10 - Lompoc grasshopper
11 - Northern California legless lizard
12 - San Joaquin kit fox
13 - Tricolored blackbird
14 - Vernal pool fairy shrimp
15 - Western pond turtle
16 - Western spadefoot

0 0.5 1 2 Miles

N

TERRA • VERDE

Hunter Ranch Golf Course
Biological Resources Assessment
Figure 3. 5-mile CNDDB Occurrences and Critical Habitat



Survey Area

Soil Unit

Arbuckle-Positas Complex, 30-50% Slopes

Arbuckle-Positas Complex, 9-15% Slopes

Arbuckle-San Ysidro Complex, 2-9% Slopes

Rincon Clay Loam, 9-15% Slopes

Sesame Sandy Loam, 9-30% Slopes

Hunter Ranch Golf Course
Biological Resources Assessment
Figure 4. Soils

0 500 1,000 2,000 Feet

N

TERRA • VERDE

Survey Area
Pond
Wetland*
Drainage*
Swale

Hunter Ranch Golf Course
Biological Resources Assessment
Figure 5a. Hydrological Resources

*A formal wetland delineation was not completed as part of these survey efforts. A formal wetland delineation should be completed if the project has potential to impact any hydrological resources.

0 500 1,000 2,000 Feet

N

TERRA • VERDE

Survey Area
Pond
Wetland*
Drainage*
Swale

Hunter Ranch Golf Course
Biological Resources Assessment
Figure 5b. Hydrological Resources

*A formal wetland delineation was not completed as part of these survey efforts. A formal wetland delineation should be completed if the project has potential to impact any hydrological resources.

0 500 1,000 Feet

N

TERRA • VERDE

Survey Area
Pond
Wetland*
Drainage*
Swale

Hunter Ranch Golf Course
Biological Resources Assessment
Figure 5c. Hydrological Resources

*A formal wetland delineation was not completed as part of these survey efforts. A formal wetland delineation should be completed if the project has potential to impact any hydrological resources.

0 500 1,000 Feet

N

TERRA • VERDE

Survey Area
Pond
Wetland*
Drainage*
Swale

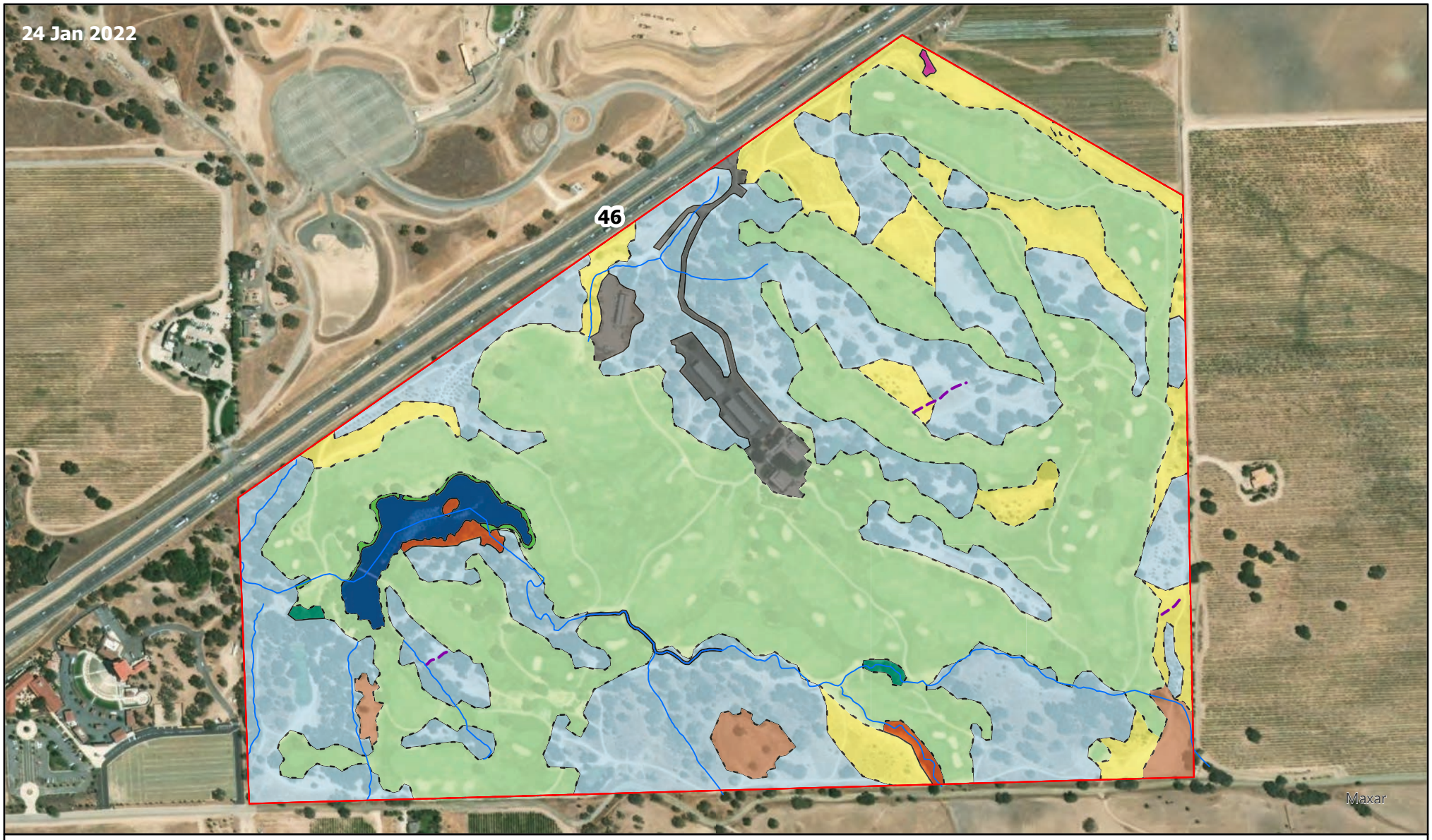
Hunter Ranch Golf Course
Biological Resources Assessment
Figure 5d. Hydrological Resources

*A formal wetland delineation was not completed as part of these survey efforts. A formal wetland delineation should be completed if the project has potential to impact any hydrological resources.

0 500 1,000 Feet

N

TERRA • VERDE



Survey Area
Drainage
Swale

Vegetation Communities and Land Cover Types

Arroyo Willow Thickets
Cattail Marshes
Fremont Cottonwood Forest
Hardstem and California Bulrush Marshes
Wild Oats and Annual Brome Grasslands
Blue Oak Woodland
Pond
Disturbed
Developed
Golf Course

0 500 1,000 2,000 Feet

N

TERRA • VERDE

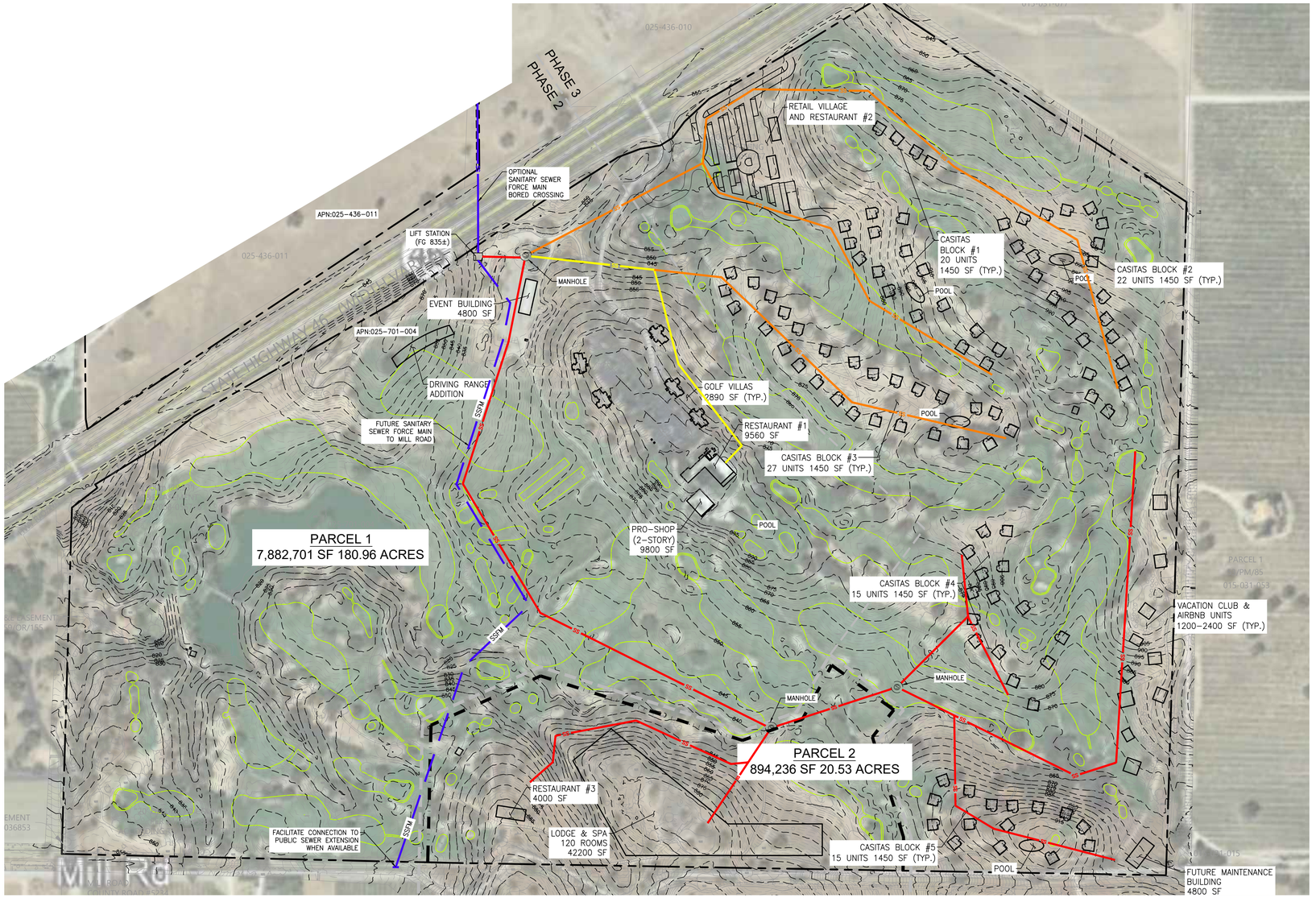
Hunter Ranch Golf Course
Biological Resources Assessment
Figure 6. Vegetation Communities and Land Cover Types

This page intentionally left blank.

APPENDIX B – PRELIMINARY SITE PLANS (Dated 08-02-2021)

This page intentionally left blank.

HUNTER RANCH



GENERAL LEGEND

- EXISTING/PROPOSED CENTERLINE (℄)
- EXISTING PROPERTY LINE (EX. ℘)
- PROPOSED PROPERTY LINE (℘)
- PROPOSED SETBACK LINE
- EXISTING/PROPOSED EASEMENT
- FIRE ZONE
- GOLF GREENS & TEE BOXES

SANITARY SEWER LEGEND:

- PROPOSED GRAVITY SANITARY SEWER MAIN (PHASE 1) – 7,400± LF
- PROPOSED GRAVITY SANITARY SEWER MAIN (PHASE 2) – 1,200± LF
- PROPOSED GRAVITY SANITARY SEWER MAIN (PHASE 3) – 5,600± LF
- PROPOSED FORCE MAIN SANITARY SEWER (PHASE 1) – 4,500± LF
- PROPOSED FUTURE FORCE MAIN TO MILL ROAD EXTENSION – 2,400± LF
- EXISTING CITY MAIN SANITARY SEWER
- SANITARY SEWER MANHOLE (SSMH)
- LIFT STATION
- SANITARY SEWER CLEANOUT TO GRADE (SSCO). CLEANOUT IS REQUIRED AT ANGLE POINTS AND EVERY 100' FOR GRAVITY SEWER LINES. ADDITIONALLY CLEANOUTS ARE REQUIRED EVERY 300' FOR FORCE MAIN SEWER LINES.

EXISTING & ADDITIONS

1. RESTAURANT #1
2. PRO-SHOP/RETAIL
3. GOLF COURSE
4. MAINTENANCE BUILDING
5. DRIVING RANGE
6. SOLAR CARPORT

PHASE 1

PARCEL 1

1. CASITAS BLOCK #4 (15 UNITS)
2. CASITAS BLOCK #5 (15 UNITS)
3. FUTURE MAINTENANCE BUILDING

PARCEL 2

1. LODGE, RESTAURANT #3, & SPA (120 UNITS)

PHASE 2

PARCEL 1

1. GOLF VILLAS (5 UNITS)
2. CONVERT (E) MAINTENANCE BUILDING TO EVENT BUILDING

PHASE 3

PARCEL 1

1. CASITAS BLOCK #2 (22 UNITS)
2. CASITAS BLOCK #3 (27 UNITS)
3. VACATION CLUB & AIRBNB UNITS (20 UNITS)

PARCEL 2

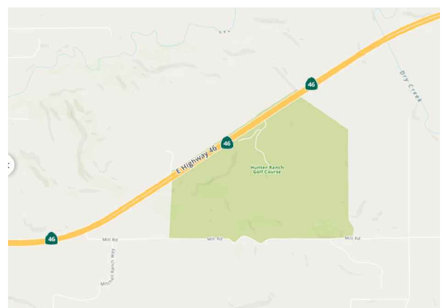
1. RETAIL VILLAGE & RESTAURANT #2
2. CASITAS BLOCK #1 (20 UNITS)

0 200' 400'

SCALE: 1" = 200'

811 Know what's below. Call 811 before you dig.

NOTE: UTILITIES SHOWN WERE PLOTTED FROM OBSERVED EVIDENCE AND PLANS OBTAINED FROM UTILITY PROVIDERS. EXACT LOCATIONS AND QUANTITIES MAY VARY. THE CONTRACTOR SHALL CALL 811 FOR UTILITY LOCATING SERVICES PRIOR TO EXCAVATION AND USE EXTREME CAUTION WHEN EXPOSING UTILITIES. ANY DAMAGE TO EXISTING UTILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.



VICINITY MAP

NTS

NO.	DATE	REVISIONS
1		
2		
3		
4		

WALSH ENGINEERING
WALSHENGINEERING.NET (805) 319-4948
1108 GARDEN STREET, SUITE 202-204 SAN LUIS OBISPO, CA 93401

HUNTER RANCH GOLF COURSE LLC

HUNTER RANCH

4041 CA-46, PASO ROBLES, CA 93446

REGISTERED PROFESSIONAL ENGINEER MATTHEW R. WALSH C 79026 STATE OF CALIFORNIA

NOT FOR CONSTRUCTION

DESIGNED BY: DAP
CHECKED BY: MRW
APPROVED BY: MRW
DATE: 08/02/2021

SITE PLAN

SHEET 1 OF 1

saved: 8/2/2021, plotted: 8/2/2021, path: s:\projects_eng\2018036_hunter ranch_king ventures\drawing\utility plans.dwg

This page intentionally left blank.

APPENDIX C – REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

This page intentionally left blank.

Regionally occurring special-status species list for the Estrella and surrounding 7.5-minute quadrangles: Cholame Hills, Creston, Paso Robles, Ranchito Canyon, San Miguel, Shandon, Shedd Canyon, Templeton.

SENSITIVE HABITATS			
Community/ Habitat[1]	**Description[2]**	**Observed on Site?[3]**	**Comments**
Designated Habitat for Special-status Species			
Vulpes macrotis mutica **San Joaquin kit fox**	The project site is located within a County of San Luis Obispo-designated 3 to 1 mitigation area.	**Yes**	The habitat on site for this species is highly modified and degraded; however, County-required habitat mitigation will apply.
Branchinecta lynchi **Vernal pool fairy shrimp**	USFWS-designated critical habitat for vernal pool fairy shrimp overlaps the entire project area.	**Yes**	No evidence or direct observation of vernal pools were observed in the survey area.

[1]List of sensitive vegetation communities and habitats obtained from CNDDB and USFWS Critical Habitat Portal (CNDDB 2021a; USFWS 2021a).
[2]Community and habitat descriptions acquired from CNDDB and the U.C. Santa Barbara (UCSB) California Gap Analysis Project (CNDDB 2021a; UCSB 2012).
[3]Communities observed during field surveys indicated with **bold** font and gray highlight, and are discussed further in the report.

SPECIAL-STATUS BOTANICAL SPECIES					
Scientific/Common Name[1]	**Listing Status[2]**	**Blooming Period[3]**	**Habitat Type[3]**	**Observed/ Habitat Present?[4]**	**Comments**
Amsinckia douglasiana Douglas' fiddleneck	CRPR 4.2	March – May	Unstable shaly sedimentary slopes. Elevation: 100 – 1,600 m.	No / No	No suitable habitat on site.
Antirrhinum ovatum Oval-leaved snapdragon	CRPR 4.2	May – July	Heavy, adobe clay soils on gentle, open slopes, also disturbed areas. Elevation: 200 – 1,400 m.	No / No	No suitable habitat on site.
Arctostaphylos hooveri Hoover's manzanita	CRPR 4.3	February – April	Rocky slopes, upland chaparral, open ponderosa-pine forest near coast. Elevation: 450 – 1,100 m.	No / No	No suitable habitat on site.
Aristocapsa insignis Indian Valley spineflower	CRPR 1B.2	May – September	Cismontane woodland with sandy soils. Elevation: 300 – 600 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Astragalus macrodon Salinas milkvetch	CRPR 4.3	April – June	Eroded pale shales or sandstone, serpentine alluvium. Elevation: 200 – 1,500 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Calochortus simulans La Panza mariposa lily	CRPR 1B.3	May – July	Sand (often granitic), grassland, and yellow pine forest. Elevation: < 1,100 m.	No / No	No suitable habitat on site.
Calycadenia villosa Dwarf calycadenia	CRPR 1B.1	May – September	Dry, rocky hills, ridges, grassland, openings in foothill woodland. Elevation: 250 – 850 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.

SPECIAL-STATUS BOTANICAL SPECIES					
Scientific/Common Name[1]	**Listing Status[2]**	**Blooming Period[3]**	**Habitat Type[3]**	**Observed/ Habitat Present?[4]**	**Comments**
Calystegia collina subsp. *venusta* South Coast Range morning-glory	CRPR 4.3	April – June	Open grassy, rocky places, or open oak/pine woodland, serpentine. Elevation: < 600 m.	No / No	No suitable habitat on site.
Camissoniopsis hardhamiae Hardham's evening-primrose	CRPR 1B.2	March – May	Sandy soil, limestone, disturbed oak woodland. Elevation: 240 – 600 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Castilleja densiflora subsp. *obispoensis* San Luis Obispo owl's-clover	CRPR 1B.2	March – June	Coastal grassland. Elevation: < 400 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Caulanthus lemmonii Lemmon's jewelflower	CRPR 1B.2	March – May	Grassland, chaparral, and scrub. Elevation: 80 – 1,100 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Ceanothus cuneatus var. *fascicularis* Lompoc ceanothus	CRPR 4.2	February – May	Sandy substrates, coastal chaparral. Elevation: < 275 m.	No / No	No suitable habitat on site.
Chorizanthe douglasii Douglas' spineflower	CRPR 4.3	April – July	Sand or gravel associated with chaparral, scrub, woodland, grassland, and forest habitats. Elevation: 300 – 1,600 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Chorizanthe palmeri Palmer's spineflower	CRPR 4.2	May – August	Serpentine soil associated with chaparral, scrub, grassland, and woodland habitats. Elevation: 60 – 700 m.	No / No	No suitable habitat on site.

SPECIAL-STATUS BOTANICAL SPECIES					
Scientific/Common Name[1]	**Listing Status[2]**	**Blooming Period[3]**	**Habitat Type[3]**	**Observed/ Habitat Present?[4]**	**Comments**
Chorizanthe rectispina Straight-awned spineflower	CRPR 1B.3	May – July	Sand or gravel associated with scrub, chaparral, and woodland habitats. Elevation: 200 – 600 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Convolvulus simulans Small-flowered morning-glory	CRPR 4.2	April – June	Clay substrates, occasionally serpentine, annual grassland, coastal-sage scrub, chaparral. Elevation: 30 – 875 m.	No / No	No suitable habitat on site.
Delphinium parryi subsp. *eastwoodiae* Eastwood's larkspur	CRPR 1B.2	March – May	Coastal chaparral and grassland on serpentine. Elevation: 100 – 500 m.	No / No	No suitable habitat on site.
Eriastrum luteum Yellow-flowered eriastrum	CRPR 1B.2	May – June	Drying slopes, in sandy or gravelly soil associated with chaparral or woodland. Elevation: < 1,000 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Eriogonum elegans Elegant wild buckwheat	CRPR 4.3	May – November	Sand or gravel. Elevation: 200 – 1,200 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Eriogonum nudum var. indictum Protruding buckwheat	CRPR 4.2	May – October	Clay substrates. Chaparral, chenopod scrub, cismontane woodland. Elevation: 100 – 1,100 m.	No / No	No suitable habitat on site.
Eriogonum temblorense Temblor buckwheat	CRPR 1B.2	May – September	Valley and foothill grassland in barren clay or sandstone substrates. Elevation: 300 – 900 m.	No / No	No suitable habitat on site.
Eschscholzia hypecoides San Benito poppy	CRPR 4.3	March – June	Grassy areas in woodland, chaparral. Elevation: 200 – 1,600 m.	No / No	No suitable habitat on site.

SPECIAL-STATUS BOTANICAL SPECIES					
Scientific/Common Name[1]	**Listing Status[2]**	**Blooming Period[3]**	**Habitat Type[3]**	**Observed/ Habitat Present?[4]**	**Comments**
Fritillaria agrestis Stinkbells	CRPR 4.2	March – June	Clay (generally serpentine) banks, depressions. Elevation: < 500 m.	No / No	No suitable habitat on site.
Galium andrewsii subsp. *gatense* Phlox-leaf serpentine bedstraw	CRPR 4.2	April – June	Dry, rocky places in serpentine soil, chaparral or open oak/pine woodland. Elevation: 220 – 1,450 m.	No / No	No suitable habitat on site.
Gilia latiflora subsp. *cuyamensis* Cuyama gilia	CRPR 4.3	March – May	Sandy flats, pinyon/juniper woodland, lower river valleys. Elevation: 600 – 2,100 m.	No / No	No suitable habitat on site.
Gilia tenuiflora subsp. *amplifaucalis* Trumpet-throated gilia	CRPR 4.3	March – April	Sandy soil of dry creeks, floodplains, slopes. Elevation: 39 – 900 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Hesperevax caulescens Hogwallow starfish	CRPR 4.2	March – June	Drying shrink-swell clay of vernal flats, steep slopes (sometimes serpentine). Elevation: < 500 m.	No / No	No suitable habitat on site.
Horkelia cuneata var. *puberula* Mesa horkelia	CRPR 1B.1	February – September	Dry, sandy coastal chaparral, scrub, and woodland. Elevation: 70 – 870 m.	No / No	No suitable habitat on site.
Horkelia cuneata var. *sericea* Kellogg's horkelia	CRPR 1B.1	April – September	Old dunes, coastal sandhills in woodland, scrub, and chaparral openings. Elevation: < 200 m.	No / No	No suitable habitat on site.
Juncus luciensis Santa Lucia dwarf rush	CRPR 1B.2	April – August	Wet, sandy soils of seeps, meadows, vernal pools, streams, roadsides. Elevation: 300 – 1,900 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.

SPECIAL-STATUS BOTANICAL SPECIES					
Scientific/Common Name[1]	**Listing Status[2]**	**Blooming Period[3]**	**Habitat Type[3]**	**Observed/ Habitat Present?[4]**	**Comments**
Lasthenia ferrisiae Ferris' goldfields	CRPR 4.2	February – May	Vernal pools or wet saline flats. Elevation: < 700 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Lasthenia leptalea Salinas Valley goldfields	CRPR 4.3	February – May	Openings in woodland. Elevation: < 500 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Lepidium jaredii Jared's peppergrass	CRPR 1B.2	March – April	Alkali bottoms, slopes, washes, dry hillsides in vertic clay, acidic, and gypsiferous soils. Elevation: 500 – 700 m.	No / No	No suitable habitat on site.
Lessingia tenuis spring lessingia	CRPR 4.3	May – July	Openings in chaparral, woodland. Elevation: 50 – 2,200 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Malacothamnus jonesii Jones' bush-mallow	CRPR 4.3	May – July	Open chaparral in foothill woodland. Elevation: 250 – 830 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Monolopia gracilens Woodland woollythreads	CRPR 1B.2	March – July	Serpentine grassland, open chaparral, oak woodland. Elevation: 100 – 1,200 m.	No / No	No suitable habitat on site.
Navarretia fossalis Spreading navarretia	Fed: Threatened CRPR 1B.1	April – June	Vernal pools, ditches. Elevation: 30 – 1,300 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.
Navarretia nigelliformis subsp. *radians* Shining navarretia	CRPR 1B.2	May – July	Vernal pools, clay depressions. Elevation: 150 – 1,000 m.	No / Yes	Species not observed during survey; however, survey not conducted during typical blooming period.

SPECIAL-STATUS BOTANICAL SPECIES					
Scientific/Common Name[1]	**Listing Status[2]**	**Blooming Period[3]**	**Habitat Type[3]**	**Observed/ Habitat Present?[4]**	**Comments**
Senecio aphanactis Chaparral ragwort	CRPR 2B.2	January – May	Alkaline flats, dry open rocky areas. Elevation: 10 – 550 m.	No / No	No suitable habitat on site.
Stebbinsoseris decipiens Santa Cruz microseris	CRPR 1B.2	April – May	Open, sandy, shaly, or serpentine sites, coastal. Elevation: 10 – 500 m.	No / No	No suitable habitat on site.

[1] List of regionally occurring special-status species acquired from CNDDB (CDFW 2021a), CCH (2021), and CNPS Rare and Endangered Plant Inventory (CNPS 2021a), and local expert knowledge.

[2] Listing status obtained from CNDDB (CDFW 2021a) and CNPS Rare and Endangered Plant Inventory (CNPS 2021a).

[3] Blooming period and habitat type obtained from Jepson eFlora (Jepson Flora Project 2021) and occasionally supplemented with information provided by CNPS (CNPS 2021a).

[4] Species observed during field surveys indicated with **bold font**; species determined to have suitable habitat present on the site, even marginally suitable habitat, indicated with gray highlight. Species highlighted gray are discussed further in the report.

SPECIAL-STATUS WILDLIFE SPECIES					
Scientific/Common Name[1]	**Listing Status[1]**	**Nesting/ Breeding Period[2]**	**Habitat Type[2]**	**Observed/ Habitat Present?[3]**	**Comments / Potential for Occurrence**
Actinemys marmorata Southwestern pond turtle	State: Species of Special Concern (SSC)	April – May	Typically found in various freshwater habitats including ponds, lakes, rivers, streams, and marshes. Preferentially, this species utilizes deeper pools with abundant vegetation and muddy bottoms where it can burrow in the mud to hibernate during winter months or aestivate during summer droughts.	No / Yes	Suitable aquatic habitat present within the pond and drainages.
Agelaius tricolor Tricolored blackbird	State: SSC	February – August	Needs nest sites near open, fresh water, protected habitat (such as cattails or tall rushes), and suitable feeding areas (e.g., pastures, rice fields, or grassland).	No / Yes	Marginal nesting habitat present around the pond edge.
Ambystoma californiense California tiger salamander – central California DPS	Fed: Threatened State: Threatened, Watch List	December – February	Found in grasslands, oak savanna, and edges of mixed woodland and lower elevation coniferous forest. Nocturnal and fossorial, uses abandon rodent burrows.	No / No	Outside of known species range, not expected to occur.
Ammospermophilus nelsoni Nelson's antelope squirrel	State: Threatened	November – March	Desert open scrub communities and grasslands with low to moderate shrub cover. Low foothills and mountains of San Joaquin Valley.	No / No	No suitable habitat on site, not expected to occur.
Anniella pulchra Northern California legless lizard	State: SSC	March – November	Sandy or loose loamy soils under coastal scrub or oak trees. Soil moisture essential.	No / Yes	Suitable habitat present in oak woodland.

SPECIAL-STATUS WILDLIFE SPECIES					
Scientific/Common Name[1]	**Listing Status[1]**	**Nesting/ Breeding Period[2]**	**Habitat Type[2]**	**Observed/ Habitat Present?[3]**	**Comments / Potential for Occurrence**
Antrozous pallidus Pallid bat	State: SSC	October – February	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. May roost in hollow trees and old buildings.	No / No	No suitable habitat on site, not expected to occur.
Aquila chrysaetos Golden eagle	State: Fully Protected	January – August	Open country in prairies, tundra, open coniferous forest, and barren areas, especially in hilly or mountainous regions. Nests in large, prominent trees in wooded areas and on cliff ledges.	No / Yes	Marginal nesting habitat in oak trees on site.
Arizona elegans occidentalis California glossy snake	State: SSC	June – July	Arid scrub, rocky washes, grasslands, and chaparral. Prefers microhabitats of open areas and areas with loose soil for easy burrowing.	No / No	No suitable habitat on site, not expected to occur.
Athene cunicularia Burrowing owl	State: SSC	March – July	Open, dry grasslands and deserts. Will use the burrows of other terrestrial animals. Also found in cleared residential areas such as vacant lots and golf courses.	No / Yes	Marginal nesting habitat in grassland on site.
Branchinecta lynchi Vernal pool fairy shrimp	Federal: Threatened	Winter – Spring	Vernal pools and depressions in grasslands.	No / Yes	Suitable habitat in wetlands on site.
Buteo swainsoni Swainson's hawk	State: Threatened	March – August	Prefers open grasslands and desert-like habitats; common to see perched on a fence looking for prey. Also found in agricultural areas. Nests in trees.	No / Yes	Marginal foraging and nesting habitat along southern edge of site.

SPECIAL-STATUS WILDLIFE SPECIES					
Scientific/Common Name[1]	**Listing Status[1]**	**Nesting/ Breeding Period[2]**	**Habitat Type[2]**	**Observed/ Habitat Present?[3]**	**Comments / Potential for Occurrence**
Corynorhinus townsendii Townsend's big-eared bat	State: SSC	November – May	Mines, tunnels, buildings, and human made structures. May use different day and night roosts. Prefers mesic habitats. Extremely sensitive to human disturbance.	No / No	No suitable roosting habitat on site, not expected to occur.
Coturnicops noveboracensis Yellow rail	State: SSC	May – September	Shallow marshes with fairly short vegetation. Nest on the ground, usually in upper, unflooded, parts of a sedge marsh, where there is relatively dense vegetation. Breeds in northeastern California with records from Modoc, Siskiyou, Mono, and Plumas Counties. Winters along coastal California, northern San Joaquin Valley, and San Francisco Bay region.	No / No	Outside of species known breeding range, not expected to occur.
Eremophila alpestris actia California horned lark	State: Watch List	March - August	Open fields, short grass areas, fields, rangelands.	No / Yes	Marginal nesting habitat in grassland on site.
Falco mexicanus Prairie falcon	State: Watch List	February – July	Primarily inhabits dry grasslands, woodlands, savannahs, cultivated fields, lake shores, and rangelands. Primarily nests on cliffs, canyons, and rock outcrops.	No / No	No suitable nesting habitat on site, not expected to occur.
Lavinia exilicauda harengus Monterey hitch	State: SSC	May – August	Primarily inhabit lowland areas with large pools or small reservoirs. Also observed in highly altered aquatic sites near agriculture.	No / No	No suitable habitat on site, not expected to occur.

SPECIAL-STATUS WILDLIFE SPECIES					
Scientific/Common Name[1]	**Listing Status[1]**	**Nesting/ Breeding Period[2]**	**Habitat Type[2]**	**Observed/ Habitat Present?[3]**	**Comments / Potential for Occurrence**
Masticophis flagellum ruddocki San Joaquin coachwhip	State: SSC	Late Spring – Summer	Open dry, treeless areas such as grasslands or saltbush scrub. Uses refugia in rodent burrows, under shaded vegetation or surface objects.	No / Yes	Marginal habitat along southern edge of site.
Onychomys torridus tularensis Tulare grasshopper mouse	State: SSC	May – July	Arid open scrub and semi-scrub habitats. Prefers compact soils with sparse perennial grasses.	No / No	No suitable habitat on site, not expected to occur.
Perognathus inornatus psammophilus Salinas pocket mouse	State: SSC	March – July	Dry, open, grassy or weedy ground, and arid annual grasslands, savanna, and desert-shrub associations with sandy washes or finely textured soil. Rarely documented in blue oak savannah.	No / No	No suitable habitat on site, not expected to occur.
Phrynosoma blainvillii Coast horned lizard	State: SSC	May – September	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	No / No	No suitable habitat on site, not expected to occur.
Rana draytonii California red-legged frog	Federal: Threatened State: SSC	January – March	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation.	No / Yes	Suitable aquatic habitat present within the pond and drainages.
Riparia riparia Bank swallow	State: Threatened	Spring – Summer	Found in small to large colonies in soft banks and bluffs adjacent to riparian areas.	No / No	No suitable habitat on site, not expected to occur.
Spea hammondii Western spadefoot toad	State: SSC	January – August	Seasonal/vernal pools in coastal scrub, grassland, chaparral, woodland habitat, and open areas with sandy or gravelly soils.	No / Yes	Marginal aquatic habitat present within the pond and drainages.

SPECIAL-STATUS WILDLIFE SPECIES					
Scientific/Common Name[1]	**Listing Status[1]**	**Nesting/ Breeding Period[2]**	**Habitat Type[2]**	**Observed/ Habitat Present?[3]**	**Comments / Potential for Occurrence**
Taxidea taxus American badger	State: SSC	Late Summer – Early Fall	Dry, open fields with friable soil for tunneling and foraging.	No / Yes	Marginal habitat in grassland on site.
Vireo bellii pusillus Least Bell's vireo	Federal: Endangered State: Endangered	March – September	Dense, shrubby vegetation in brushy fields, second growth forest, woodland, riparian, chaparral, and mesquite brush lands; often near water in arid regions. Nests suspended from branches of small trees or shrubs.	No / No	No suitable habitat on site, not expected to occur.
Vulpes macrotis mutica San Joaquin kit fox	Federal: Endangered State: Threatened	December – July	Open, annual grasslands with loose, sandy soil.	No / Yes	Marginal habitat along southern edge and adjacent to project site. Within County mitigation area.

[1] List of regionally occurring special-status species and listing status acquired from CNDDB (CDFW 2021a) and local expert knowledge. See Status Codes. Limited information exists for State listed Special Animals such as Atascadero June beetle, Lompoc grasshopper, and San Joaquin pocket mouse, and therefore are not addressed in this report.

[2] Life history information obtained from multiple sources, including CaliforniaHerps.com (Nafis 2021), CNDDB (CDFW 2021a), and USFWS Environmental Conservation Online System (ECOS) (USFWS 2021a).

[3] Species observed during field surveys indicated with **bold font**; species determined to have suitable habitat present on the site, even marginally suitable habitat, indicated with gray highlight. Species highlighted gray are discussed further in the report.

APPENDIX D – BOTANICAL AND WILDLIFE SPECIES OBSERVED

This page intentionally left blank.

Hunter Ranch Golf Course Project
List of Botanical Species Observed on December 2, 2021

Family	Scientific Name	Common Name	Origin
Agavaceae, Century Plant Family	*Chlorogalum pomeridianum* var. *pomeridianum*	Common soap plant	Native
Amaranthaceae, Amaranth Family	*Amaranthus albus*	Tumbleweed	Naturalized
Apiaceae Carrot Family	*Eryngium vaseyi*	Coyote-thistle	Native
Apocynaceae, Dogbane Family	*Asclepias fascicularis*	Narrow-leaf milkweed	Native
	Nerium oleander	Common oleander	Naturalized
Asteraceae, Sunflower Family	*Achillea millefolium*	Yarrow	Native
	Baccharis pilularis	Coyote brush	Native
	Centaurea solstitialis	Yellow star-thistle	Naturalized
	Cirsium vulgare	Bull thistle	Naturalized
	Croton setiger	Turkey-mullein	Native
	Erigeron bonariensis	Flax-leaved horseweed	Naturalized
	Heterotheca grandiflora	Telegraph weed	Native
	Lactuca serriola	Prickly lettuce	Naturalized
	Sonchus sp.	Sowthistle	Naturalized
Boraginaceae, Borage Family	*Amsinckia* sp.	Fiddleneck	Native
Brassicaceae, Mustard Family	*Hirschfeldia incana*	Mustard	Naturalized
Caprifoliaceae, Honeysuckle Family	*Lonicera subspicata* var. *denudata*	Johnston's honeysuckle	Native
Chenopodiaceae, Goosefoot Family	*Atriplex semibaccata*	Australian saltbush	Naturalized
	Chenopodium album	Lamb's quarters	Naturalized
	Salsola tragus	Russian thistle	Naturalized
Cyperaceae, Sedge Family	*Cyperus eragrostis*	Tall cyperus	Native
	Schoenoplectus acutus var. *occidentalis*	Common tule	Native
Ericaceae, Heath Family	*Arctostaphylos* sp.	Manzanita	Native
Fabaceae, Legume Family	*Acmispon strigosus*	Strigose lotus	Native
	Cercis occidentalis	Redbud	Native
	Lupinus sp.	Lupine	Native

Family	Scientific Name	Common Name	Origin
Fabaceae, Legume Family	*Lupinus bicolor*	Miniature lupine	Native
	Trifolium sp.	Clover	Native
	Vicia villosa	Hairy vetch	Naturalized
Fagaceae, Oak Family	*Quercus agrifolia*	Coast live oak	Native
	Quercus douglasii	Blue oak	Native
	Quercus lobata	Valley oak	Native
Geraniaceae, Geranium Family	*Erodium botrys*	Big heron bill	Naturalized
	Erodium cicutarium	Redstem filaree	Naturalized
Juncaceae, Rush Family	*Juncus* sp.	Rush	Native
Lamiaceae, Mint Family	*Trichostema lanceolatum*	Vinegar weed	Native
Lythraceae, Loosestrife Family	*Lythrum hyssopifolia*	Hyssop loosestrife	Naturalized
Malvaceae, Mallow Family	*Malva parviflora*	Cheeseweed	Naturalized
Montiaceae, Miner's Lettuce Family	*Claytonia* sp.	Miner's lettuce	Native
Onagraceae, Evening-primrose Family	*Clarkia* sp.	Clarkia	Native
	Epilobium brachycarpum	Willow herb	Native
Papaveraceae, Poppy Family	*Eschscholzia californica*	California poppy	Native
Pinaceae, Pine Family	*Pinus coulteri*	Coulter pine	Native
	Pinus sabiniana	Foothill pine	Native
Plantaginaceae, Plantain Family	*Plantago lanceolata*	English plantain	Naturalized
	Veronica anagallis-aquatica	Water speedwell	Naturalized
Poaceae, Grass Family	*Avena* sp.	Oats	Naturalized
	Bromus diandrus	Ripgut brome	Naturalized
	Bromus hordeaceus	Soft chess	Naturalized
	Bromus rubens	Red brome	Naturalized
	Cynodon dactylon	Bermuda grass	Naturalized
	Elymus multisetus	Big squirreltail	Native
	Hordeum murinum	Wall barley	Naturalized
	Muhlenbergia rigens	Deergrass	Native
	Pennisetum setaceum	Crimson fountain grass	Naturalized
	Poa secunda	Nevada blue grass	Native
	Polypogon monspeliensis	Rabbitfoot grass	Naturalized
	Stipa sp.	Needle grass	Native

Family	Scientific Name	Common Name	Origin
Polygonaceae, Buckwheat Family	*Eriogonum nudum* var. *auriculatum*	Ear-shaped wild buckwheat	Native
	Rumex crispus	Curly dock	Native
Rosaceae, Rose Family	*Heteromeles arbutifolia*	Toyon	Native
Rubiaceae, Madder Family	*Galium aparine*	Goose grass	Native
Ranunculaceae, Buttercup Family	*Ranunculus californicus*	Common buttercup	Native
Salicaceae, Willow Family	*Populus fremontii* subsp. *fremontii*	Fremont cottonwood	Native
	Salix lasiandra	Pacific willow	Native
	Salix lasiolepis	Arroyo willow	Native
Solanaceae, Nightshade Family	*Datura wrightii*	Jimsonweed	Native
Typhaceae, Cattail Family	*Typha latifolia*	Broad-leaved cattail	Native
Verbenaceae, Vervain Family	*Verbena lasiostachys* var. *lasiostachys*	Western vervain	Native

Hunter Ranch Golf Course Project

List of Wildlife Species Observed on December 2, 2021

Taxon	Scientific Name	Common Name	*Listing Status Federal/State
Amphibians	*Pseudacris sierra*	Sierran treefrog	--
Birds	*Baeolophus inornatus*	Oak titmouse	--
	Bombycilla cedrorum	Cedar waxwing	--
	Branta canadensis	Canada goose	--
	Buteo jamaicensis	Red-tailed hawk	--
	Callipepla californica	California quail	--
	Cathartes aura	Turkey vulture	--
	Charadrius vociferus	Killdeer	--
	Corvus brachyrhynchos	American crow	--
	Haemorhous mexicanus	House finch	--
	Fulica americana	American coot	--
	Melanerpes formicivorus	Acorn woodpecker	--
	Melospiza lincolnii	Lincoln's sparrow	--
	Phalacrocorax auritus	Double-crested cormorant	--
	Sayornis nigricans	Black phoebe	--
	Sitta carolinensis	White-breasted nuthatch	--
	Streptopelia decaocto	Eurasian collared-dove	--
	Zonotrichia leucophrys	White-crown sparrow	--
Invertebrates	*Apis mellifera*	Western honey bee	--
	Vespula pensylvanica	Western yellowjacket	--
Mammals	*Mephitis mephitis*	Striped skunk	--
	Odocoileus hemionus	Mule deer	--
	Otospermophilus beecheyi	California ground squirrel	--
	Procyon lotor	Raccoon	--
	Sus scrofa	Wild pig	--
	Thomomys bottae	Botta's pocket gopher	--

APPENDIX E – REPRESENTATIVE SITE PHOTOGRAPHS

This page intentionally left blank.

Photo 1. View of golf course with scattered blue oaks and dirt cart path in foreground (12-02-21).

Photo 2. View of blue oak woodlands and adjacent grasslands in the southern portion of the site (12-02-21).

Photo 3. Disturbed area in the middle of the southern edge of the site where grass clippings and other golf course greenwaste was maserated and tilled under(12-02-21).

Photo 4. Disturbed area in the southeast corner of the site (12-02-21).

Photo 5. View northwest toward the pond in the western portion of the site. Common tule is visible along the edges (12-02-21).

Photo 6. Looking downstream along the upper reach of Drainage 1 under the existing bridge. Defined bed and banks and OHWM visible (12-02-21).

Photo 7. View southwest of detension basin that Drainage 1 flows through (12-02-21).

Photo 8. View northeast upstream along Drainage 2 showing defined bed and bank and OHWM (12-02-21).

Photo 9. View west of Drainage 3 showing the in-channel Wetland 9 (12-02-21).

Photo 10. View east looking upstream along Drainage 3 just west of Wetland 9 (12-02-21).

Photo 11. View southeast looking upstream along Drainage 4 showing defined bed and bank but lack of OHWM (12-02-21).

Photo 12. View east of Drainage 5 showing defined bed and bank and evidence of OHWM in upper reach (12-02-21).

Photo 13. View northwest looking upstream along Drainage 6 showing defined bed and bank and evidence of OHWM (12-02-21).

Photo 14. View north along Drainage 7 showing defined bed and bank and evidence of debris wracking (12-02-21).

Photo 15. View north looking upstream along the lower reach of Drainage 8 where it loses definition and likely water flows overland to Drainage 3 (12-02-21).

Photo 16. View southwest looking downstream along Drainage 9 showing defined bed and bank and evidence of OHWM (12-02-21).

Photo 17. View northeast looking upstream along the lower section of Swale 1 downstream of Wetland 7 (12-02-21).

Photo 18. View northeast looking upstream along Swale 2 toward the property boundary (12-02-21).

Photo 19. View southwest looking downstream along Swale 3 towards Drainage 6 (12-02-21).

Photo 20. View of ponded water in Wetland 1 that is located within the channel of Drainage 1 (12-02-21).

Photo 21. View northeast of wetland vegetation with Wetland 2 (12-02-21).

Photo 22. View northeast of the in-channel Wetland 3 associated with Drainage 2 (12-02-21).

Photo 23. View southeast of Wetland 4 near the entrance to the site (12-02-21).

Photo 24. View northeast of Wetland 5 vegetated with cattails (12-02-21).

Photo 25. View northwest of Wetland 6 which showed evidence of hydrology and hydrophytic vegetation (12-02-21).

Photo 26. View southwest of Wetland 7 upstream of Swale 1 (12-02-21).

Photo 27. View west of in-channel Wetland 8 associated with Drainage 3 (12-02-21).

Photo 28. View east of in-channel Wetland 9 associated with Drainage 3 (12-02-21).

Photo 29. View north of in-channel Wetland 10 associated with Drainage 3 (12-02-21).

December 21, 2021

Mr. John King
Hunter Ranch Golf Course
285 Bridge Street
San Luis Obispo, CA 93401

Sent via email c/o Dave Watson: dave@watsonplanning.us

RE: San Joaquin Kit Fox Habitat Evaluation for Hunter Ranch Golf Course, Paso Robles, California (APN: 025-701-004)

Dear Mr. King,

The following San Joaquin kit fox (*Vulpes macrotus mutica*) habitat evaluation and corresponding San Joaquin Kit Fox Habitat Evaluation Form (see Attachment A) has been completed for proposed developments at 4041 Highway 46 East, Paso Robles, California. The intent of this report is to assist the California Department of Fish and Wildlife (CDFW) and/or County of San Luis Obispo with a decision regarding the final compensatory mitigation to offset impacts to San Joaquin kit fox, a species listed as *endangered* by U.S. Fish and Wildlife Service (USFWS) and as *threatened* by the State of California.

Background

Hunter Ranch Golf Course is an established development on approximately 204 acres that currently includes an active 18-hole golf course, driving range, pro-shop/retail store, restaurant, and maintenance facilities with solar carport, accessory parking spaces, and associated access roads. The proposed project consists of remodels to current structures as well as additions that will use undeveloped as well as maintained/converted (i.e., previously disturbed) portions of the property. For the purposes of this kit fox habitat evaluation, only undeveloped and maintained/converted portions of the property will be included in acreage estimates and impact analyses. Aspects of the project that will occur in the interior of existing buildings or over existing concrete work areas (i.e., converting the maintenance building to an event building, etc.) are excluded. The project consists of dividing the existing property into two parcels and developing them both simultaneously in four phases. Parcel 1 (181 acres) would contain the existing golf course and proposed future developments, whereas Parcel 2 (23 acres) would contain a proposed restaurant and 120-unit lodge & spa. A description of the relevant development in each phase is below. A conceptual project plan

dated August 2021, and an impact analysis for the most recent project updates are included as Attachment B to this report.

- Phase 1
    - Parcel 1: New developments include Casitas Blocks #1 and #3, consisting of 28 1,450-ft^2 individual casitas.
    - Parcel 2: New developments include a restaurant and a lodge, consisting of 120 rooms, spa, pool, patio, and a parking lot, totaling 122,600 ft^2.
    - The total permanent ground disturbance for phase 1 is 3.75 acres (163,200 ft^2).
- Phase 2
    - Parcel 1: New developments include Casitas Block #2, consisting of 20 1,450-ft^2 individual casitas; and a 2,000-ft^2 caretaker's unit and five 2,890-ft^2 villas will be established around the periphery of the existing solar carport parking area.
    - The total permanent ground disturbance for phase 2 is 1.04 acres (45,450 ft^2).
- Phase 3
    - Parcel 1: The existing 4,800-ft^2 facilities maintenance building and 30,000-ft^2 driving range will be converted to an event building and Top Golf Driving Tee facility, respectively.
    - Parcel 1: New developments include Casitas Block #4a, consisting of 20 1,450-ft^2 individual casitas; a new 4,800-ft^2 facilities maintenance building will be established in the southeast corner of the parcel; and an additional maintenance parking/open air storage area totaling 16,200-ft^2 will be located in the southwest corner of the parcel.
    - The total permanent ground disturbance for phase 3 is 1.15 acres (50,000 ft^2).
- Phase 4
    - Parcel 1: New developments include Casitas Block #4b, consisting of 24 1,450-ft^2 individual casitas; family/AirBnB units, consisting of 33 units totaling 79,200 ft^2; and a 33,250-ft^2 retail village with 40,000- ft^2 of additional parking area.
    - The total permanent ground disturbance for phase 4 is 4.3 acres (187,250 ft^2).
- Additionally, a wastewater lift station adjacent to Highway 46 East will provide service between approximately 4,500 linear feet (LF) of force main sanitary sewer and 14,200 LF of gravity sanitary sewer main for proposed developments.

The construction of all phases for the proposed development would result in a total permanent disturbance area of approximately 10.24 acres. In order to facilitate construction of the proposed project, an additional 1.70 acres would be temporarily disturbed and restored back to its previous condition upon project completion.

Property Setting

The property is located adjacent to and southeast of Highway 46 East, approximately 3.25 miles east of Highway 101. It is surrounded by active vineyards to the east, fragmented areas of undeveloped land and vineyards to the south, an amphitheater (Vina Robles) to the west, and a large artistic land development project (Sensorio Paso Robles) to the north. Four unnamed U.S. Geological Survey blue line drainages and a pond are located within the property. The drainages are tributaries to Dry

Creek, located approximately 0.5 mile north of the property, and eventually flow to Huer Huero Creek, located approximately 1.0 mile west. Areas within one mile of the project can be classified as a mix of rural residential housing, agricultural land dominated by vineyards, and sparse areas of undeveloped land, mainly in drainages and along road shoulders.

To date, the majority of the 204-acre property has been developed as a heavily landscaped and maintained golf course with associated facilities constructed in the central portion, except for small patches of naturally vegetated areas which are included in the proposed development. This property was developed for use as a golf course since at least 1994, as verified by Google Earth aerial imagery. Attachment C of this report contains a series of maps, illustrating the current and historical land use of the property and surrounding properties. The new developments are proposed in areas that were converted from oak woodland and annual grassland to their current state as a heavily landscaped golf course. However, small patches of remnant oak woodland have remained throughout the property. The understory of these remnant patches has been maintained for esthetics and fire prevention, but the tree canopy and soils have not been developed.

The property is within the San Luis Obispo County-designated 3 to 1 mitigation area for San Joaquin kit fox. Because the property is larger than 40 acres, a San Joaquin Kit Fox Habitat Evaluation Form was completed per the County of San Luis Obispo Guidelines (Attachment A).

San Joaquin Kit Fox Habitat Evaluation

Terra Verde wildlife biologists, Patrick Scott, Sara Snyder, and Blake Maule, with experience working with San Joaquin kit foxes, conducted a San Joaquin kit fox habitat assessment consisting of a background review of historically documented kit fox observations and a site visit during which existing site conditions were noted; the overall biological community was identified; and the proposed development areas of the property were surveyed for the presence of suitable habitat, sign, or direct observations of San Joaquin kit fox.

No San Joaquin kit foxes or their sign (e.g., scat or tracks) were observed in the project area during the site visit. The nearest extant San Joaquin kit fox core population occurs approximately 75 miles southeast of the project site in the California Valley/Carrizo Plain National Monument area (*Recovery Plan for Upland Species of the San Joaquin Valley*, USFWS 1998). A historic subpopulation of kit foxes is documented within the Salinas River Watershed (i.e., Camp Roberts), approximately 9 miles northwest of the project site. Therefore, the Hunter Ranch Golf Course property may be considered within a movement corridor, linking the extant core population in Carrizo Plain with intact habitat that once supported a population of kit foxes. Observation records in the California Department of Fish and Wildlife's California Natural Diversity Database within 5 miles of the project site are few and occurred during the early 1990s, prior to large amounts of residential and vineyard/winery development.

The undeveloped areas of the project site consist of highly modified and maintained golf greens, remnant blue oak (*Quercus douglasii*) woodland with ruderal herbaceous cover, and bare ground. A small patch of scattered coyote brush (*Baccharis pilularis*) is present on the eastern side of the Phase 1 - Parcel 2 area and young blue oak mitigation plantings from previous development are present along the eastern boundary of the property. There is little evidence of prey species, such as

California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*), except for few burrows in relatively loose soils on slopes. In most undeveloped areas, the soil was highly compacted with no sign of mammalian prey. Photos depicting the state of the property as of November 3, 2021, are included as Attachment D to this report.

No new fences are proposed, and the project is not expected to have a future impact on passage for kit foxes between adjacent properties, mainly due to the size and quality of the areas proposed for development and the low suitability of habitat for kit foxes in the surrounding areas. Likely paths of kit fox travel in the project vicinity are the Dry Creek and Huer Huero Creek corridors, as well as the existing unpaved roads in the surrounding property's rather than through the existing golf course. Once the project is complete, there may be an increase in traffic on Mill Road and State Route 46 or on unpaved roads surrounding the property, which could affect dispersing kit foxes. However, because kit fox use of the potential corridor in which the property lies is largely unknown, the potential for increased mortality of kit foxes due to the proposed project is unknown.

Should you have any questions regarding the information provided, please contact me at pscott@terraverdeweb.com or (714) 362-6667.

Sincerely,

Patrick Scott
Wildlife Biologist

Attachments:
Attachment A – Kit Fox Habitat Evaluation Form
Attachment B – Conceptual Project Plan (August 2, 2021) and Updated Impact Analysis (November 24, 2021)
Attachment C – Maps
Attachment D – Representative Site Photographs

ATTACHMENT A – KIT FOX HABITAT EVALUATION FORM

This page intentionally left blank.

Kit Fox Habitat Evaluation Form

(guidelines)

Cover Sheet

Project Name_____

Date_____

Project Location* _____

*Include project vicinity map and project boundary on copy of U.S.G.S. 7.5 minute map (size may be reduced)

U.S.G.S. Quad Map Name

_____

Lat/Long or UTM coordinates (if available)

_____

Project Description:

Project Size _____**Acres** **Amount of Kit Fox Habitat Affected**_____**Acres**

Quantity of WHR Habitat Types Impacted (i.e. - 2 acres annual grassland, 3 acres blue oak woodland)

WHR type_____ _____Acres

WHR type_____ _____Acres

WHR type_____ _____Acres

WHR type_____ _____Acres

Comments:_____

_____

Form Completed By:

Rev 3/02
G:envdiv/forms/kit fox habitat

San Joaquin Kit Fox Habitat Evaluation form

Is the project area within 10 miles of a recorded San Joaquin kit fox observation or within contiguous suitable habitat as defined in question 2 (A-E)

Yes - Continue with evaluation form
No - Evaluation form/surveys are not necessary

1. Importance of the project area relative to Recovery Plan for Upland Species of the San Joaquin Valley, California (Williams et al., 1998)

   A. Project would block or degrade an existing corridor linking core populations or isolate a subpopulation (20)
   B. Project is within core population (15)
   C. Project area is identified within satellite populations (12)
   D. Project area is within a corridor linking satellite populations (10)
   E. Project area is not within any of the previously described areas but is within known kit fox range (5)

2. Habitat characteristics of project area.

   A. Annual grassland or saltbush scrub present >50% of site (15)
   B. Grassland or saltbush scrub present but comprises<50% of project area (10)
   C. Oak savannah present on >50% of site (8)
   D. Fallow ag fields or grain/alfalfa crops (7)
   E. Orchards/vineyards (5)
   F. Intensively maintained row crops or suitable vegetation absent (0)

3. Isolation of project area.

   A. Project area surrounded by contiguous kit fox habitat as described in Question 2a-e (15)
   B. Project area adjacent to at least 40 acres of contiguous habitat or part of an existing corridor (10)
   C. Project area adjacent to <40 acres of habitat but linked by existing corridor (i.e., river, canal, aqueduct) (7)
   D. Project area surrounded by ag but less than 200 yards from habitat (5)

E. Project area completely isolated by row crops or development and is greater than 200 yards from potential habitat (0)

4. Potential for increased mortality as a result of project implementation. Mortality may come from direct (e.g., - construction related) or indirect (e.g., - vehicle strikes due to increases in post development traffic) sources.

   A. Increased mortality likely (10)
   B. Unknown mortality effects (5)
   C. No long term effect on mortality (0)

Revised 03-02

5. Amount of potential kit fox habitat affected.

   A. >320 acres (10)
   B. 160 - 319 acres (7)
   C. 80 - 159 acres (5)
   D. 40 - 79 acres (3)
   E. < 40 acres (1)

6. Results of project implementation.

   A. Project site will be permanently converted and will no longer support foxes (10)
   B. Project area will be temporarily impacted but will require periodic disturbance for ongoing maintenance (7)
   C. Project area will be temporarily impacted and no maintenance necessary (5)
   D. Project will result in changes to agricultural crops (2)
   E. No habitat impacts (0)

7. Project Shape

   A. Large Block (10)
   B. Linear with > 40 foot right-of-way (5)
   C. Linear with < 40 foot right-of-way (3)

8. Have San Joaquin kit foxes been observed within 3 miles of the project area within the last 10 years?

   A. Yes (10)
   B. No (0)

Scoring

1. Recovery importance _____
2. Habitat condition _____

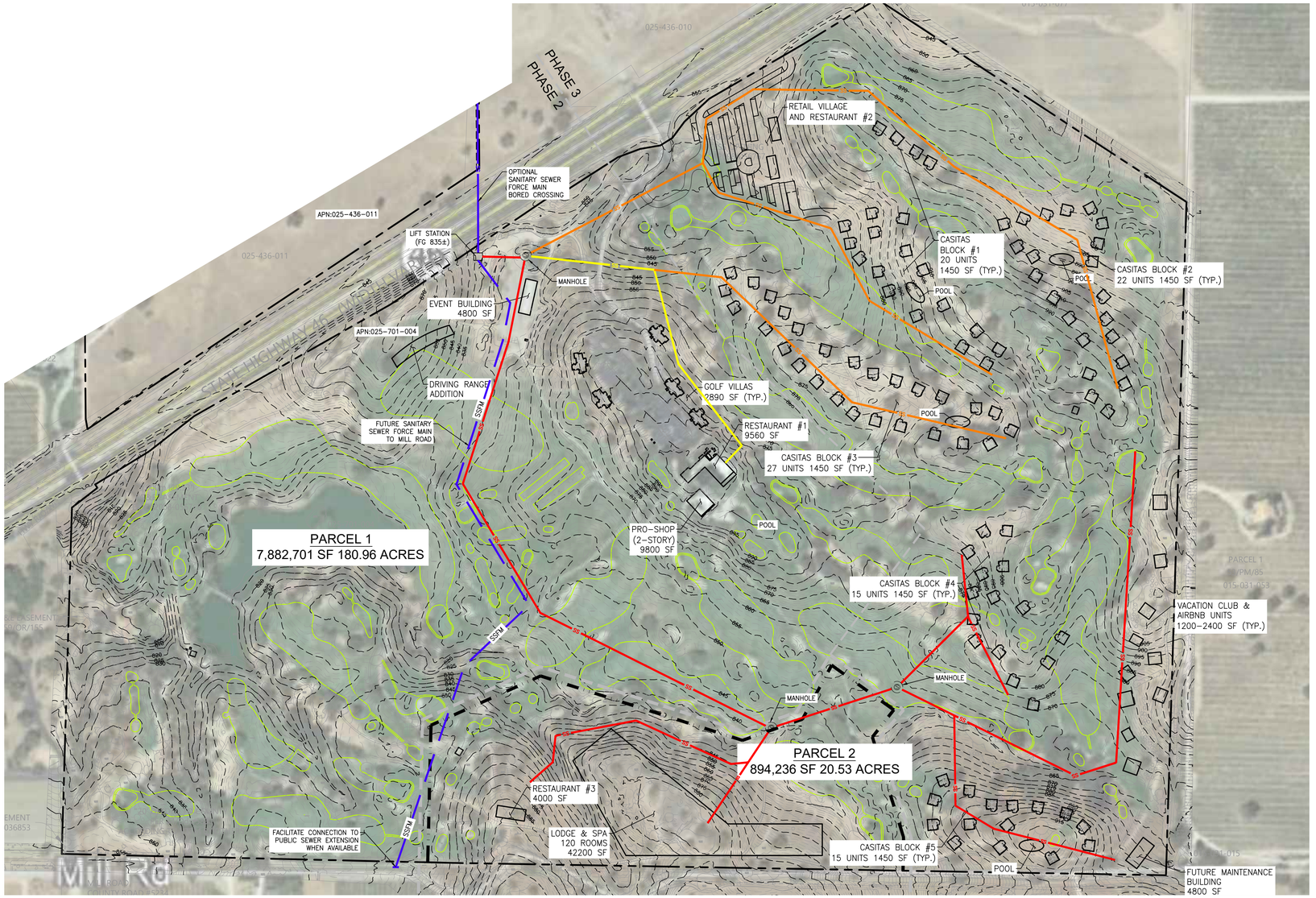
3. Isolation _____
4. Mortality _____
5. Quantity of habitat impacted _____
6. Project results _____
7. Project shape _____
8. Recent observations _____

TOTAL _____

Revised 03/02-lpd

ATTACHMENT B – CONCEPTUAL PROJECT PLANS AND UPDATED IMPACT ANALYSIS

This page intentionally left blank.



GENERAL LEGEND

- EXISTING/PROPOSED CENTERLINE (℄)
- EXISTING PROPERTY LINE (EX. ℘)
- PROPOSED PROPERTY LINE (℘)
- PROPOSED SETBACK LINE
- EXISTING/PROPOSED EASEMENT
- FIRE ZONE
- GOLF GREENS & TEE BOXES

SANITARY SEWER LEGEND:

- PROPOSED GRAVITY SANITARY SEWER MAIN (PHASE 1) – 7,400± LF
- PROPOSED GRAVITY SANITARY SEWER MAIN (PHASE 2) – 1,200± LF
- PROPOSED GRAVITY SANITARY SEWER MAIN (PHASE 3) – 5,600± LF
- PROPOSED FORCE MAIN SANITARY SEWER (PHASE 1) – 4,500± LF
- PROPOSED FUTURE FORCE MAIN TO MILL ROAD EXTENSION – 2,400± LF
- EXISTING CITY MAIN SANITARY SEWER
- SANITARY SEWER MANHOLE (SSMH)
- LIFT STATION
- SANITARY SEWER CLEANOUT TO GRADE (SSCO). CLEANOUT IS REQUIRED AT ANGLE POINTS AND EVERY 100' FOR GRAVITY SEWER LINES. ADDITIONALLY CLEANOUTS ARE REQUIRED EVERY 300' FOR FORCE MAIN SEWER LINES.

EXISTING & ADDITIONS

1. RESTAURANT #1
2. PRO-SHOP/RETAIL
3. GOLF COURSE
4. MAINTENANCE BUILDING
5. DRIVING RANGE
6. SOLAR CARPORT

PHASE 1

PARCEL 1

1. CASITAS BLOCK #4 (15 UNITS)
2. CASITAS BLOCK #5 (15 UNITS)
3. FUTURE MAINTENANCE BUILDING

PARCEL 2

1. LODGE, RESTAURANT #3, & SPA (120 UNITS)

PHASE 2

PARCEL 1

1. GOLF VILLAS (5 UNITS)
2. CONVERT (E) MAINTENANCE BUILDING TO EVENT BUILDING

PHASE 3

PARCEL 1

1. CASITAS BLOCK #2 (22 UNITS)
2. CASITAS BLOCK #3 (27 UNITS)
3. VACATION CLUB & AIRBNB UNITS (20 UNITS)

PARCEL 2

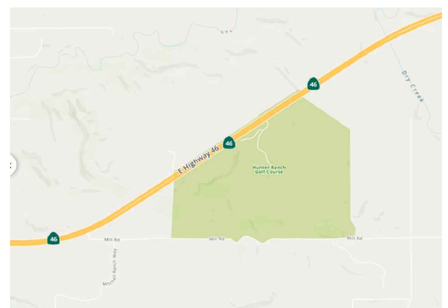
1. RETAIL VILLAGE & RESTAURANT #2
2. CASITAS BLOCK #1 (20 UNITS)

0 200' 400'

SCALE: 1" = 200'

811 Know what's below. Call 811 before you dig.

NOTE: UTILITIES SHOWN WERE PLOTTED FROM OBSERVED EVIDENCE AND PLANS OBTAINED FROM UTILITY PROVIDERS. EXACT LOCATIONS AND QUANTITIES MAY VARY. THE CONTRACTOR SHALL CALL 811 FOR UTILITY LOCATING SERVICES PRIOR TO EXCAVATION AND USE EXTREME CAUTION WHEN EXPOSING UTILITIES. ANY DAMAGE TO EXISTING UTILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.



VICINITY MAP

NTS

HUNTER RANCH

NO.	DATE	REVISIONS
1		
2		
3		
4		

WALSH ENGINEERING
WALSHENGINEERING.NET (805) 319-4948
1108 GARDEN STREET, SUITE 202-204 SAN LUIS OBISPO, CA 93401

HUNTER RANCH GOLF COURSE LLC

HUNTER RANCH

4041 CA-46, PASO ROBLES, CA 93446

REGISTERED PROFESSIONAL ENGINEER MATTHEW R. WALSH C 79026 STATE OF CALIFORNIA

NOT FOR CONSTRUCTION

DESIGNED BY:	DAP
CHECKED BY:	MRW
APPROVED BY:	MRW
DATE:	08/02/2021

CONCEPTUAL SITE PLAN

SHEET 1 OF 1

saved: 8/2/2021, plotted: 8/2/2021, path: s:\projects_eng\2018036_hunter ranch_king ventures\drawing\utility plans.dwg

Hunter Ranch Kit Fox Impacts

Paso Robles, CA

EXISTING SITE DEVELOPMENT
226,172 SF (5,2 AC) = Existing Parking, Paths, Bldgs
7,483,608 SF (171.8 AC) = Golf Course
7,709,780 SF (177.0 AC) = Existing Total

DEVELOPMENT SITES

PHASE 1
Lodge-120 rms-Spa-Restaurant (red) = 122,600 SF
Casitas Blocks #1 & #3-28 units (purple) = 40,600 SF
Phase 1 Totals = 163,200 SF = 3.75 AC

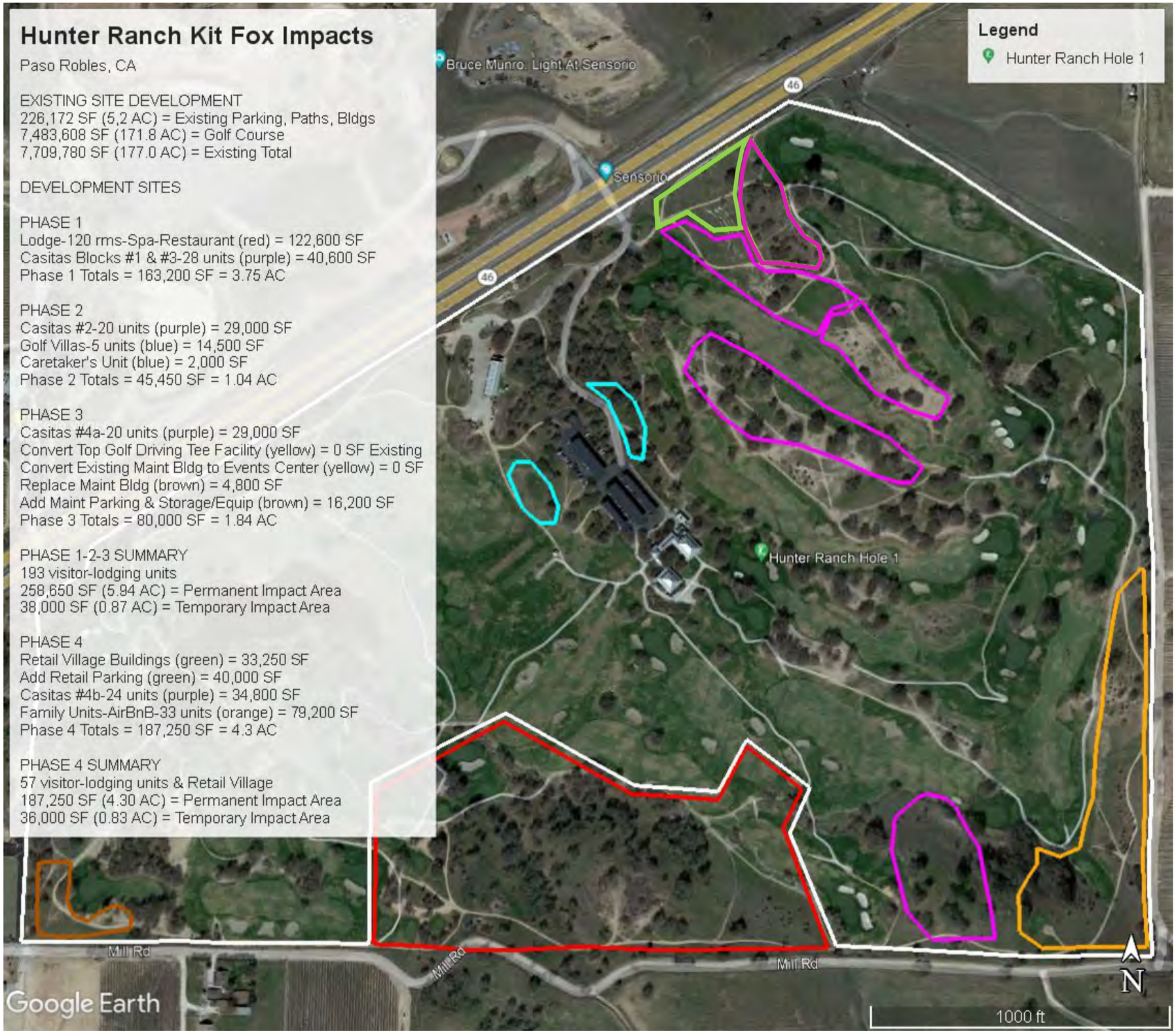
PHASE 2
Casitas #2-20 units (purple) = 29,000 SF
Golf Villas-5 units (blue) = 14,500 SF
Caretaker's Unit (blue) = 2,000 SF
Phase 2 Totals = 45,450 SF = 1.04 AC

PHASE 3
Casitas #4a-20 units (purple) = 29,000 SF
Convert Top Golf Driving Tee Facility (yellow) = 0 SF Existing
Convert Existing Maint Bldg to Events Center (yellow) = 0 SF
Replace Maint Bldg (brown) = 4,800 SF
Add Maint Parking & Storage/Equip (brown) = 16,200 SF
Phase 3 Totals = 80,000 SF = 1.84 AC

PHASE 1-2-3 SUMMARY
193 visitor-lodging units
258,650 SF (5.94 AC) = Permanent Impact Area
38,000 SF (0.87 AC) = Temporary Impact Area

PHASE 4
Retail Village Buildings (green) = 33,250 SF
Add Retail Parking (green) = 40,000 SF
Casitas #4b-24 units (purple) = 34,800 SF
Family Units-AirBnB-33 units (orange) = 79,200 SF
Phase 4 Totals = 187,250 SF = 4.3 AC

PHASE 4 SUMMARY
57 visitor-lodging units & Retail Village
187,250 SF (4.30 AC) = Permanent Impact Area
36,000 SF (0.83 AC) = Temporary Impact Area



Overall Site = 204 acres

Golf Parcel (white) = 181 ac
Restaurant-Lodge (red) = 23 ac

Phases 1-2-3
- 28 units = Casitas Blocks #1&3
- 120 units = Lodge/Spa and Restaurant, Parking

- 20 units = Casitas Block #2
- 5 units = Golf Villas
- Caretaker's unit

- 20 units = Casitas Block #4a
- Convert Existing Maint Bldg to Event Building
- Replacement Maint Bldg
- Parking

Phase 4
- 33 units = Family/AirBnB
- Retail Village-Restaurant
- Parking
- 24 units = Casitas Block #4b

Totals
- 250 units Visitor Serving
- 416 parking spaces
- 445,900 sf new buildings
- 10.24 AC = Permanent Impact
- 1.7 AC = Temporary Impact

Scale (at 11" x 17")
1" = ~550'

11-24-2021

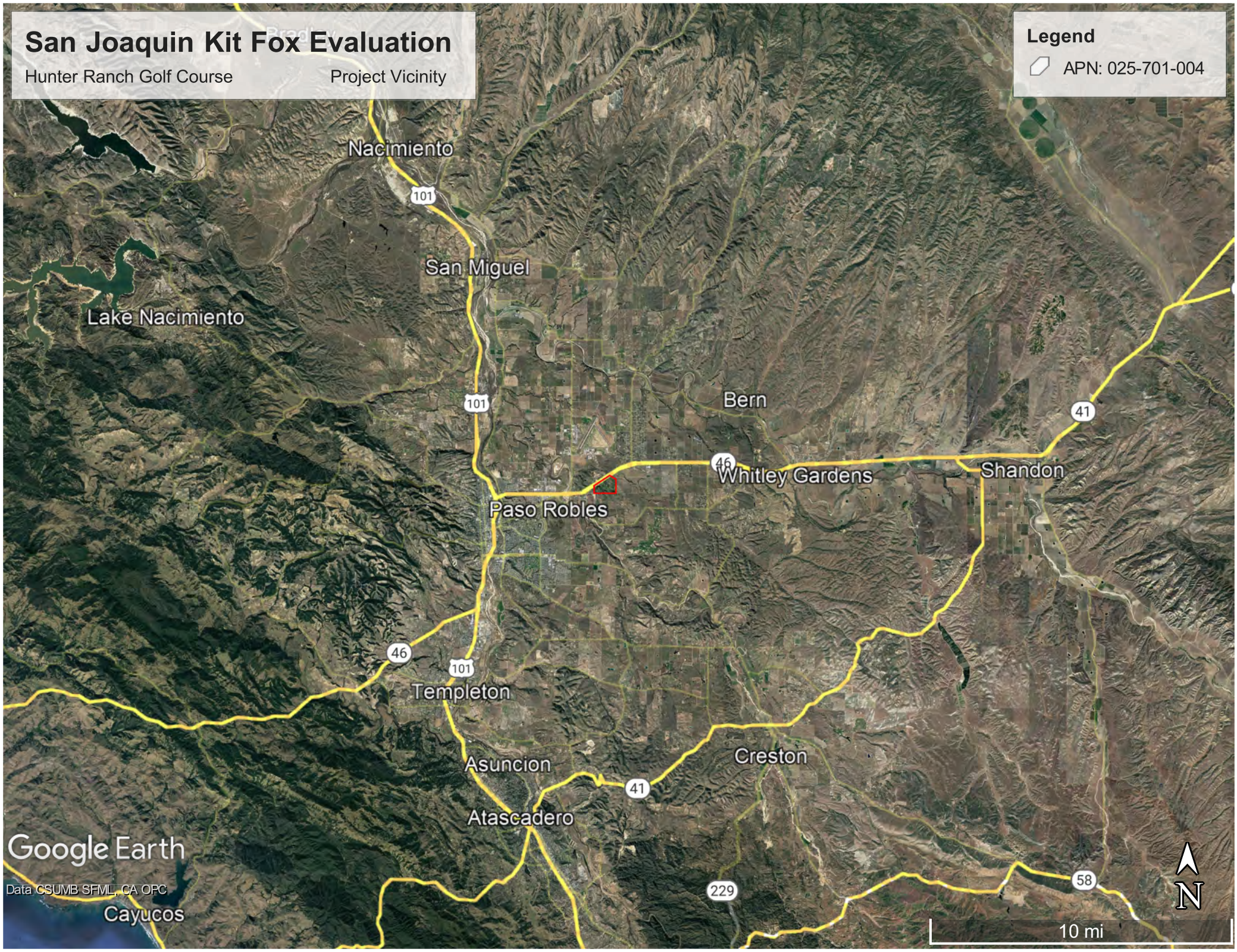
WATSON PLANNING CONSULTANTS
Land Use Planning and Real Estate Development Solutions Since 1989
www.WatsonPlanning.us

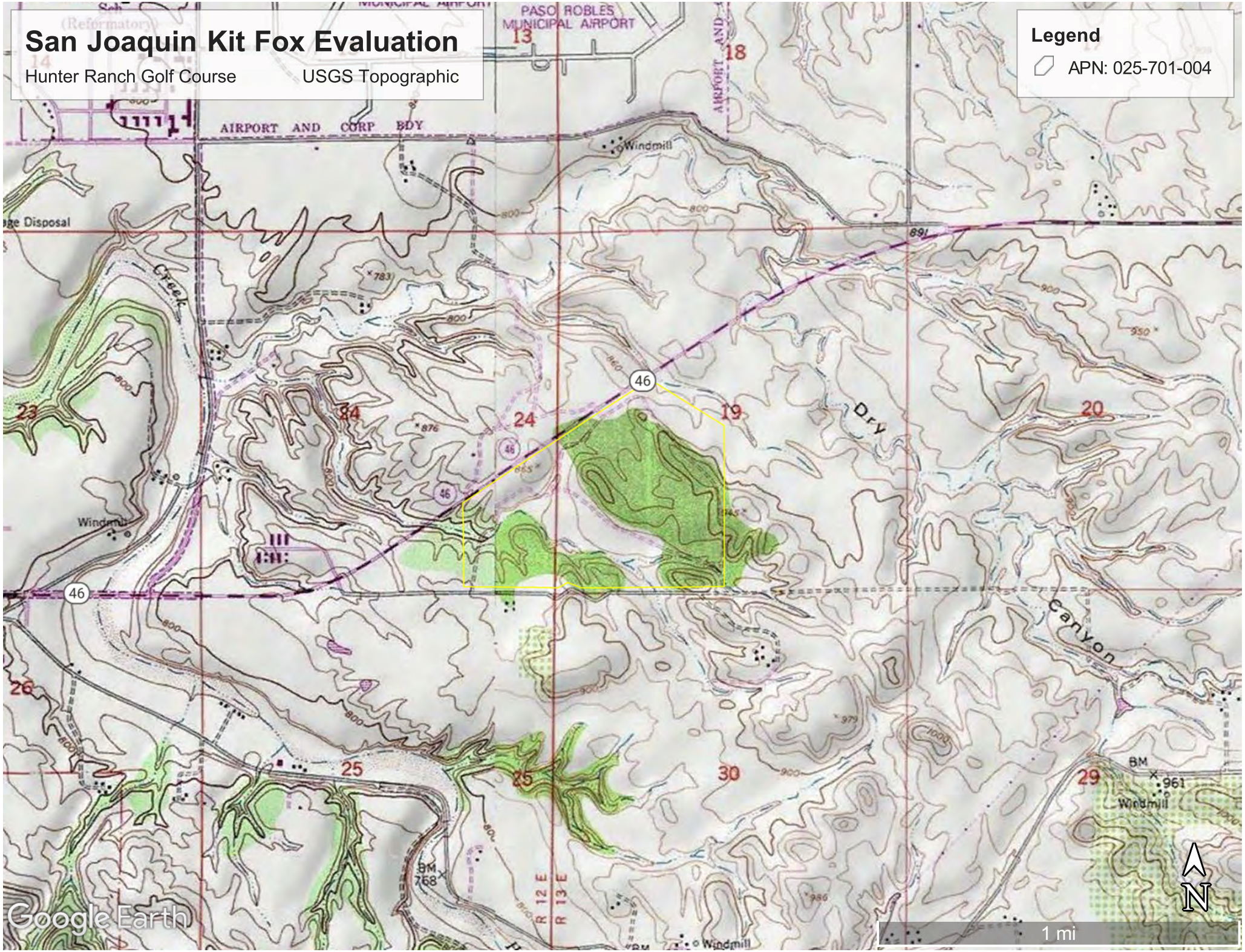
Job Title:
HUNTER RANCH Kit Fox Impact Area Analysis

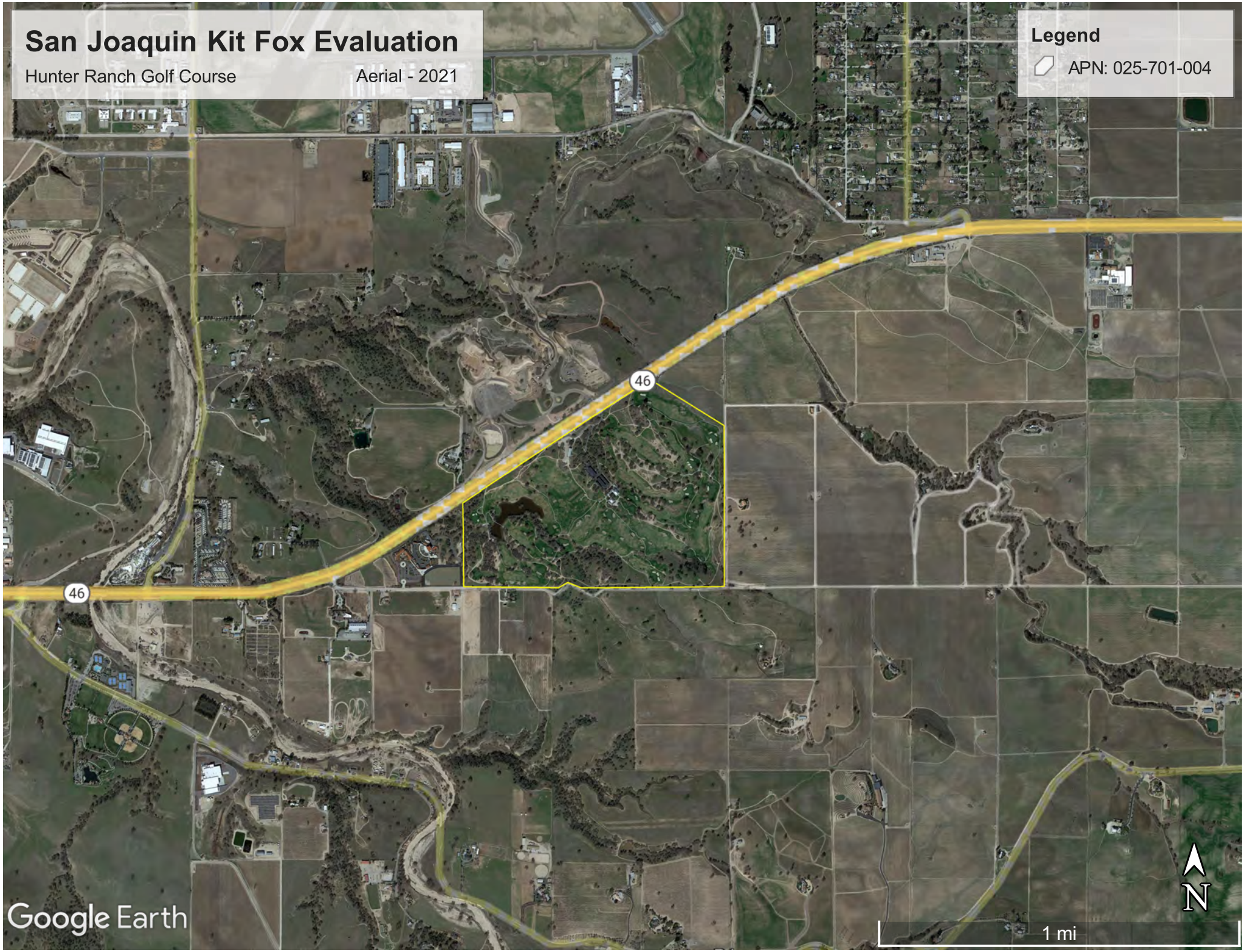
SHEET No.
1
Site Plan

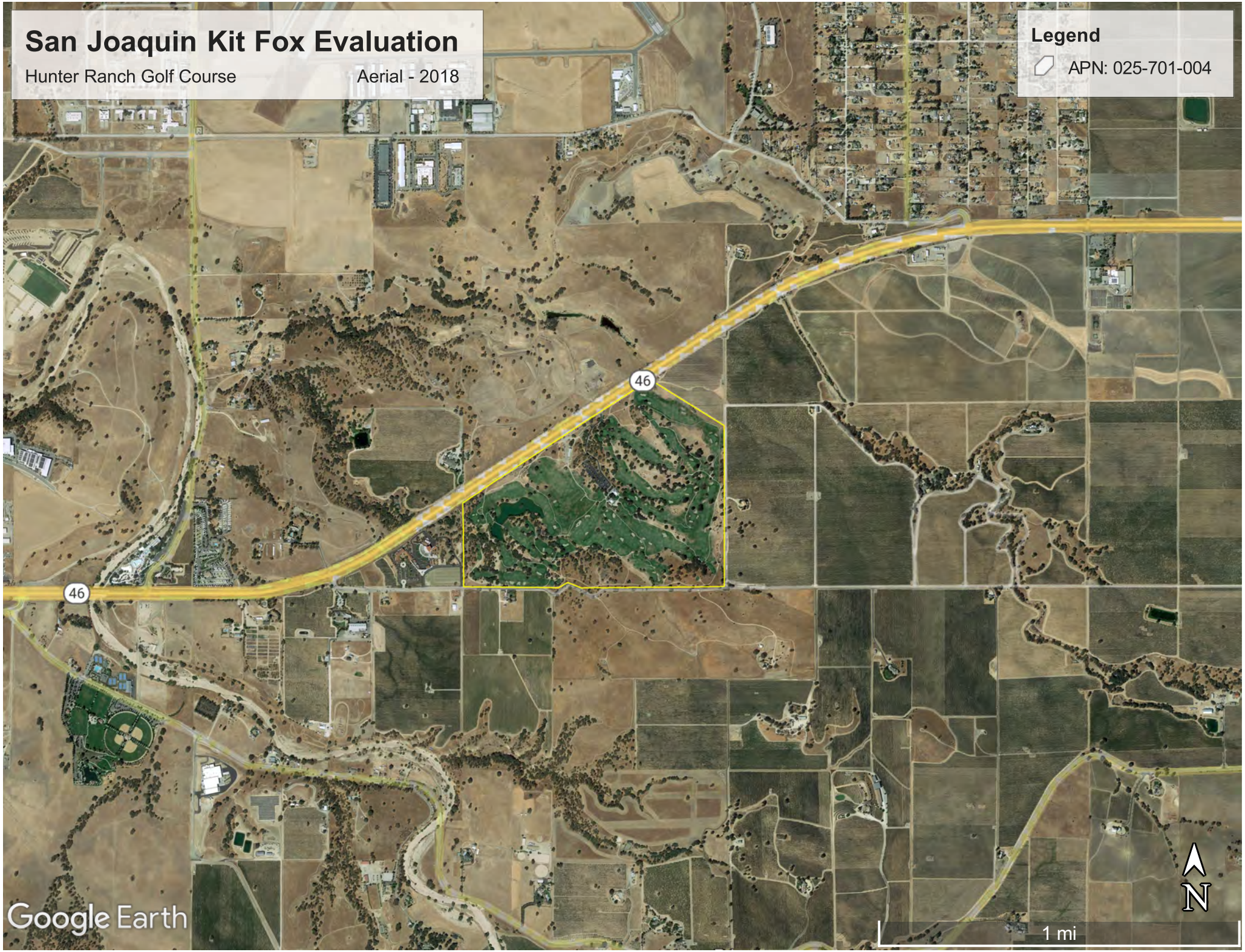
ATTACHMENT C – MAPS

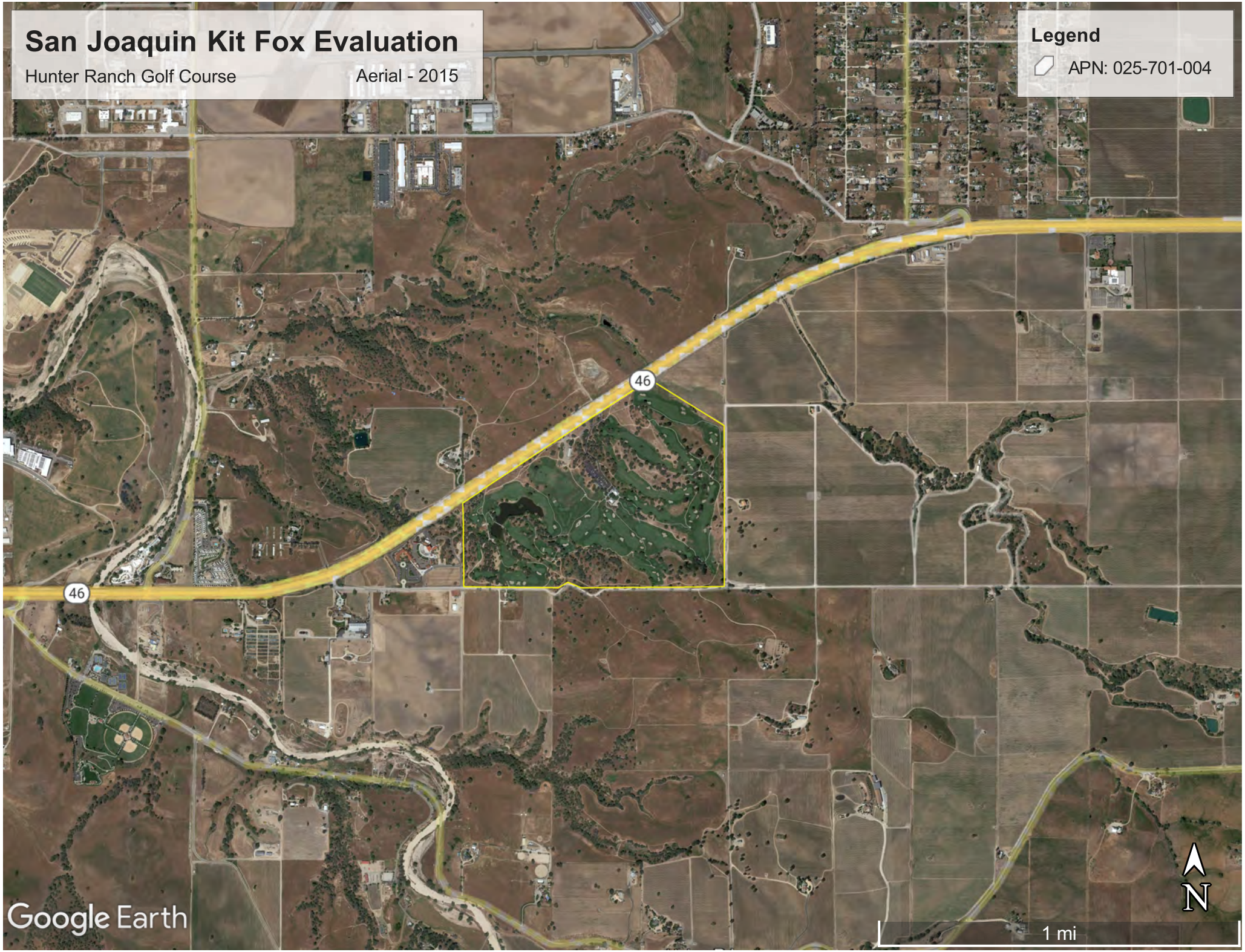
This page intentionally left blank.

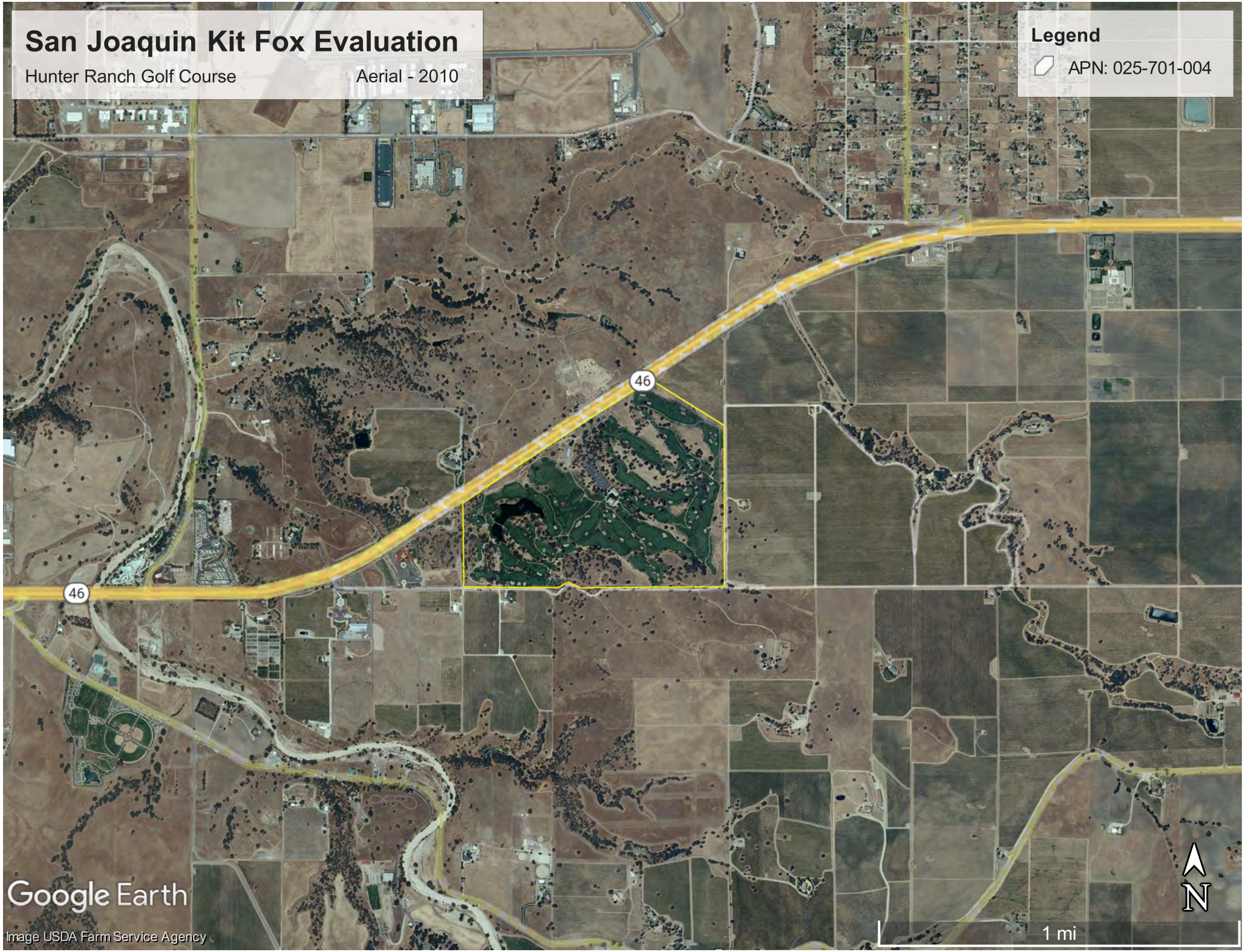

San Joaquin Kit Fox Evaluation
Hunter Ranch Golf Course
Project Vicinity
Legend
APN: 025-701-004
Nacimiento
101
San Miguel
Lake Nacimiento
101
Bern
41
46
Whitley Gardens
Shandon
Paso Robles
46
101
Templeton
Asuncion
Creston
41
Atascadero
Google Earth
Data CSUMB SFML, CA OPC
Cayucos
229
58
N
10 mi

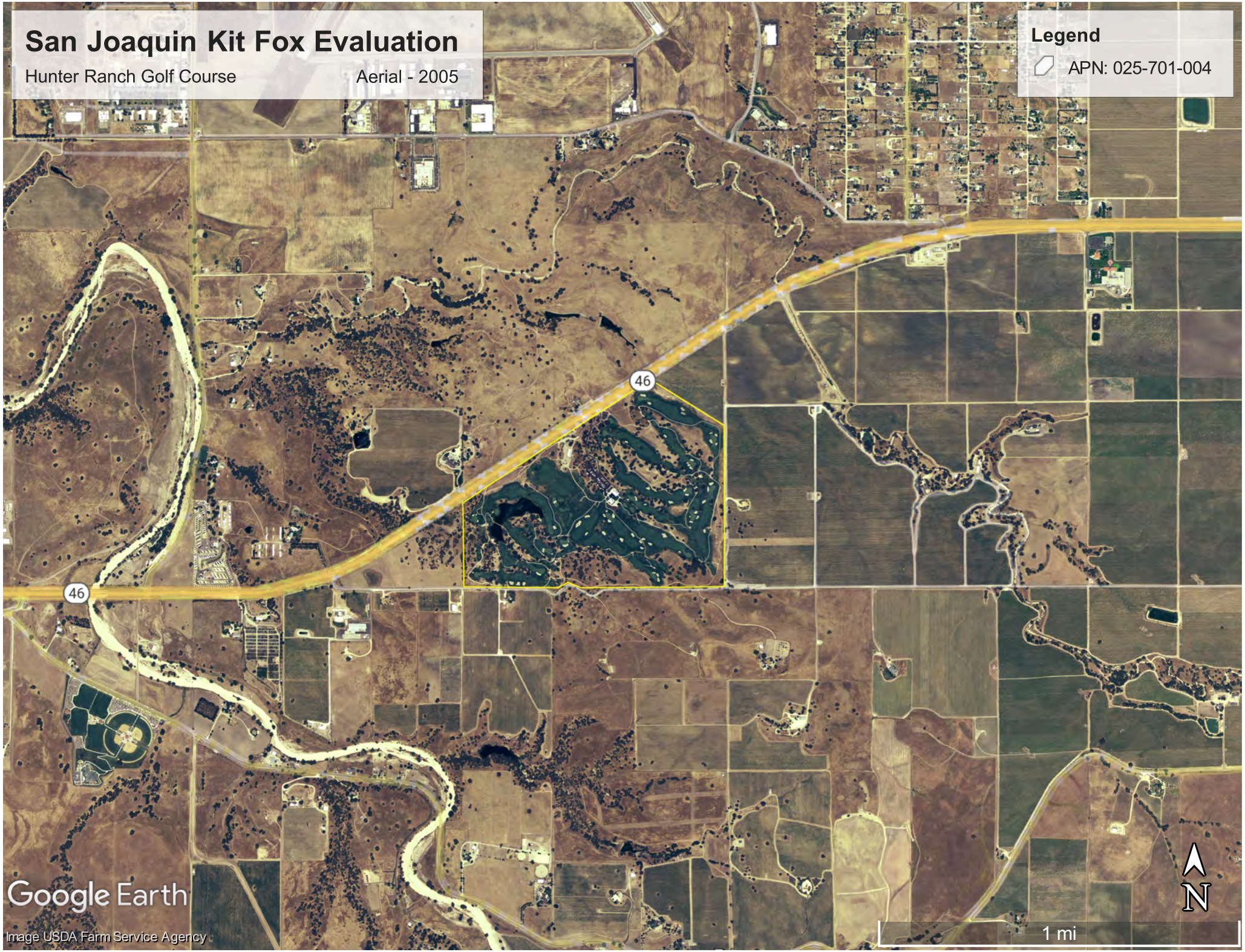

San Joaquin Kit Fox Evaluation
Hunter Ranch Golf Course
USGS Topographic
Legend
APN: 025-701-004
PASO ROBLES MUNICIPAL AIRPORT
AIRPORT AND CORP BDY
Windmill
Creek
Dry
Canyon
46
R 12 E
R 13 E
1 mi
N
Google Earth

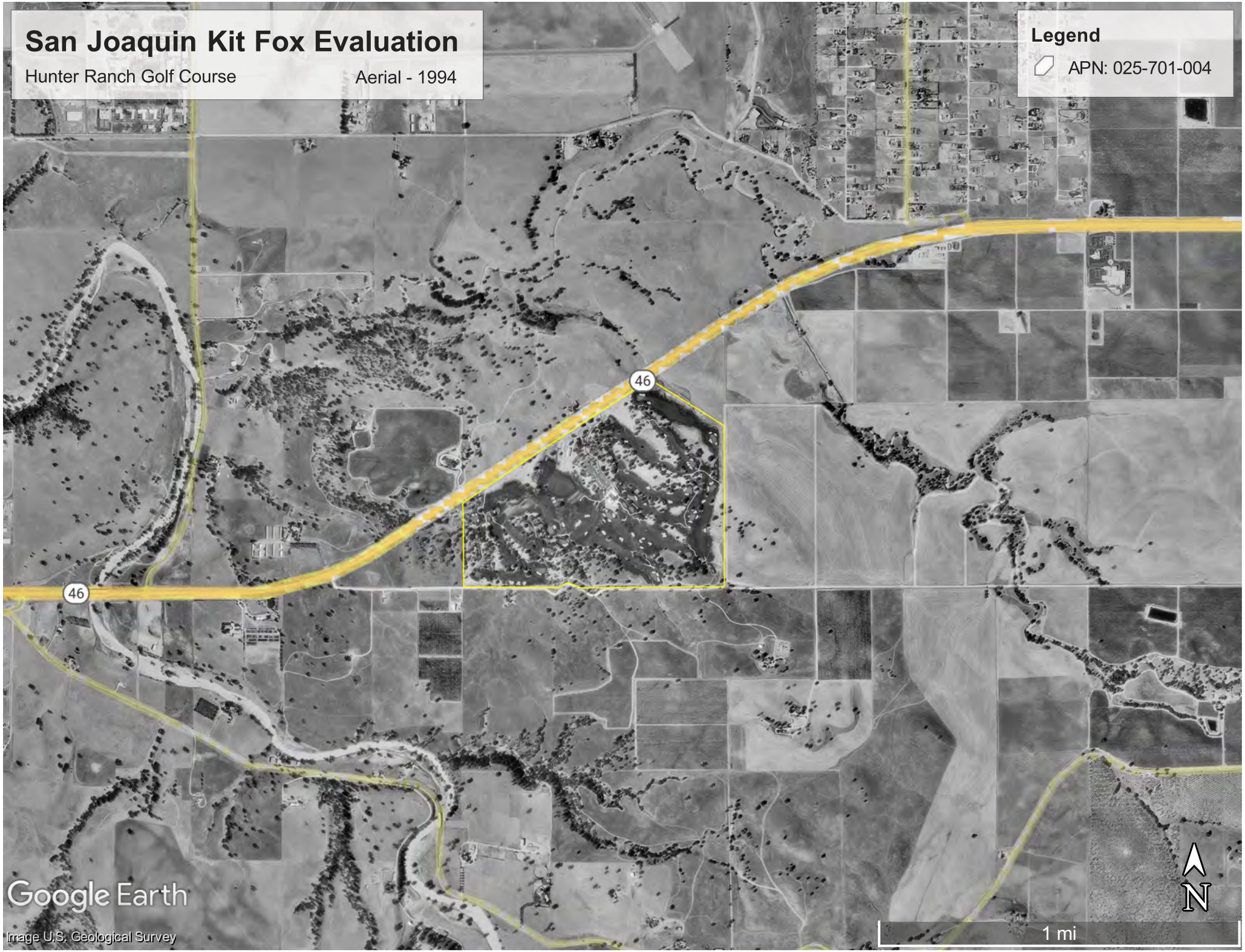

San Joaquin Kit Fox Evaluation
Hunter Ranch Golf Course
Aerial - 2021
Legend
APN: 025-701-004
46
46
Google Earth
N
1 mi


San Joaquin Kit Fox Evaluation
Hunter Ranch Golf Course
Aerial - 2018
Legend
APN: 025-701-004
46
46
Google Earth
N
1 mi


San Joaquin Kit Fox Evaluation
Hunter Ranch Golf Course
Aerial - 2015
Legend
APN: 025-701-004
46
46
Google Earth
N
1 mi


San Joaquin Kit Fox Evaluation
Hunter Ranch Golf Course
Aerial - 2010
Legend
APN: 025-701-004
46
46
Google Earth
Image USDA Farm Service Agency
N
1 mi


San Joaquin Kit Fox Evaluation
Hunter Ranch Golf Course
Aerial - 2005
Legend
APN: 025-701-004
46
46
Google Earth
Image USDA Farm Service Agency
N
1 mi


San Joaquin Kit Fox Evaluation
Hunter Ranch Golf Course
Aerial - 1994
Legend
APN: 025-701-004
46
46
Google Earth
Image U.S. Geological Survey
N
1 mi

ATTACHMENT D – REPRESENTATIVE SITE PHOTOGRAPHS

This page intentionally left blank.

Photo 1. View west from the southeast corner of the property of existing conditions and the proposed Casitas Block #4 footprint (November 3, 2021).

Photo 2. View southeast of existing conditions and the proposed new maintenance building footprint (November 3, 2021).

Photo 3. View east of the existing conditions and eastern extent of the proposed lodge & spa footprint (November 3, 2021).

Photo 4. View north of the existing conditions and northern extent of the proposed lodge & spa footprint (November 3, 2021).

Photo 5. View north from the proposed lodge & spa footprint of remnant blue oak woodland (November 3, 2021).

Photo 6. View southeast of existing conditions and proposed golf villas footprint, east of the existing parking lot (November 3, 2021).

Photo 7. View west from the existing parking lot of existing conditions and the proposed footprint of the caretaker's unit, west of the existing parking lot (November 3, 2021).

Photo 8. View east of the existing conditions and the proposed Casitas Block #2 footprint (November 3, 2021).

Photo 9. View north of the existing conditions and the proposed Casitas Block #3 footprint (November 3, 2021).

Photo 10. View north from the southeast property corner of existing conditions and the proposed family and AirBnB units footprint (November 3, 2021).

Photo 11. View west of existing conditions and planted blue oak trees, and the proposed family and AirBnB units footprint (November 3, 2021).

Photo 12. View northwest of existing conditions and the proposed retail village and restaurant footprint (November 3, 2021).

Appendix C

Archaeological Inventory Survey

ARCHAEOLOGICAL INVENTORY SURVEY FOR THE HUNTER RANCH IMPROVEMENT PROJECT, 4041 SR-46 EAST, PASO ROBLES, SAN LUIS OBISPO COUNTY, CALIFORNIA

[Portion of APN: 025-701-004

Prepared for:

John King
King Ventures
285 Bridge Street
San Luis Obispo, CA 93401

Prepared by:

Nancy Farrell
Cultural Resource Management Services
829 Paso Robles Street
Paso Robles, California 93446

September 2021

Paso Robles and Estrella 7.5' Quadrangles

CRMS

CULTURAL RESOURCE MANAGEMENT SERVICES

CRMS Proj ect No. 55-1006

INTRODUCTION

At the request of Mr. John King, King Ventures, Cultural Resource Management Services (CRMS) conducted a literature and records search and intensive archaeological survey of portions of the Hunter Ranch Golf Course that are currently undeveloped.. The property is approximately four miles east of the City of Paso Robles, bounded on the north by Highway 46 and on the south by Mill Road (Figure 1). A phased development of a hotel lodge, spa, individual casitas, and a new maintenance building is planned for the property. The purpose of this investigation is to identify any cultural resources present on the parcel that may be affected by the proposed construction. This work was completed in order to comply with the requirements of the California Environmental Quality Act (CEQA) and the City of Paso Robles (Figure 2 and 3).

CEQA requires lead agencies to evaluate proposed projects for their potential to impact archaeological resources (Public Resources Code Section 21082, 21083.2, and 21084.1, and California Code of Regulations 15064.5). According to the CEQA Guidelines, "historical resources" include buildings, structures, objects, districts, or sites that may possess prehistoric or historical archaeological, architectural, cultural, or scientific importance. CEQA states that if a project will have a significant effect on important cultural resources, then alternative plans or mitigation measures need to be developed. were conducted to identify and evaluate any significant prehistoric or historic cultural resources that might be impacted by the proposed construction (Exhibit A).

In addition, as part of an early participation notice, letters were sent to Native American tribes, organizations and individuals. The list of recipients was provided by the Native American Heritage Commission (NAHC), and is comprised of those groups and individuals thought to have a cultural interest in this area, notifying them of the proposed project, inviting them to consult, and requesting information or concerns regarding the proposed project. A Sacred Lands Search was conducted at the Native American Heritage Commission (NAHC). Concurrent with that search, Native Americans and Native American groups cited by the NAHC were contacted. There were no responses to the letters written, noted specifically in Exhibit B.

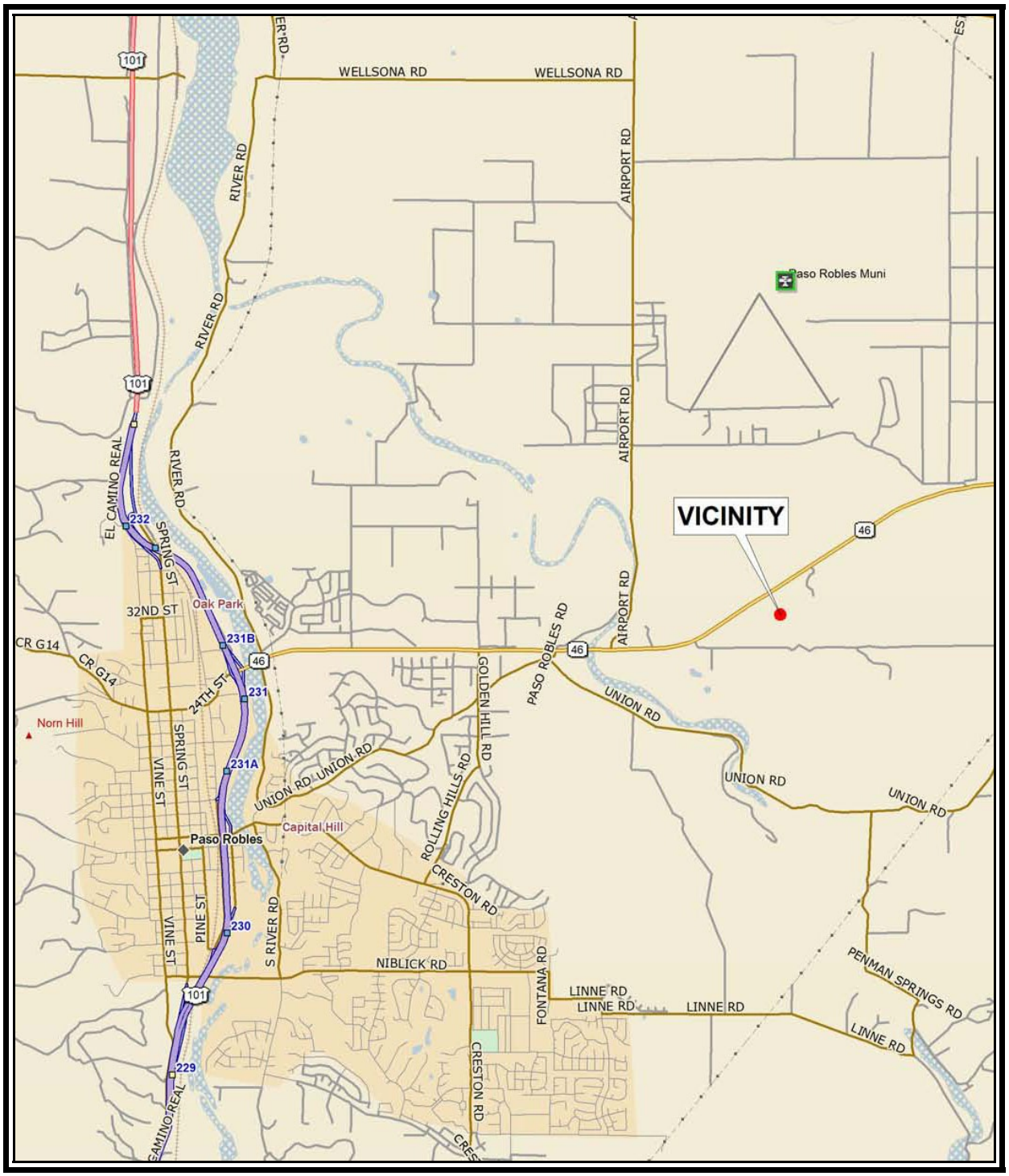


Figure 1: Vicinity Map (No Scale)

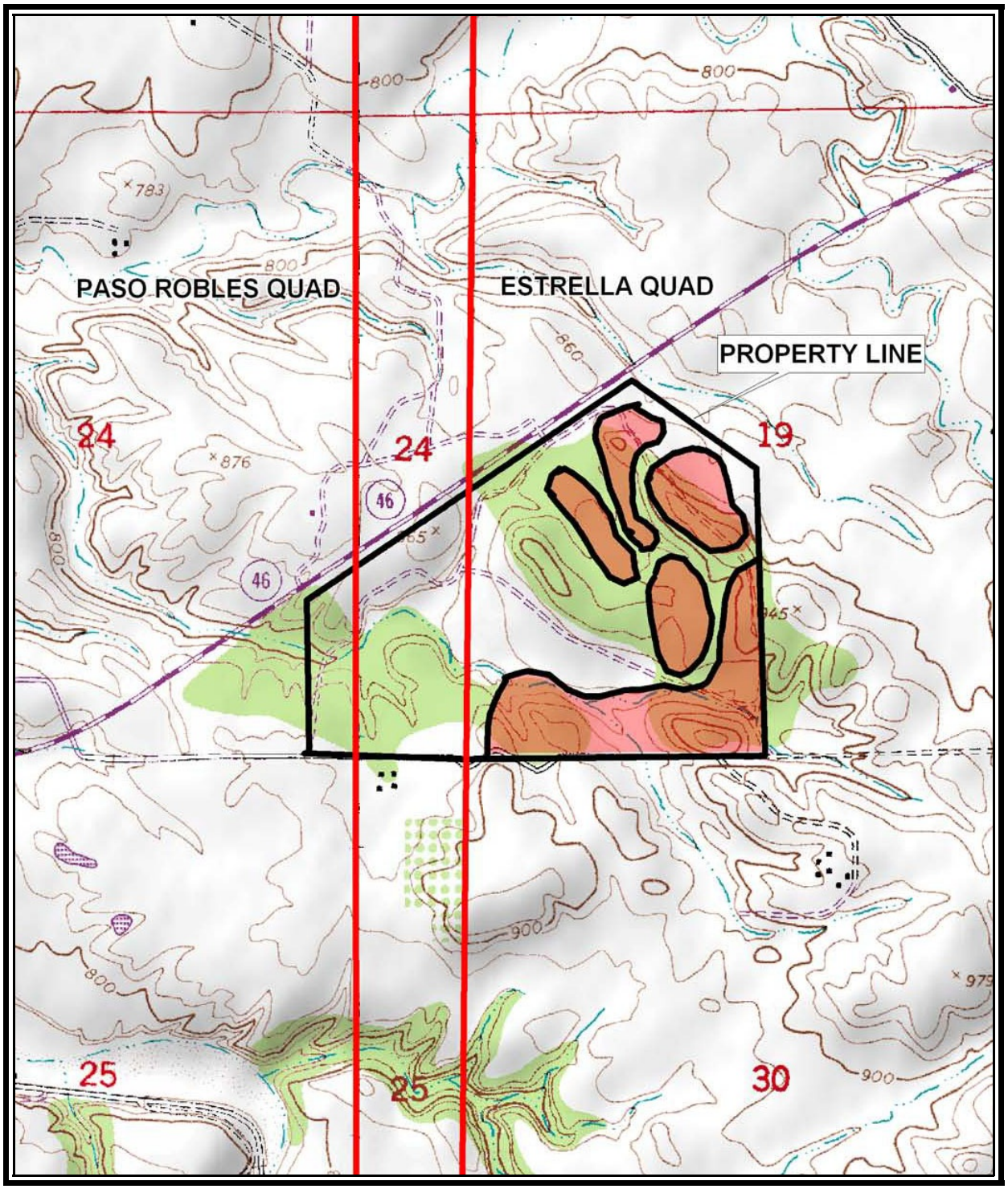


Figure 2: Portion of USGS 7.5' Quadrangle, Paso Robles, CA and Estrella, CA Survey Areas Shown As Salmon Colored Polygons

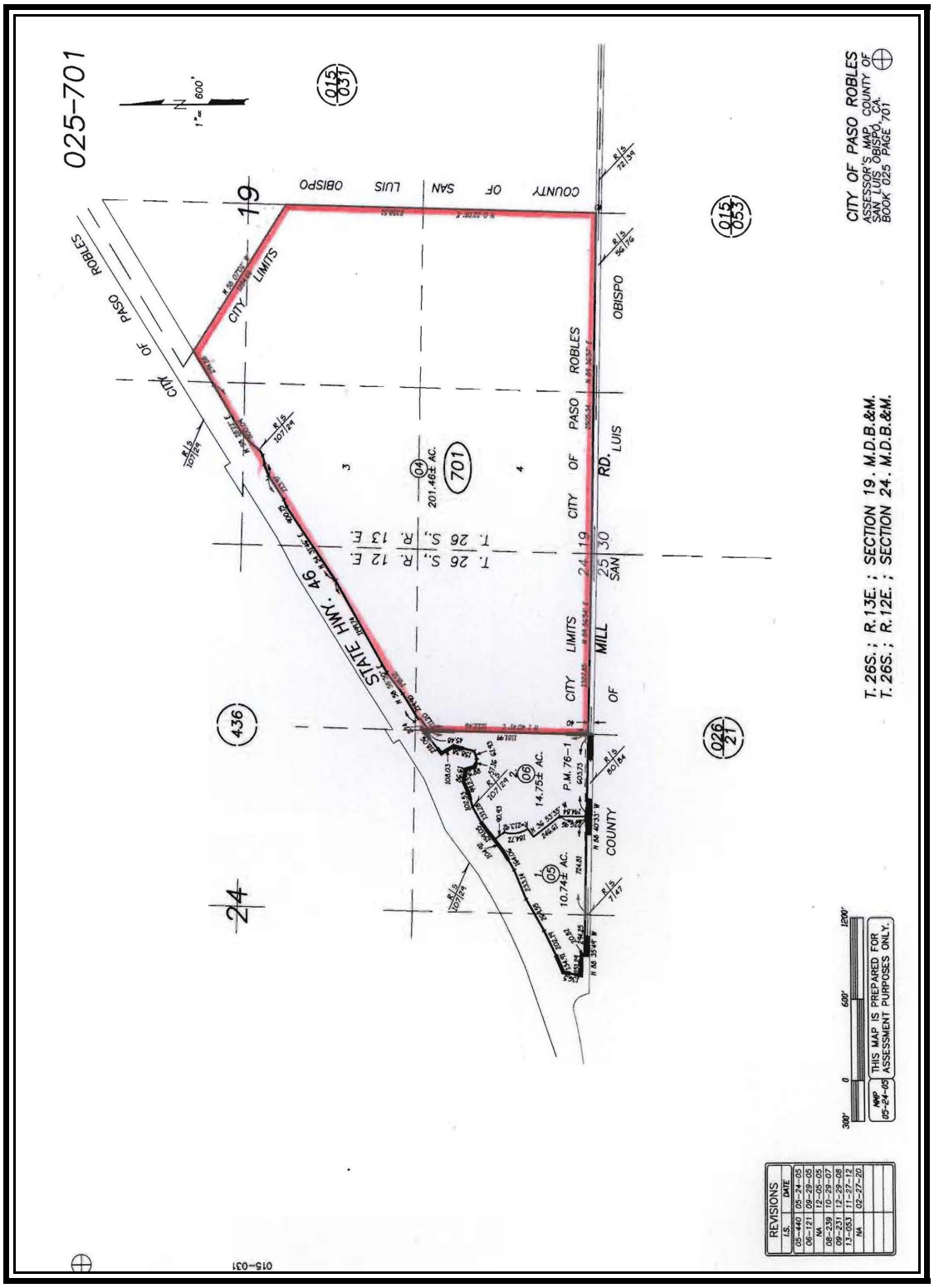


Figure 3: Assessor's Parcel Map-Entire Parcel Shown in Red Outline

ENVIRONMENTAL CONTEXT

Climate

The local climate has remained generally stable over the most recent few thousand years. The weather pattern is characterized by hot, dry summers and cool, moist winters. Every several years, extreme frosts occur during winter months, but generally the area experiences 300 to 325 frost-free days per year.

Water Sources

Annual rainfall here ranges from 12 to 20 inches. Today, the Estrella River, north of the property, and the Huer Huero Creek to the west and south, flow at the surface only during seasons of heavy rainfall, but the river flow was probably more abundant and regular during the time of prehistoric human occupation of the area. There are also unnamed blue line creeks to the north and south and through the project parcel. The surface flow in these streams has likely been reduced to a minimum in recent years by the many municipal and private wells which draw water from the river and creeks for residential and agricultural use.

Geology and Pedology

The Paso Robles area presents a complex geologic picture. Cenozoic Monterey Shale and Miocene Santa Margarita Sandstone formations are dominant (Chipping 1987:VIII-7). Sandstones, siltstone, diatomite and conglomerates are characteristic rocks of the Santa Margarita Formation. Beds of fossil Pecten and oyster shells are also present in some locations. Two soil types occur on the property. On the slopes is Sesame sandy loam, a shallow soil derived from residuum weathered from granitic rock. The remainder of the parcel contains Arbuckle-San Ysidro complex, a very deep, well-drained soil formed in alluvium (Lindsey, 1983: 16-20). The soil contains few inclusions, with occasional tool-quality, unworked Monterey chert fragments, and small gravels and river cobbles.

Vegetation

The vegetation in this part of Paso Robles is primarily oak woodland and grassland interspersed with chaparral. The Hunter Ranch is dominated by Blue Oaks (*Quercus douglasii*) and of course, landscaping. In those areas that are currently undeveloped are occasional chamise (*Adenostoma fasciculatum*) shrubs, mustard (*Brassica* spp.), jimson weed (*Datura stramonium*), turkey mullein (*Croton setigerus*), spurge (*Euphorbia* spp.), feral oats (*Avena* sp.), other annual grasses and invasive species such as yellow star thistle (*Cirsium solstitialis*) and dock (*Rumex* spp.).

Fauna

Fauna commonly occurring in the surrounding area include black-tailed deer (*Odocoileus hemionus columbianus*), coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), cottontail rabbit (*Sylvilagus* spp.), black bear (*Ursus americanus*) and historically, grizzly bear (*Ursus horribilis*) and tule elk (*Cervus elaphus nannoides*). A number of ground squirrels (*Spermophilus* spp.), the western gray squirrel (*Sciurus griseus*), gophers (*Thomomys* spp.), mice (*Microtus* spp. and *Peromyscus* spp.), and a variety of reptiles and amphibians are also present. Common birds in the area include red-tailed hawk (*Buteo jamaicensis*), California scrub jay (*Aphelocoma coerulescens*), mourning dove (*Zenaida macroura*), western meadowlark (*Sturnella neglecta*), mockingbird (*Mimus polyglottos*) and turkey vulture (*Cathartes aura*), acorn woodpecker (*Melanerpes formicuvorus*), and valley quail (*Lophortyx californicus*). Except for predators, all of these animals would have been food items for indigenous populations.

CULTURAL BACKGROUND

Prehistoric Overview

Archaeological evidence indicates that San Luis Obispo County was occupied as early as 9000 years ago, as indicated by radiocarbon dates from excavations at Diablo Canyon (Greenwood 1972), Edna Valley (Fitzgerald 2000), Cambria (Parker 2004) and Paso Robles (Stevens *et al.* 2004). The cultural history of this region has until recently been placed within the sequence that has been defined for the Santa Barbara region, where far more archaeological investigations had taken place. The first regional chronology was proposed by D.B. Rogers (1929) and was based on his excavation of coastal sites around Santa Barbara. This three-part sequence of Early Oak Grove or Millingstone Culture, Intermediate or Hunting People and a late Canaliño Culture is still considered generally valid in terms of broad cultural patterns (Fitzgerald and Jones 1998).

Researchers on the Central Coast have continued to refine the chronological framework and several alternative schemes have been proposed, primarily based on sites in the Central Valley, Central Coast and Channel Islands (*cf.* Moratto 1984: 125; King 1990; Erlandson and Jones, 2002; Jones *et al.* 2007). The following chronology for the San Luis Obispo area builds on this work and incorporates extensive investigations carried out on the Pecho Coast, south of San Luis Obispo (Jones and Codding 2019). All dates are radiocarbon calibrated dates:

.	*Paleoindian*	*10,000 BC - 8350 BC*
	Millingstone/ Lower Archaic	*8350 BC - 3500 BC*
	Early	*3500 BC - 600 BC*
	Middle	*600 BC - AD 1000*
	Middle/Late Transition	*AD 1000 - AD 1230*
	Late	*AD 1230 - AD 1769*
	Mission Period	*AD 1769 - AD 1830*

These periods are based upon shifts in technology that relate to the type and variety of foods consumed, methods of procurement, and social structure. The earliest periods were a time of hunting and gathering, with an emphasis on seed collecting and processing. The tool kit for these periods shows an emphasis on milling equipment and crude cores yielding flaked stone tools. An increased reliance on fishing (evidenced by fishhooks), and on acorns as a dietary staple (mortars and pestles), was indicated later by the addition of new tools.

Paleoindian (10,000-8350 BC)

Excavations on the northern Channel Islands have yielded radiocarbon dates as early as 12,500 years ago (Erlandson and Braje 2011). There is still very limited information for the Paleoindian period in the Central Coast mainland region.

Millingstone Period (8350 BC–3500 BC)

More substantive archaeological evidence exists for the Millingstone Period, as evidenced by radiocarbon dates from excavations conducted at Diablo Canyon (Greenwood 1972), Cambria (Gibson 1979) Edna Valley (Fitzgerald *et al.* 1998) and Paso Robles (Stevens *et.al* 2004). It was during this period that permanent settlements with associated cemeteries were established. This basic adaptation persisted until about 3500 BC and was characterized by milling slabs, manos (handstones), rather crude cobble tools and a high density of marine shellfish remains on the coast. Collection of seeds appears to have been important for diet.

Early Period (3500 BC–600 BC)

Along the coast and in interior areas, the Early period is marked by the appearance of mortars and pestles and contracting-stemmed projectile points (Jones 1993). Other artifacts found with Early period occupations are also found in Millingstone period sites, including Olivella (*Callianax biplicata*) class L beads, large side-notched projectile points, and milling slabs and handstones. Large projectile points and stone knives are indicative of hunting activity. Milling implements consisting of manos and metates were evidence of the processing of seeds, and possibly

vegetable foods, dried meats, and fish. Greater numbers of sites are known from the Early period, possibly signaling a population increase. The end of this period is marked by changes in technology with the decrease of manos and metates, a shift in the settlement pattern, and alterations in ornamental style.

Middle Period (600 BC– AD 1000)

Mortars and pestles become larger and more common during this period and small seeds become less important as a staple. Exotic products are adopted. This period heralds the advent of social and political alliances and economic networks to regulate food supplies and their distribution in order to alleviate conditions resulting from regional fluctuations in the harvest. Some villages grew larger and less defensive in nature as populations were integrated into larger political units. The end of this period is marked by dramatic changes in economic, social, and political conditions, evidenced by new habitation sites and larger coastal fishing communities.

The Middle period is well represented at recorded sites along the central coast and increasingly in interior regions as well. The types of artifacts found in Middle period occupations are similar to those from the Early period although a larger number of bone implements and bead types are known and projectile points tend to be contracting-stemmed types instead of side-notched and square-stemmed (Olsen and Payen 1969; Bennyhoff and Hughes 1987; Jones and Waugh 1995). Excavations at Fort Hunter-Liggett have shown that Middle period occupations in that area resemble those found along the coast (Jones and Haney 1997).

Middle/Late Transition Period (AD 1000 – AD 1230)

Around 1,000 A.D. a 300-year period of warmer temperatures and drier climate, the Medieval Climatic Anomaly, caused adverse environmental conditions, particularly intermittent droughts (Raab and Larson 1997). During the Late Period, terrestrial resource production is thought to have decreased significantly, while adaptive responses involving technology and social complexity evolved. Characteristic artifacts include curved shell fishhooks, mortars with attached basket hopper, contracting-stemmed and double side-notched projectile points. The bow and arrow was introduced.

Late Period (AD 1230 - AD 1769)

This period is marked by a more mobile, dispersed settlement pattern than earlier periods (Jones *et al.* 2015: 15), an increasing dependence on acorns and other storable commodities, and a general diversification of the marine and terrestrial foods consumed. Late period assemblages from the interior south coast ranges are distinguished by a suite of new bead types, small side-notched and triangular arrow points, and hopper mortars as well as many artifact types found in earlier periods (Olsen and Payen 1969). At Fort Hunter Liggett, Late period occupations also included

small arrow points, new bead types, as well as bedrock mortars and unshaped pestles (Jones 2000; Haney *et al.* 2002). The Late period assemblages from a wide area of the central coast and interior regions appear superficially similar, but this was probably a time of continued cultural differentiation due to higher population densities.

Mission Period (AD 1769 - AD 1830)

Glass trade beads, square nails and bottle glass begin to appear in the archaeological matrix (Meighan 1979; Moratto 1984: 273).

There is clearly still a great deal to learn about the prehistory of the interior south coast ranges, but comparisons between findings in coastal areas and the small amount of work conducted locally show that a similar set of cultural changes probably occurred in both areas. The presence of marine shell beads in interior areas and obsidian obtained from the desert east in coastal areas is testimony to the wide-ranging trade and social networks that existed from an early date.

Ethnographic Overview

At the time of European contact, the surrounding region was probably occupied by the Salinan people, although some confusion still exists among experts as to the dividing line between the Chumash and the Salinan in this area. The Salinan were bordered by the Esselen and Costanoan to the north and the Chumash to the south (Kroeber 1925). Unfortunately, very little of substance is known about Salinan culture because of the early influence of the missions and the remoteness of their territory, meaning their traditional lifeways were altered early on and few people outside of the mission system were present to record what remained after secularization (Mason 1912).

The Salinan, like nearly all of California's original inhabitants, practiced a hunting and gathering economy. Major plant foods included acorns and a variety of small seeds while major animal foods included a diverse assortment of terrestrial mammals, marine and freshwater fish, shellfish, birds, as well as reptiles and insects. It is unclear to what extent people living inland ventured to the coast and vice versa, but it is likely that people were mobile enough to take advantage of plant and animal foods when and where they occurred. Diets would have varied from season to season, and from year to year, depending on what was available at any one time.

Historic Overview

European contact in the San Luis Obispo County region may have begun as early as 1587 with the visit of Pedro de Unamuno to Morro Bay, although some scholars have questioned this based on the ambiguity of Unamano's descriptions (Mathes 1968). A visit in 1595 by Sebastian Rodriguez Cermeño is better documented (Wagner 1924). The

best early descriptions come from accounts by members of Gaspar de Portola's land expedition, which passed through the region in 1769 (Squibb 1984). No large villages, such as those seen along the Santa Barbara channel, were reported by early travelers in the San Luis Obispo region.

Permanent Spanish settlement of the region began with the founding of Mission San Antonia de Padua (near King City) in 1771 and San Luis Obispo de Tolosa (in San Luis Obispo) in 1772. Twenty-five years later, Mission San Miguel Archangel was founded in the heart of southern Salinan territory. The mission properties were extensive and included an outlying rancho station near present day Paso Robles. As elsewhere, induction into the missions had a devastating effect on the local inhabitants, requiring them to live and work at the mission and abandon their former lifeways. Under the guidance of the mission fathers, the natives were instructed in farming methods, including the production of wheat, beans and various kinds of fruit. The earliest farming was intended to foster independence; thus making the import of supplies up from Mexico unnecessary.

The inauguration of Spanish colonization brought about major and devastating changes in the aboriginal society, due primarily to the introduction of European diseases. The consequent high mortality rate, and the pressure of overwhelming social change, decimated the population. By 1805, most native villages had been abandoned, and the populace had either fled or moved into the mission system (Gibson 1983). The natives who had survived the Spanish colonization period, went on to build and staff the ranchos of the Mexican and American periods which followed. By the beginning of the 20th Century, the Chumash and Salinan had been integrated into American society (Gibson 1983 and 1990; King 1984).

In 1822, Mexico attained independence of Spain and California became a Mexican territory. The Secularization Act, passed by the Mexican congress in 1833, provided for the immediate break-up of the missions and the transfer of mission lands to Mexican settlers and Indians. Work toward this end began in 1834 under Governor Figueroa. Grants were made to individuals by the governor based upon on the recommendation of the local *alcalde* of the Mission. During the years from 1840 to 1846, a series of land grants were made from the lands of Mission San Miguel by the governors of Mexican California. The project property was just northeast of one of these grants. The Rancho 17,774+ acre Rancho Santa Ysabel, was granted on May 12, 1844 by Mexican Governor Manuel Micheltorena to Francisco Arce (Ohles 1997: 104-110). In 1848 at the end of the Mexican war, California was ceded to the United States, and was admitted to the Union in 1850. All grants were then subject to validation under U. S . laws. Based on the quality of the soil and general accessibility, a Board of

Equalization in San Luis Obispo considered the parcel to be a Third Class Mexican Land Grant Ranchero. The U.S. Land Commission issued a patent on the parcel on May 21, 1866 (Cowan 1977: 93).

In 1878, a San Miguel Mission administrator, Don Innocenti Garcia, related to one Thomas Savage that Arce had sold the land to Don Francisco Rico; however, no other record of this transaction has been located (Ohles 1997:110). Ownership had passed to W. V. Huntington by 1886, when the West Coast Land Co. was incorporated. The immediate objective was to purchase and develop 64,000 acres of land for resale. The land was comprised of the ranchos Santa Ysabel, El Paso de Robles, Eureka, and the unsold portion of Huer Huero. The purchase was based upon the expectation that the Southern Pacific Railroad would build a coastal line between San Francisco and Los Angeles through San Luis Obispo County (Nicholson 1993).

The 26,000 acre rancho El Paso de los Robles, granted May 12, 1844 to Pedro Navarez by Mexican Governor Manuel Micheltorena was located on the western side of the Salinas River. A patent was obtained July 20, 1866 by Petronillo Rios, but prior to the patent, the parcel was sold in two separate transactions, first to Daniel and James Blackburn on September 21, 1858. The second portion was sold July 9, 1861 to Lazarus Godchaux. They immediately began making improvements to the hot sulphur springs which had been used by local inhabitants for generations. By the 1870s, the Paso Robles Hot Springs was a well known destination for people seeking the famous curative powers of the springs. With the coming of the Southern Pacific Railroad in 1886, a town plan for Paso Robles, on the western side of the Salinas River, was commissioned and was completed by 1887.

Throughout the later part of the nineteenth and most of the twentieth century, the economy of the Paso Robles region was largely agricultural. Cattle ranches, dairies, almond and other fruit orchards, and large tracts devoted to dry land grain production comprised the rural landscape. Agriculture has continued to be the mainstay of the region up to the present, with increasing emphasis on viticulture and wine-making. The proliferation of wineries in the last three decades has lead to tourism once again becoming a major component of the local economy. The present Hunter Ranch property ranch had been used for grazing; in 1988 it was sold by Gary Spiller to Kenneth Hunter, Jr. Hunter was well known as a developer of golf courses around California. He opened the Hunter Ranch course in 1994 and it has proven to be a popular destination.

MAP AND RECORDS SEARCH RESULTS

Concurrent with the field survey, a records and literature search was conducted at the Central Coast Information Center (CCIC), Santa Barbara Natural History

Museum, which is the State-designated regional clearinghouse for archaeological site information for San Luis Obispo County. Eight previous cultural resource studies have been conducted within a one-quarter mile radius of the project area (Soule 1984; PAR 1992; Glover 1999; Conway 2001; Gibson 1993, 2006; Anastasio 20013; Haas *et al.* 2015). Four of these previous reconnaissance level investigations included part or all of the project area. Although no archaeological sites have been identified within the search radius, two isolated artifacts, a Monterey chert projectile point and a sandstone mortar fragment, were found during grading at two locations on the Hunter Ranch (Gibson 1993). The State Historic Property Data Files, National Register of Historic Places, National Register of Determined Eligible Properties, California Historical Landmarks, California Points of Historic Interest, California OHP Archaeological Determinations of Eligibility, and the Caltrans State and Local Bridge Surveys were also searched . No historic property evaluations were found within the search radius (Exhibit A).

In addition, a Sacred Lands search was conducted at the Native American Heritage (HAHC) commission in Sacramento. The results of that search were negative. In accordance with the results letter from the NAHC, letters were written to the interested Native Americans and groups listed in their response (Exhibit B).

RESULTS OF FIELD INVESTIGATION

A field inspection of the project area was made on September 15, 2021 by Nancy Farrell and Ron Rose of CRMS. The survey was accomplished by walking transects across each designated development area spaced at four meter intervals . The mineral surface visibility was excellent in most areas, from 75-95%. Additionally, the high number of rodent burrows afforded excellent views of the soil. Although a few pieces of Monterey chert (a preferred flaked stone tool material) were present, no prehistoric or historic cultural resources were encountered during the survey (Figures 4-11).

Figure 4: Overview of Casitas Block One-View To East

Figure 5: Overview of Casitas Block Two-View To South

Figure 6: Overview Casitas Block Three-View To East

Figure 7: Overview Of Casitas Block Four-View To North

Figure 8: Overview Of Casitas Block Five-View To West

Figure 9: Overview New Maintenance Building Site-View To East

Figure 10: Overview Restaurant/Spa Area-View To West

Figure 11: Overview Restaurant/Spa Parking Area-View To West

CONCLUSION AND RECOMMENDATIONS

Since no significant cultural resources were located within the survey area, no further archaeological investigations are recommended at this time. However, the presence of buried artifacts on the property has been demonstrated (Gibson 1993). Therefore, we recommend that an archaeological awareness information briefing be given to each new construction team.

At the pre-construction meeting, the field archaeologist will conduct awareness training for the construction crew and supervisors. This will include a description of the types of artifacts that may be encountered and a discussion of why these are of importance to the Native American community as well as for an understanding of our local history. Pertinent laws and regulations protecting archaeological sites will be briefly reviewed and archaeologists monitoring methods will be explained. Also included in the training will be a discussion regarding a discovery by a construction crew member. The crew will be instructed to stop work in the immediate area and advise the archaeological monitor of the discovery so that it can be evaluated in a timely manner.

If cultural resources, such as prehistoric or historic artifacts, bone, or other cultural materials are encountered during project activities, all work within 50 feet of the discovery should be redirected. The City Environmental Coordinator should be notified so that the extent and location of discovered materials may be evaluated by a qualified archaeologist. The archaeologist will assess the situation, consult with agencies as appropriate, and make recommendations regarding the treatment of the discovery. Upon completion of the assessment, the archaeologist should prepare a report documenting the methods and results of the investigation, and provide recommendations for the treatment of the archaeological materials discovered.

It must also be noted that the subject property lies within safety zones 5 and 6 of the Paso Robles Municipal Airport Land Use Plan. The compatible uses and densities are dictated by this document (City of Paso Robles 1977) (Figure 12).

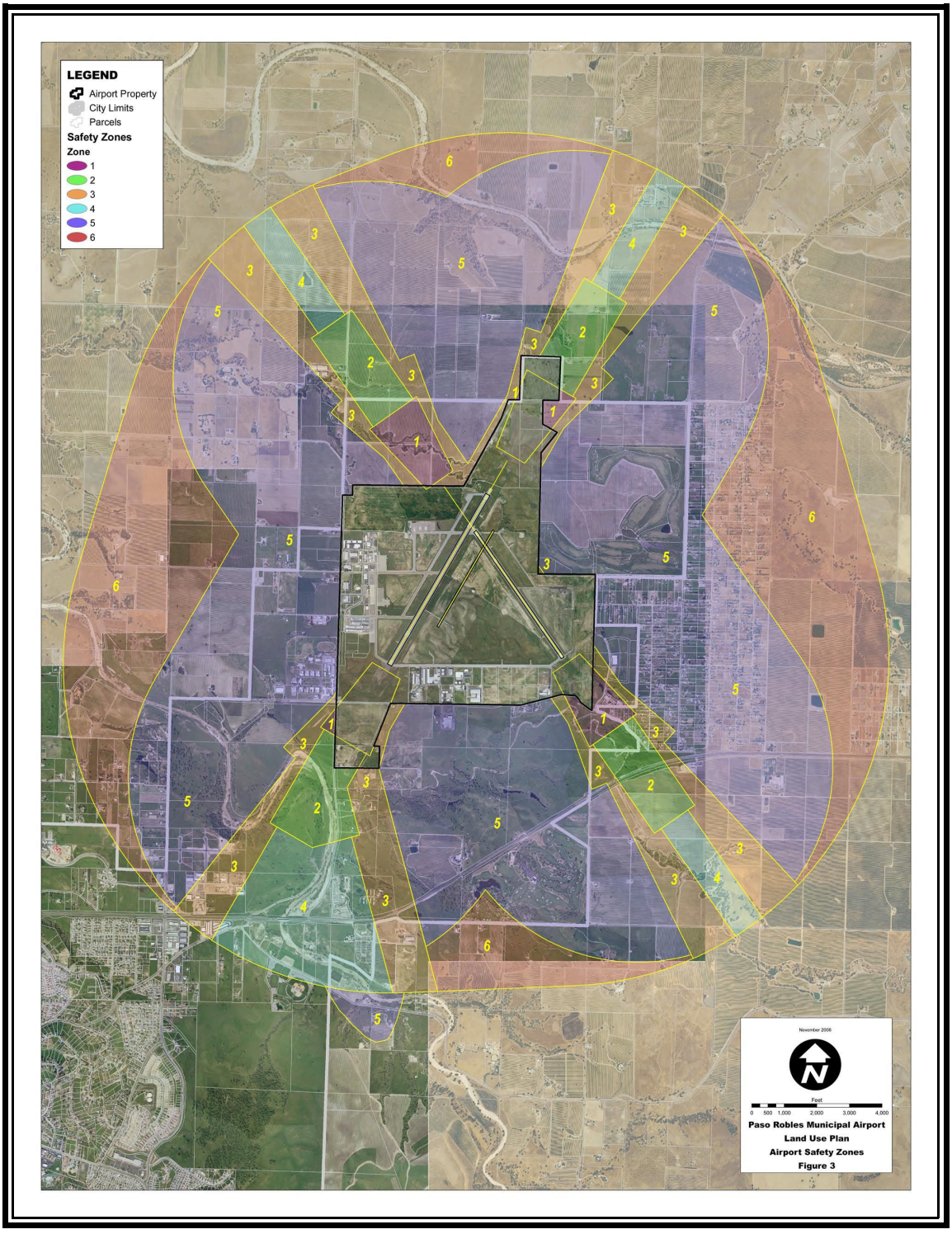


Figure 12: Paso Robles Airport Land Use Plan-Airport Safety Zones

REFERENCES

Anastasio , Rebecca L.
2013 Collins Vineyard Annexation Phase 1 Cultural Resources Survey and Report for City CEQA Document. Parallel Design Studios.

Bennyhoff, J. A., and R. E. Hughes
1987 Shell Beads and Ornament Exchange Networks Between California and the Western Great Basin. *American Museum of Natural History Anthropological Papers* 64(2).

City of Paso Robles
1977 Paso Robles Airport Land Use Plan, Amended 2005 and 2007.

Conway, Thor
2001 An Archaeological Surface Survey at the Black Ranch, Highway 46, Paso Robles, San Luis Obispo County, CA.

Cowan, Robert G.
1977 *Ranchos of California, a list of Spanish Concessions 1775-1822 and Mexican Grants 1822-1846.* Historical Society of Southern California. Los Angeles.

Erlandson, Jon and and Todd Braje
2011 From Asia to the Americas by Boat? Paleogeography, paleoecology, and stemmed points of the Northwest Pacific. *Quaternary International* 239: 28-37.

Erlandson Jon M. and Terry L. Jones, editors
2002 *Catalysts to Complexity, Late Holocene Societies of the California Coast. Perspectives in California Archaeology, Volume 6*. Cotsen Institute of Archaeology, University of California, Los Angeles.

Fitzgerald, Richard T.
1997 Archaeological Data Recovery at the Salinas River Crossing Site, CA-SLO-1756, San Luis Obispo County, California, for the Coastal Branch, Phase II Project. Submitted to the California Department of Water Resources, Sacramento, California. Garcia and Associates, Santa Cruz, California.
2000 *Cross Creek: An Early Holocene/Millingstone Site*. *California State Water Project, Coastal Branch Series Paper No. 12.* San Luis Obispo County Archaeological Society.

Fitzgerald, Richard T. and Terry L. Jones
1998 Interpretive Synthesis of Subsurface Archaeological Investigations for the Coastal Branch Phase II Project. In *Archaeological Data Recovery at CA-SLO-1797, the Cross Creek Site, San Luis Obispo County, California, Coastal Branch Phase II Project*, edited by R. T. Fitzgerald, Appendix G. Report prepared by Garcia and Associates, on file at California Department of Water Resources, Sacramento.

Gibson, Robert O.
1983 *Ethnogeography of the Salinan People: A Systems Approach*. Master's Thesis, California State University, Hayward.
1993 Hunter Ranch Golf Course EIR Cultural Resources.
2006 Results of Archival Records Search and Phase One Archaeological surface Survey for the Vina Robles 12-inch Waterline Project, Highway 46 East, Paso Robles, San Luis Obispo County, CA.

Glover, Leslie C., *et al*
1999 Archaeological Survey Report For A Highway Widening From Two Lanes To Four Along Highway 46, San Luis Obispo County, CA. Archaeological Research Center, Department of Anthropology California State University, Sacramento.

Greenwood, R.S.
1972 *9000 Years of Prehistory at Diablo Canyon, San Luis Obispo County, California. San Luis Obispo County Archaeological Society Occasional Paper* 2, San Luis Obispo.

Haas, Hannah, Breana Campbell and Christopher Duran
2015 Ken Mundee Paso Vista Resort Project, Paso Robles, CA: Cultural Resources Study. Rincon Consultants

Haney, Jefferson W, Terry L. Jones, and Jennifer M. Farqhuar
2002 Phase II Archaeological Investigation of CA-MNT-879 Fort Hunter Liggett, Monterey County, California. Report submitted to U.S. Army Corps of Engineers, Sacramento District.

Jones, Terry L.
1993 Big Sur: A Keystone in Central California Cultural History. *Pacific Coast Archaeological Society Quarterly* 29(1):1-78.
2000 Archaeological Evaluations at CA-MNT-237 and CA-MNT-519, Fort Hunter Liggett, Monterey County, California. Report submitted to U.S. Army Corps of Engineers, Sacramento District.

Jones Terry L. and Brian Codding
2019 *Foragers on America's Western Edge, The Archaeology of California's Pecho Coast.* The University of Utah Press, Salt Lake City.

Jones, Terry L., Kathleen Davis, Glenn Farris, Steven D. Grantham, Teresa W. Fung, and Betty Rivers
1994 Toward a Prehistory of Morro Bay: Phase II Archaeological Investigations for the Highway 41 Widening Project, San Luis Obispo County, California. Report prepared for Caltrans District 5, San Luis Obispo, California.

Jones, Terry L., and Jefferson W. Haney
1997 Archaeological Evaluation of CA-MNT-521, Fort Hunter Liggett, Monterey County, California. Report submitted to U.S. Army Corps of Engineers, Sacramento District.

Jones, Terry, Nathan Stevens, Debbie Jones, Richard Fitzgerald, and Mark Hylkema.
2007 The Central Coast: A Midlatitude Milieu. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry Jones and Kathryn Klar. AltaMira Press in cooperation with the Society for California Archaeology, Plymouth, United Kingdom.

Jones, Terry L. and Georgie Waugh
1995 *Central California Prehistory: A View from Little Pico Creek. Perspectives in California Archaeology, Vol. 3*. Institute of Archaeology, University of California, Los Angeles.

King, Chester D.
1990 Evolution of Chumash Society: A Comparative Study of Artifacts Used for Social Systems Maintenance in the Santa Barbara Channel Region Before A.D. 1804. In *The Evolution of North American Indians*, edited by D. H. Thomas. Garland Publishing, Inc. New York.

Kroeber, Alfred
1925 *Handbook of the Indians of California*. Facsimile edition, California Book Company, 1953.

Lindsey, Wesley C.
1983 *Soil Survey of San Luis Obispo County, California. Paso Robles Area.* United States Department of Agriculture.

Mason, J. Alden
1912 *The Ethnology of the Salinan Indians*. University of California Publications in American Archaeology and Ethnology, Vol. 10, No.4, pp.97-240. Berkeley, The University Press.
1918 The Language of the Salinan Indians. *University of California Publications in American Archaeology and Ethnology* 14(1):1-154. Berkeley, CA.

Mathes, W. M.
1968 *Sebastián Vizcaino and Spanish Expansion in the Pacific Ocean, 1580-1630.* California Historical Society, San Francisco.

Meighan, Clement
1979 Glass Trade Beads in California. Ms. on file at Lowie Museum of Anthropology. University of California, Berkeley.

Mikkelsen, P.J., and W. R. Hildebrandt
1990 Archaeological Inventory and Evaluation for the Proposed Los Banos Grandes Reservoir, Merced County, California. Report on file, U.S. Bureau of Reclamation, Sacramento.

Moratto, Michael J.
1984 *California Archaeology*. Academic Press. Orlando

Nicholson, Loren
1980 *Rails Across the Ranchos*. Valley Publishers. Fresno, California.

Ohles, Wallace
1997 *The Lands of Mission San Miguel*. Word Dancer Press. Fresno, California.

Olsen, W. H., and L. A. Payen
1969 *Archaeology of the Grayson Site. California Department of Parks and Recreation Archaeological Report No. 12.* Sacramento.

PAR Environmental Services
1992 Historic Property Survey Report for Proposed Lane Widening of State Route 46, PM 32.2 to 36.4.

Rabb, L. Mark, and Daniel O. Larson
1997 Medieval Climatic Anomaly and Punctuated Cultural Evolution in Coastal Southern California. *American Antiquity* 62: 319-336.

Rivers, Betty
2000 *A Line Through the Past: Historical and Ethnographic Background for the Branch Canal*. *California State Water Project, Coastal Branch Series Paper* No. 1. San Luis Obispo County Archaeological Society.

Rogers, David .B.
1929 *Prehistoric Man of the Santa Barbara Coast, California*. Santa Barbara Museum of Natural History Special Publication 1, Santa Barbara, California.

Soule, W.
1984 Negative Archaeological Survey Report, State Water Resources Control Board, Division of Water Rights, Estrella River Winery.

Squibb, Paul
1984 *Captain Portola in San Luis Obispo County in 1769*. Tabula Rasa Press. Morro Bay, California.

Stevens, Nathan, Richard T. Fitzgerald, Nancy Farrell, Mark A. Giambastiani, Jennifer M. Farquhar, and Dayna Tinsley
2004 Archaeological Test Excavations at Santa Ysabel Ranch, Paso Robles, San Luis Obispo County, California. Report submitted to Weyrich Development Company, LLC. Cultural Resource Management Services, Paso Robles.

Treinen, Richard M.
2007 *The Watershed of San Luis Obispo County*. Earth and Soil Sciences Department, California Polytechnic State University.

Wagner, H.R.
1924 The Voyage to California of Sebastian Rodriguez Cermeño in 1595. *California Historical Society Quarterly* 3 (1): 3-24.

Exhibit A

Records and Literature Search
Cental Coast Information Center
Santa Barbara Museum of Natural History
Santa Barbara, CA

Central Coast Information Center
Santa Barbara Museum of Natural History
2559 Puesta del Sol
Santa Barbara, CA 93105
PHONE (805) 682-4711 ext. 181
FAX (805) 682-3170
EMAIL ccic@sbnature2.org

9/13/2021 Records Search # 21-218

Nancy Farrell
Cultural Resource Management Services
829 Paso Robles St.
Paso Robles, CA 93446

Re: Hunter Ranch Hotel and Casita

The Central Coast Information Center received your record search request for the project area referenced above, located on the Paso Robles, Estrella USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a one quarter mile radius:

As indicated on the data request form, the locations of reports and resources are provided in the following format: ■ custom GIS maps ☐ shapefiles ☐ hand-drawn maps ☐ none

Resources within project area:	2; P-40-038059, P-40-038060
Resources within ¼ mile radius:	0
Reports within project area:	7; see list
Reports within ¼ mile radius:	0

Resource Database Printout (list):	■ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☐ enclosed	■ not requested	☐ nothing listed
Resource Digital Database Records:	☐ enclosed	■ not requested	☐ nothing listed
Report Database Printout (list):	■ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☐ enclosed	■ not requested	☐ nothing listed
Report Digital Database Records:	☐ enclosed	■ not requested	☐ nothing listed
Resource Record Copies:	■ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☐ enclosed	■ not requested	☐ nothing listed
OHP Historic Properties Directory:	☐ enclosed	☐ not requested	■ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	■ nothing listed

The following sources of information are available at **http://ohp.parks.ca.gov/?page_id=28065**. Some of these resources used to be available through the CHRIS but because they are now online, they can be accessed directly. The Office of Historic Preservation makes no guarantees about the availability, completeness, or accuracy of the information provided through the sources listed below.

California State Lands Commission Shipwreck Database	*Caltrans Historic Bridge Inventory*
U.S. Geological Survey Historic Topographic Maps	*Rancho Plat Maps*
National Park Service National Register of Historic Places Nominations	*Natural Resource Conservation Service Soil Survey Maps*
US Bureau of Land Management General Land Office Records	*California Historical Landmarks Listing (by county)*
Five Views: An Ethnic Historic Site Survey for California (1988)	*Historical Soil Survey Maps*

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of California Historical Resources Information System (CHRIS) data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the CHRIS.

Sincerely,

Brian Barbier
Coordinator

Exhibit B

Letter Request To Native American Heritage Commission (NAHC)
Response From NAHC
Early Participation Notice To Native Americans and Groups
Response From Native Americans and Groups

CRMS
CULTURAL RESOURCE MANAGEMENT SERVICES

Cultural Resource Management Services
829 Paso Robles Street
Paso Robles, CA 93446
Phone 805-237-3838
Fax 805-237-3849

September 1, 2021

Mr. Steven Quinn
Associate Governmental Program Analyst
California Native American Heritage Commission
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691

RE: Phase I Inventory Survey, Hotel, Restaurant, and Associated Structures
4041 CA-41, Paso Robles, CA, Portion of APN: 025-701-004

Dear Mr. Quinn

The owners of the property described above intend to construct a hotel, restaurant, and associated seervice buildings on the property described above.

Cultural Resource Management Services (CRMS) has been retained, to prepare a Phase I surface survey as well as provide an early participation notice to interested Native Americans and Native American groups relative to the proposed construction project.

Please review the sacred lands files for any Native American Sacred resources or sites that may be within or adjacent to the area of potential effect (APE). Please verify that any sacred sites in the vicinity are not in the APE. The project area is within the incorporated limits of the city of Paso Robles, San Luis Obispo county, and is identified on the attached portion of the USGS Paso Robles and Estrella 7.5' Quadrangles. The study area falls within Sections 19 and 24 Township 26S South and Range 12 East MDM. The project location is depicted as a salmon polygon. As the area was part of a Rancho, there are no section lines.

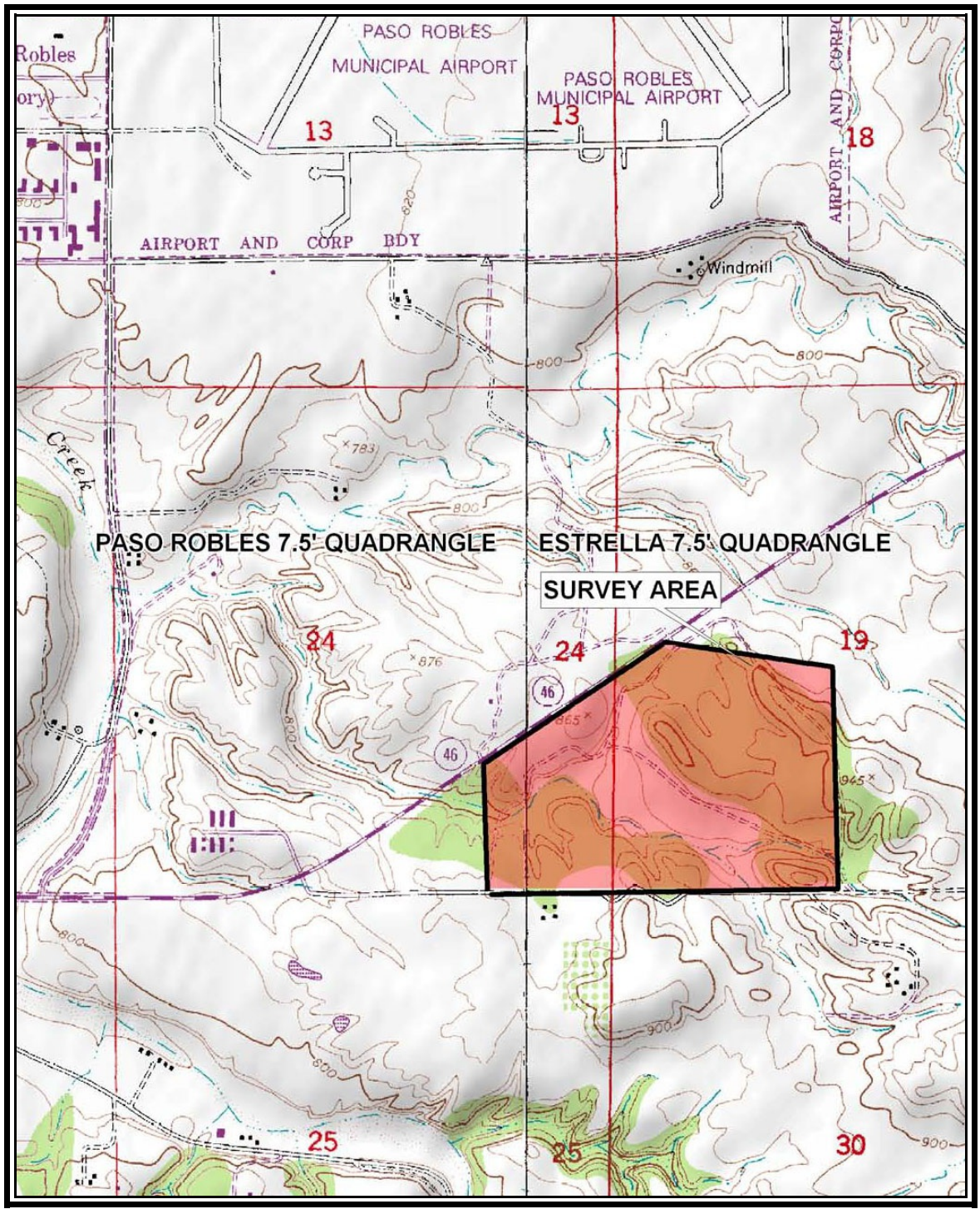
Also provide a list, including names and addresses, of Native American individuals and organizations who may have knowledge of cultural resources in the project area; or who may have a concern or wish to comment on the project.

If you have any questions contact me at the phone number or address shown, or by email ronrose@crms.com. We look forward to your reply.

Best regards,

Ron Rose
Vice President

Encl: Portion of USGS 7.5' Quadrangle , Paso Roble and Estrella, CA



Portion of USGS 7.5' Quadrangle Paso Robles and Estrella, CA

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

September 28, 2021

Ron Rose
CRMS

Via Email to: ronrose@crms.com

Re: 4041 CA-41, Paso Robles, CA Project, San Luis Obispo County

Dear Mr. Rose:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

CRMS
CULTURAL RESOURCE MANAGEMENT SERVICES

Cultural Resource Management Services
829 Paso Robles Street
Paso Robles, CA 93446
Phone 805-237-3838
Fax 805-237-3849

XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX

September 28, 2021

RE: Phase I Inventory Survey, 4041 SR-41 East
Paso Robles, CA, Portion of APN: 025-701-004

XXXXXXXXXXXXX:

The owner of the property described above, is proposing the construction of a hotel, restaurant, spa, and other ancillary structures.

Cultural Resource Management Services (CRMS) has been retained, to prepare a Phase I surface survey as well as provide an early participation notice to interested Native Americans and Native American groups relative to the proposed construction project.

The project area is within the incorporated limits of the city of Paso Robles, San Luis Obispo county, and is identified on the attached portion of the USGS Paso Robles and Estrella 7.5' Quadrangles. The study area falls within Sections 19 and 24 Township 26S South and Range 12 East MDM. The project location is depicted as a salmon polygon. As the area was part of a Rancho, there are no section lines.

The Native American Heritage Commission has indicated that no Sacred Sites exist anywhere on the property or the vicinity. If you wish to comment on this project, please do so as soon as possible. If you have any questions contact me at the phone number or address shown, or by email ronrose@crms.com. We look forward to your reply.

Best regards,

Ron Rose
Vice President

Encl: Portion of USGS 7.5' Quadrangle, Paso Robles and Estrella

The letter on the previous page was sent to the following Native Americans and groups. XXXX substituted for address and salutation.

Native American Heritage Commission
Native American Contact List
San Luis Obispo County
9/28/2021

Barbareno/Ventureno Band of Mission Indians
Julie Tumamait-Stenslie, Chairperson
365 North Poli Ave — Chumash
Ojai, CA, 93023
Phone: (805) 646 - 6214
jtumamait@hotmail.com

Barbareno/ Ventureno Band of Mission Indians
Brenda Guzman,
58 N. Ann Street, #8 — Chumash
Ventura, CA, 93001
Phone: (209) 601 - 4676
brendamguzman@gmail.com

Barbareno/ Ventureno Band of Mission Indians
Patrick Tumamait,
992 El Camino Corto — Chumash
Ojai, CA, 93023
Phone: (805) 216 - 1253

Barbareno/ Ventureno Band of Mission Indians
Annette Ayala,
188 S. Santa Rosa Street — Chumash
Ventura, CA, 93001
Phone: (805) 515 - 9844
annetteayala78@yahoo.com

Chumash Council of Bakersfield
Julio Quair, Chairperson
729 Texas Street — Chumash
Bakersfield, CA, 93307
Phone: (661) 322 - 0121
chumashtribe@sbcglobal.net

Northern Chumash Tribal Council
Fred Collins, Spokesperson
P.O. Box 6533 — Chumash
Los Osos, CA, 93412
Phone: (805) 801 - 0347
fcollins@northernchumash.org

Salinan Tribe of Monterey, San Luis Obispo Counties
Patti Dutton, Tribal Administrator
7070 Morro Road, Suite A — Salinan
Atascadero, CA, 93422
Phone: (805) 464 - 2650
info@salinantribe.com

San Luis Obispo County Chumash Council
Mark Vigil, Chief
1030 Ritchie Road — Chumash
Grover Beach, CA, 93433
Phone: (805) 481 - 2461
Fax: (805) 474-4729

Santa Rosa Rancheria Tachi Yokut Tribe
Leo Sisco, Chairperson
P.O. Box 8 — Southern Valley Yokut
Lemoore, CA, 93245
Phone: (559) 924 - 1278
Fax: (559) 924-3583

Santa Ynez Band of Chumash Indians
Kenneth Kahn, Chairperson
P.O. Box 517 — Chumash
Santa Ynez, CA, 93460
Phone: (805) 688 - 7997
Fax: (805) 686-9578
kkahn@santaynezchumash.org

Tule River Indian Tribe
Kerri Vera, Environmental Department
P. O. Box 589 — Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
kerri.vera@tulerivertribe-nsn.gov

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589 — Yokut
Porterville, CA, 93258
Phone: (559) 781 - 4271
Fax: (559) 781-4610
neil.peyron@tulerivertribe-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 4041 CA-41, Paso Robles, CA Project, San Luis Obispo County.

PROJ-2021-004911 — 09/28/2021 09:44 AM — 1 of 2

Tule River Indian Tribe
Joey Garfield, Tribal Archaeologist
P. O. Box 589 Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
joey.garfield@tulerivertribe-nsn.gov

Xolon-Salinan Tribe
Donna Haro, Tribal Headwoman
P. O. Box 7045 Salinan
Spreckels, CA, 93962
Phone: (925) 470 - 5019
dhxolonaakletse@gmail.com

Xolon-Salinan Tribe
Karen White, Chairperson
P. O. Box 7045 Salinan
Spreckels, CA, 93962
Phone: (831) 238 - 1488
xolon.salinan.heritage@gmail.com

yak tityu tityu yak tiłhini – Northern Chumash Tribe
Mona Tucker, Chairperson
660 Camino Del Rey Chumash
Arroyo Grande, CA, 93420
Phone: (805) 748 - 2121
olivas.mona@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 4041 CA-41, Paso Robles, CA Project, San Luis Obispo County.

RESPONSE TO LETTERS WRITTEN

To date, there have been no responses.

Appendix D

Noise & Groundborne Vibration Impact Analysis

NOISE & GROUNDBORNE VIBRATION IMPACT ANALYSIS

FOR

HUNTER RANCH HOTEL & RESORT PROJECT

PASO ROBLES, CA

NOVEMBER 2023

PREPARED BY:

AMBIENT
AIR QUALITY & NOISE CONSULTING

75 HIGUERA STREET, SUITE 105
SAN LUIS OBISPO, CA 93401

TABLE OF CONTENTS

Introduction 1
Proposed Project Summary 1
Existing Setting 1
Concepts and Terminology 1
Acoustic Fundamentals 1
Noise Descriptors 3
Human Response to Noise 5
Affected Environment 7
Noise-Sensitive Land Uses 7
Ambient Noise Environment 7
Regulatory Framework 8
Noise 9
Groundborne Vibration 10
Impacts And Mitigation Measures 11
Methodology 11
Project Impacts 13
References 18

LIST OF FIGURES

Figure 1. Project Vicinity Map 2
Figure 2. Common Community Noise Sources & Noise Levels 4
Figure 3. Ambient Noise Level Measurement Locations 8
Figure 4. Recommended Noise Barrier Location 17

LIST OF TABLES

Table 1. Common Acoustical Descriptors 5
Table 2. Summary of Short-Term Measured Ambient Noise Levels 8
Table 3. Noise Standards for New Uses Affected by Traffic or Railroad Noise 9
Table 4. Noise Standards for Non-Transportation Noise Sources 10
Table 5. Summary of Groundborne Vibration Levels and Potential Effects 11
Table 6. Typical Construction Equipment Noise Levels 13

APPENDICES

Appendix A. Noise Prediction Modeling & Supportive Documentation

LIST OF COMMON TERMS AND ACRONYMS

ANSI	Acoustical National Standards Institute, Inc.
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CIty	City of Paso Robles
CNEL	Community Noise Equivalent Level
dB	Decibels
dBA	A-Weighted Decibels
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	Heating Ventilation & Air Conditioning
Hz	Hertz
in/sec	Inches per Second
L_{dn}	Day-Night Level
L_{eq}	Equivalent Sound Level
L_{max}	Maximum Sound Level
ppv	Peak Particle Velocity
Project	Hunter Ranch Hotel & Resort Project
U.S. EPA	United States Environmental Protection Agency

INTRODUCTION

This report discusses the existing noise setting and identifies potential noise impacts associated with implementation of the proposed Hunter Ranch Hotel & Resort Project (project). Noise mitigation measures are recommended where the predicted noise levels would exceed applicable noise standards.

PROPOSED PROJECT SUMMARY

The Hunter Ranch Hotel & Resort Project would add a 402-unit resort hotel, a 300-person event center, and supporting facilities to the existing 18-hole golf course. The proposed project's vicinity map is depicted in Figure 1.

EXISTING SETTING

CONCEPTS AND TERMINOLOGY

ACOUSTIC FUNDAMENTALS

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound is mechanical energy transmitted in the form of a wave because of a disturbance or vibration. Sound levels are described in terms of both amplitude and frequency.

Amplitude

Amplitude is defined as the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. 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 3 dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3-dB change in amplitude as the minimum audible difference perceptible to the average person.

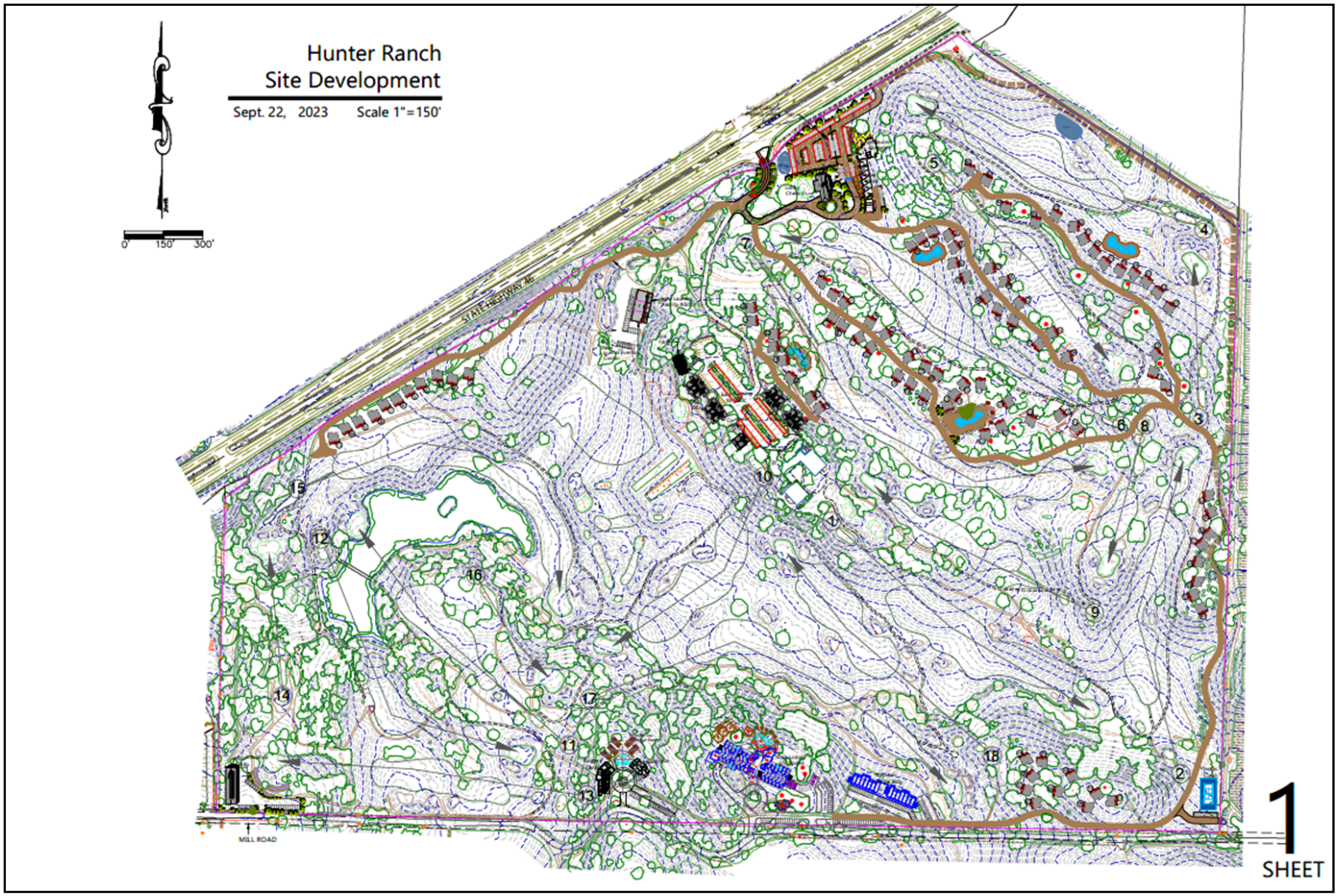
Frequency

The frequency of a sound is defined as the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. For instance, the human ear is more sensitive to sound in the higher portion of this range than in the lower and sound waves below 16 Hz or above 20,000 Hz cannot be heard at all. To approximate the sensitivity of the human ear to changes in frequency, environmental sound is usually measured in what is referred to as "A-weighted decibels" (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA (U.S. EPA 1971). Common community noise sources and associated noise levels, in dBA, are depicted in Figure 2.

Addition of Decibels

Because decibels are logarithmic units, sound levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces a sound level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

Figure 1. Project Vicinity Map



Source: Watson Planning

Sound Propagation & Attenuation

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path, and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, depending on ground surface characteristics. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water,), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 decibels per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation for soft surfaces results in an overall attenuation rate of 4.5 decibels per doubling of distance from the source.

Atmospheric Effects

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in a minimum of 5 dB of noise reduction. Taller barriers provide increased noise reduction.

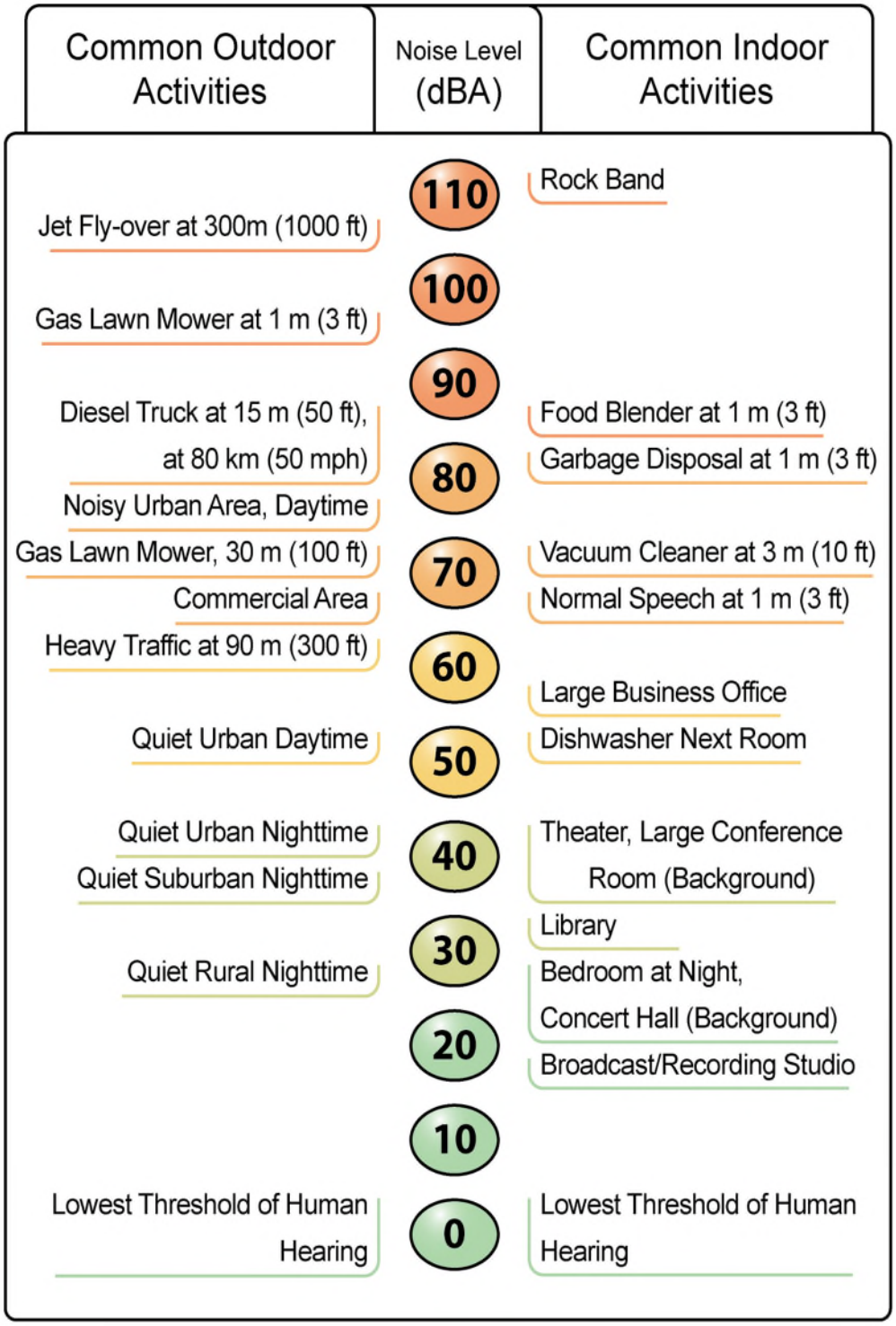
Noise reductions afforded by building construction can vary depending on construction materials and techniques. Standard construction practices typically provide approximately 15 dBA exterior-to-interior noise reductions for building facades, with windows open, and approximately 25-30 dBA, with windows closed. With compliance with current Title 24 energy efficiency standards, which require increased building insulation and inclusion of an interior air ventilation system to allow windows on noise-impacted façades to remain closed, exterior-to-interior noise reductions typically average approximately 25 dBA. The absorptive characteristics of interior rooms, such as carpeted floors, draperies and furniture, can result in further reductions in interior noise.

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. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound-pressure level in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz, and perceive sounds within that range better than sounds of the same amplitude in higher or lower

Figure 2. Common Community Noise Sources & Noise Levels



Source: Caltrans 2022

frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies, which is referred to as the "A-weighted" sound level (expressed in units of dBA). The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with environmental noise.

The intensity of environmental noise fluctuates over time, and several descriptors of time-averaged noise levels are typically used. For the evaluation of environmental noise, the most commonly used descriptors are equivalent sound level (L_{eq}), day-night average level (L_{dn}), and community noise equivalent level (CNEL). The energy-equivalent noise level, L_{eq}, is a measure of the average energy content (intensity) of noise over any given period. Many communities use 24-hour descriptors of noise levels to regulate noise. The day-night average noise level, L_{dn}, is the 24-hour average of the noise intensity, with a 10-dBA "penalty" added for nighttime noise (10 p.m. to 7 a.m.) to account for the greater sensitivity to noise during this period. CNEL, the community equivalent noise level, is similar to L_{dn} but adds an additional 5-dBA penalty for evening noise (7 p.m. to 10 p.m.) Common noise level descriptors are summarized in Table 1.

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. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

Table 1. Common Acoustical Descriptors

Descriptor	Definition
Energy Equivalent Noise Level (L_{eq})	The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.
Statistical Descriptor (L_x)	The noise level exceeded a percentage of time during a measurement period. For instance, L_{50} is a statistical descriptor of the noise level exceeded 50% of the time during the measurement period. Over a one-hour period the L_{50} noise level is roughly equivalent to the L_{eq} noise level.
Minimum Noise Level (L_{min})	The minimum instantaneous noise level during a specific period of time.
Maximum Noise Level (L_{max})	The maximum instantaneous noise level during a specific period of time.
Day-Night Average Noise Level (DNL or L_{dn})	The DNL was first recommended by the U.S. EPA in 1974 as a "simple, uniform and appropriate way" of measuring long term environmental noise. DNL takes into account both the frequency of occurrence and duration of all noise events during a 24-hour period with a 10 dBA "penalty" for noise events that occur between the more noise-sensitive hours of 10 p.m. and 7 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours to account for increases sensitivity to noise during these hours.
Community Noise Equivalent Level (CNEL)	The CNEL is similar to the Ldn described above, but with an additional 5 dBA "penalty" added to noise events that occur between the hours of 7:00 p.m. to 10 p.m. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated Ldn.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted: the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans;
- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference;
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 5 dB is typically considered substantial;
- A 10-dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on Human Activities

The extent to which environmental noise is deemed to result in increased levels of annoyance, activity interference, and sleep disruption varies greatly from individual to individual depending on various factors, including the loudness or suddenness of the noise, the information value of the noise (e.g., aircraft overflights, child crying, fire alarm), and an individual's sleep state and sleep habits. Over time, adaptation to noise events and increased levels of noise may also occur. In terms of land use compatibility, environmental noise is often evaluated in terms of the potential for noise events to result in increased levels of annoyance, sleep disruption, or interference with speech communication, activities, and learning. Noise-related effects on human activities are discussed in more detail, as follows:

Speech Communication

For most noise-sensitive land uses, an interior noise level of 45 dB L_{eq} is typically identified for the protection of speech communication in order to provide for 100-percent intelligibility of speech sounds. For outdoor voice communication, an exterior noise level of 60 dBA L_{eq} allows normal conversation at distances up to 2 meters with 95 percent sentence intelligibility (U.S. EPA 1974.) Based on this information, speech interference begins to become a problem when steady noise levels reach approximately 60 to 65 dBA. Within interior noise environments, an average-hourly background noise level of 45 dBA L_{eq} is typically recommended for noise-sensitive land uses, such as educational facilities (Caltrans 2002).

Annoyance & Sleep Disruption

With regard to potential increases in annoyance, activity interference, and sleep disruption, land use compatibility determinations are typically based on the use of the cumulative noise exposure metrics (i.e., CNEL or L_{dn}). Perhaps the most comprehensive and widely accepted evaluation of the relationship between noise exposure and the extent of annoyance was one originally developed by Theodore J. Schultz in 1978. In 1978 the research findings of Theodore J. Schultz provided support for L_{dn} as the descriptor for environmental noise. Research conducted by Schultz identified a correlation between the cumulative noise exposure metric and individuals who were highly annoyed by transportation noise. The Schultz curve, expressing this correlation, became a basis for noise standards. When expressed graphically, this relationship is typically referred to as the Schultz curve. The Schultz curve indicates that approximately 13 percent of the population is highly annoyed at a noise level of 65 dBA L_{dn}. It also indicates that the percentage of people describing themselves as being highly annoyed accelerates smoothly between 55 and 70 dBA L_{dn}. A noise level of 65 dBA L_{dn} is a commonly referenced dividing point between lower and higher rates of people describing themselves as being highly annoyed (Caltrans 2002).

The Schultz curve and associated research became the basis for many of the noise criteria subsequently established for federal, state, and local entities. Most federal and state of California regulations and policies related to transportation noise sources establish a noise level of 65 dBA CNEL/L_{dn} as the basic limit of acceptable noise exposure for residential and other noise-sensitive land uses. For instance, with respect to aircraft noise, both the Federal Aviation Administration (FAA) and the State of California have identified a noise level of 65 dBA L_{dn} as the dividing point between normally compatible and normally incompatible residential land use generally applied for determination of land use compatibility. For noise-sensitive land uses exposed to aircraft noise, noise levels in excess of 65 dBA CNEL/L_{dn} are typically considered to result in a potentially significant increase in levels of annoyance (Caltrans 2002).

Allowing for an average exterior-to-interior noise reduction of 25 dB, which is typical for newer building construction with windows closed, an exterior noise level of 70 dBA CNEL/L_{dn} would equate to an interior noise level of 45 dBA CNEL/L_{dn}. An interior noise level of 45 dB CNEL/L_{dn} is generally considered sufficient to protect against activity interference at most noise-sensitive land uses, including residential dwellings, and would also be sufficient to protect against sleep interference (U.S. EPA 1974.) Within California, the California Building Code establishes a noise level of 45 dBA CNEL as the maximum acceptable interior noise level for residential uses (other than detached single-family dwellings). Use of the 45 dBA CNEL threshold is further supported by recommendations provided in the State of California Office of Planning and Research's *General Plan Guidelines*, which recommend an interior noise level of 45 dB CNEL/L_{dn} as the maximum allowable interior noise level sufficient to permit "normal residential activity."

The cumulative noise exposure metric is currently the only noise metric for which there is a substantial body of research data and regulatory guidance defining the relationship between noise exposure, people's reactions, and land use compatibility. However, when evaluating environmental noise impacts involving intermittent noise events, such as aircraft overflights and train passbys, the use of cumulative noise metrics may not provide a thorough understanding of the resultant impact. The general public often finds it difficult to understand the relationship between intermittent noise events and cumulative noise exposure metrics. In such instances, supplemental use of other noise metrics, such as the L_{eq} or L_{max} descriptor, may be helpful as a means of increasing public understanding regarding the relationship between these metrics and the extent of the resultant noise impact (Caltrans 2002).

AFFECTED ENVIRONMENT

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 also 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.

Sensitive land uses located in the vicinity of the proposed project site consist predominantly of rural residential land uses. The nearest residential land uses are located south of the project site, across Mill Road.

AMBIENT NOISE ENVIRONMENT

To document existing ambient noise levels in the project area, short-term ambient noise measurements were conducted on September 28th, 2023, using a Soft dB Piccolo Type 2 integrating sound-level meter. The meter was calibrated before use and is certified to be in compliance with Acoustical National Standards Institute (ANSI) specifications. Measured short-term ambient noise levels are summarized in Table 2. Noise measurement locations are presented in Figure 3.

As indicated in Table 2, the measured daytime ambient noise levels in the project area average approximately 43 to 58 dBA L_{eq}. Ambient noise levels within the project area are predominantly influenced by vehicle traffic on State Route 46 (SR-46). Ambient noise levels during the evening and nighttime hours are generally 5 to 10 dB lower than daytime noise levels.

Table 2. Summary of Short-Term Measured Ambient Noise Levels

Measurement Location	Monitoring Period	Primary Noise Sources Noted	Noise Levels (dBA) L_{eq}
ST1: Near the northern property line, north of existing maintenance building, ~80' from SR-46 near travel lane	13:40 – 13:50	Vehicle traffic on SR-46	57.1
ST2: Near the northern property line, ~120' from SR-46 near travel lane	14:05 – 14:15	Vehicle traffic on SR-46	58.2
ST3: Near southern property line along Mill Rd.	14:25 – 14:35	Distance vehicle traffic on SR-46 and Mill Rd.	42.5
Ambient noise measurements were conducted on September 28, 2023, using a Soft dB Piccolo Type 2 integrating sound-level meter. Refer to Figure 3 for noise measurement locations.			

Figure 3. Ambient Noise Level Measurement Locations

Locations are approximate. Not to scale.

REGULATORY FRAMEWORK

NOISE

City of Paso Robles General Plan

The *City of Paso Robles General Plan Noise Element* was adopted in 2019. The General Plan Noise Element includes noise standards for determination of compatibility of newly proposed land uses in comparison to existing noise environments. Because the proposed project is a new land use it must satisfy the City's land use compatibility standards. The City's General Plan identifies quantitative noise standards for both transportation and non-transportation (i.e., stationary) noise sources. The City's General Plan noise standards for non-transportation noise sources are consistent with those identified in the City's municipal code, as discussed below. With regard to transportation noise, the City's General Plan noise standard for new hotels is 65 dBA L_{dn}/CNEL for outdoor activity areas and 45 dBA L_{dn}/CNEL for interior spaces (refer to Table 3) (City of Paso Robles 2019).

Table 3. Noise Standards for New Uses Affected by Traffic or Railroad Noise

Land Use	Noise Sensitive[1] Outdoor Areas - L_{dn}[7]	Noise Sensitive Interior Spaces[2,3] L_{dn}[7]	Noise Sensitive Interior Spaces[2,3] L_{eq}[5,8]
Residential	65	45	--
Mixed Use Residential	--	45	--
Uptown Town Center S.P. Area Residential	70	45	--
Hotels, Hospitals[4], & Nursing Homes	65	45	--
Theaters & Auditoriums	--	--	35
Churches, Meeting Halls, Libraries	65	--	40
Schools[6]	--	--	40
Office/Professional	65	--	45
Commercial/Retail Buildings	--	--	50
Playgrounds, Parks, etc.	70	--	--
Industrial	--	--	50

1. *Noise sensitive areas are defined in the acoustic terminology section. Where there are no sensitive exterior spaces proposed as part of the new use, only the interior noise level standards shall apply.*
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. *If the proposed use is exposed to railroad noise, in addition to the interior noise standards shown, a maximum (Lmax) noise level standard of 70 dBA shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.*
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. *As determined for a typical worst-case hour during periods of use.*
6. *Exterior areas of school uses are not typically noise-sensitive. As a result, the standards for schools are focused on the interior office and classroom spaces.*
7. *DNL = Day – Night Average Level (also denoted Ldn). Represents 24-hour average of noise with noise occurring during nighttime hours (10 pm to 7 am) penalized by 10 dBA prior to averaging.*
8. *Leq = Average or "Equivalent" noise level. Represents the energy average of all noise occurring during a given period (typically 1-hour).*

City of Paso Robles Municipal Code

The City of Paso Robles Municipal Code, Title 21 – Zoning, Chapter 21.60.040 – General Noise Regulations, addresses noise associated with public nuisances. The City's municipal code identifies quantitative noise standards to be applied to interior and exterior noise levels. As presented in Table 4, the exterior standards for hotels range from 70 to 80 dBA L_{max} for instantaneous noise levels and 50 to 60 dBA L_{eq} for average-hourly noise levels, depending on time of day. Likewise, interior noise standards for hotels range from 45 to 60 dBA L_{max} and 35 to 45 dBA L_{eq}. For residential land uses, these exterior noise standards are reduced by 5 dBA. (City of Paso Robles 2023).

Table 4. Noise Standards for Non-Transportation Noise Sources

Receiving Land Use	Period[3]	Exterior Spaces[1]		Interior Spaces[2]	
		L_{max}[4]	L_{eq}[5]	L_{max}[4]	L_{eq}[5]
Residential	Day	75	55	60	45
	Evening	70	50	55	40
	Night	65	45	45	35
Mixed Use Residential	Day	--	--	60	45
	Evening	--	--	55	40
	Night	--	--	45	35
Uptown Town Center S.P. Area Residential	Day	75	60	60	45
	Evening	75	55	55	40
	Night	70	50	45	35
Hotels, Hospitals[6], & Nursing Homes	Day	80	60	60	45
	Evening	75	55	55	40
	Night	70	50	45	35
Theaters & Auditoriums	Day	75	55	40	35
	Evening	70	50	40	35
	Night	--	--	40	35
Churches, Meeting Halls, Libraries	Day	75	55	55	45
	Evening	70	50	55	40
Schools[7]	Day	--	--	55	40
	Evening	--	--	55	40
Office/Professional	Day	80	60	60	45
	Evening	75	55	60	45
Commercial/Retail Buildings	Day	80	60	60	50
	Evening	75	55	60	50
Playgrounds, Parks, etc.	Day	75	55	--	--
	Evening	75	55	--	--
Industrial	Day	80	60	60	50
	Evening	75	55	60	50

1. *Noise sensitive areas are defined acoustic terminology section.*
2. *Interior noise level standards are applied within noise-sensitive areas of the various land uses, as defined in the acoustic terminology section, with windows and doors closed.*
3. *Daytime hours = 7 a.m. to 7 p.m., Evening hours = 7 p.m. to 10 p.m., Nighttime hours = 10 p.m. to 7 a.m.*
4. *L_{max} = Highest measured sound level occurring during a given interval of time (Typically 1 hour).*
5. *L_{eq} = Average or "Equivalent" noise level during the worst-case hour in which the building is in use.*
6. *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*
7. *Exterior areas of school uses are not typically noise-sensitive. As a result, the standards for schools are focused on the interior office and classroom spaces.*

General Notes:

a. *Where the noise source in question consists of speech or music, or is impulsive in nature, or contains a pure tone, the noise standards of this table are reduced by 5 dB.*
b. *Where ambient noise levels exceed the noise level standards shown above, the noise standards shall be increased in 5 dBA increments to encompass the ambient.*
c. *Reductions in the noise standards for noise sources identified in general note "A" above shall be applied after any increases warranted by elevated ambient conditions prescribed in general note "B," subject to verification through a noise study.*

GROUNDBORNE VIBRATION

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of amplitude and frequency. A person's perception of the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating. Vibration can be measured in terms of acceleration, velocity, or displacement.

The effects of groundborne vibration levels, with regard to human annoyance and structural damage, is influenced by various factors, including ground type, the distance between source and receptor, and duration. Overall effects are also influenced by the type of vibration event, defined as either continuous or transient. Continuous vibration events would include most construction equipment, including pile drivers, and compactors, whereas, transient sources of vibration create single isolated vibration events, such as demolition ball drops and blasting.

The threshold criteria for continuous and transient events are summarized in Table 6. As indicated in Table 5, the threshold at which there is a risk to normal structures from continuous events is 0.5 inches per second (in/sec) peak particle velocity (ppv) for newer building construction. A threshold of 0.5 in/sec ppv also represents the structural damage threshold applied to older structures for transient vibration sources. With regard to human perception (refer to Table 5), vibration levels would begin to become distinctly perceptible at levels of 0.04 in/sec ppv for continuous events and 0.25 in/sec ppv for transient events. Continuous vibration levels are considered annoying for people in buildings at levels of 0.2 in/sec ppv (Caltrans 2020).

Table 5. Summary of Groundborne Vibration Levels and Potential Effects

Vibration Level (in/sec ppv)	Human Reaction	Effect on Buildings
0.006 - 0.019	Threshold of perception; possibility of intrusion.	Vibrations unlikely to cause damage of any type.
0.08	Vibrations readily perceptible.	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected.
0.10	Level at which continuous vibrations begin to annoy people.	Virtually no risk of "architectural" damage to normal buildings.
0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relatively short periods of vibrations).	Threshold at which there is a risk of "architectural" damage to fragile buildings.
0.3 - 0.6	Vibrations become distinctly perceptible at 0.04 in/sec ppv and considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges.	Potential risk of "architectural" damage may occur at levels above 0.3 in/sec ppv for older residential structures and above 0.5 in/sec ppv for newer structures.

The vibration levels are based on peak particle velocity in the vertical direction for continuous vibration sources, which includes most construction activities.
Source: Caltrans 2020

IMPACTS AND MITIGATION MEASURES

METHODOLOGY

Short-Term Construction Noise

Short-term noise impacts associated with construction activities were analyzed based on typical construction equipment noise levels and distances to the nearest noise-sensitive land uses. Noise levels were predicted based on representative off-road equipment noise levels derived from the Federal Highway Administration's (FHWA) Roadway Construction Noise Model based on average equipment usage rates and assuming a noise-attenuation rate of 6 dB per doubling of distance from the source.

Long-term Operational Noise

The primary operational noise source for the project would be associated with the event center. Additional noise levels associated with hotels are typically from heating, ventilation, and air conditioning (HVAC) units.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the California environmental Quality Act (CEQA) Guidelines Initial Study Checklist, a project would be considered to have a significant impact to climate change if it would:

a) Result in the 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.

b) Generate excessive groundborne vibration or groundborne noise levels.

c) 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, the project would expose people residing or working in the project area to excessive noise levels.

The CEQA Guidelines do not define the levels at which temporary and permanent increases in ambient noise are considered "substantial." As discussed previously in this section, a noise level increase of 3 dBA is barely perceptible to most people, an increase of 5 dBA is readily noticeable, and a difference of 10 dBA would be perceived as a doubling of loudness. For purposes of this analysis, a significant increase in ambient noise levels would be defined as an increase of 5 dBA, or greater, that would exceed applicable noise standards.

Stationary source noise levels were evaluated in comparison to the City's noise ordinance standards (refer to Table 3). The compatibility of proposed land uses was also evaluated for consistency with the City's General Plan noise standards and policies, which establish a conditionally acceptable exterior noise level of 65 dBA L_{dn} within outdoor activity areas and an interior noise level of 45 dBA L_{dn}.

It is important to note that no standardized criteria have been developed by the State of California or the City for assessing construction noise impacts. However, the Federal Transit Administration (FTA) has identified criteria for the assessment of construction-generated noise levels. For noise-sensitive land uses, such as residential land uses, the FTA criteria identify daytime and nighttime average-hourly noise limits of 90 and 80 dBA L_{eq}, respectively (FTA 2018). Short-term construction noise levels exceeding these levels would be determined to have a potentially significant impact.

The CEQA Guidelines also do not define the levels at which groundborne vibration levels would be considered excessive. For this reason, California Department of Transportation (Caltrans) recommended groundborne vibration thresholds were used for the evaluation of impacts based on increased potential for structural damage and human annoyance, as identified in Table 6. No fragile or historic buildings were identified in the project area. For purposes of this analysis, risks of architectural damage (i.e., minor cracking of plaster walls and ceilings) would be considered potentially significant if construction-generated ground vibration levels at nearby structures would exceed 0.5 in/sec ppv. Ground vibration in excess of 0.2 in/sec ppv would be expected to result in a potential for significant short-term increases in levels of annoyance for occupants of nearby sensitive structures (e.g., residential dwellings).

PROJECT IMPACTS

Impact Noise-A:	***Would the project result in the 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?***

Potential short-term and long-term noise impacts associated with the proposed project are discussed, as follows:

Short-term Construction Noise Impacts

Construction noise typically occurs intermittently and varies depending upon the phase (e.g., land clearing, grading, excavation, and erection). Noise generated by construction equipment, including earthmovers, material handlers, and portable generators can reach high levels. Noise levels commonly associated with off-road equipment anticipated to be used during project construction are summarized in Table 6.

As noted in Table 6, instantaneous noise levels generated by individual pieces of off-road equipment typically range from approximately 77 to 90 dBA L_{max} at 50 feet. Typical operating cycles may involve 2 minutes of full power, followed by 3 or 4 minutes at lower settings. Based on typical off-road equipment usage rates, average hourly noise levels for individual equipment would be approximately 83 dBA L_{eq}, or less, at 50 feet. Assuming that multiple pieces of equipment could be operating simultaneously, predicted average-hourly noise levels could reach levels of approximately 85 dBA at 50 feet.

Table 6. Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	
	L_{max}	L_{eq}
Air Compressor	78	74
Backhoe	78	74
Concrete Mixer	79	75
Crane, Mobile	81	73
Dozer	82	78
Grader	85	81
Loader	79	71
Paver	77	74
Roller	80	73
Saw	90	83

dBA = A-weighted decibels; L_{max} = Maximum sound level; L_{eq} = Equivalent sound level
Source: FHWA Roadway Construction Noise Model

The nearest noise-sensitive land uses located in the vicinity of the proposed project site include rural residential dwellings, which are located approximately 75 feet south of the project site. Depending on the location and types of onsite activities conducted, predicted noise levels at the nearest existing residences could potentially exceed an average-hourly noise limit of 80 dBA L_{eq}. Furthermore, with regard to residential land uses, activities occurring during the more noise-sensitive evening and nighttime hours could result in increased levels of annoyance and potential sleep disruption to occupants of nearby residential land uses. For these reasons, this impact would be considered **potentially significant**.

Mitigation Measure Noise-1: The following measures shall be implemented to reduce short-term construction-related noise impacts:

a. Noise sources associated with construction shall be limited to between 7 a.m. and 7 p.m. on weekdays. Construction activities shall be prohibited on Sundays and federal holidays.

b. Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.

c. When not in use, off-road equipment shall be turned off and shall not be allowed to idle.

Significance After Mitigation: Use of mufflers would reduce individual equipment noise levels by approximately 10 dBA. Implementation of the above mitigation measures would limit construction activities to the less noise-sensitive periods of the day. With implementation of the above mitigation measures and because activities would be short-term, this impact would be considered ***less-than-significant.***

Long-term Operational Noise Impacts

On-Site Stationary Noise Sources

On-site stationary source noise levels would be primarily influenced by activities at the proposed event center, onsite building mechanical equipment, and noise associated with the use of the onsite maintenance building. Noise levels and potential impacts to nearby existing land uses are discussed, as follows:

Event Center

Noise associated with the event center could expose other nearby land uses (both existing and project related) to increases in ambient noise levels. Noise typically associated with such development includes amplified music and voices. Based on noise measurement data obtained from similar venues, noise levels associated with the event center would be approximately 70 dBA L_{eq} at 50 feet. This representative noise levels includes the use of an amplified sound system consisting of a mix of music and announcements conducted over an approximate one-hour period. The nearest noise-sensitive land use is a residential dwelling located approximately 2,245 feet southwest of the project's event center, along Mill Road. Assuming an operational noise level of 70 dBA L_{eq} with the use of an amplified sound system, predicted noise levels at the nearest noise-sensitive land use would be approximately 37 dBA L_{eq}. Predicted noise levels would not exceed the City's noise standards for non-transportation noise sources of 45 dBA L_{eq} during the nighttime hours or 55 dBA L_{eq} during the daytime hours (refer to Table 4). As a result, this impact would be ***less than significant***.

Building Mechanical Equipment

Noise generated by building mechanical equipment (e.g., heaters, air conditioning units) can result in increases in ambient noise levels. Building heating units are typically located within the structure and would not be expected to result in detectable increases in exterior ambient noise levels. Air conditioning units would operate primarily during the day and evening hours and less frequently at night. Air conditioning units typically generate noise levels of approximately 60 to 65 dBA L_{eq} at 3 feet when operating. Typical operational cycles for residential units occur for periods of approximately 10 minutes in 20-to-30-minute intervals. The nearest existing noise-sensitive land use (i.e., residential dwelling) is located approximately 175 feet south of the proposed Maintenance Building, along Mill Road. Assuming that the proposed maintenance building includes installation of an air conditioning unit and a maximum noise level of 65 dBA L_{eq}, predicted average-hourly exterior noise levels at this nearest residential land use would be approximately 30 dBA L_{eq}. Predicted noise levels at other nearby existing land uses would be less. Predicted noise levels would not exceed the City's noise standards for non-transportation noise sources of 45 dBA L_{eq} during the nighttime hours or 55 dBA L_{eq} during the daytime hours (refer to Table 4). As a result, this impact would be ***less than significant***.

Maintenance Building

The highest noise levels commonly associated with maintenance buildings typically include the operation of pneumatic tools and air compressors. The operation of pneumatic tools and air compressors can generate noise levels of approximately 80 to 85 dBA L_{eq} at 50 feet. The nearest existing noise-sensitive land

use (i.e., residential dwelling) is located approximately 175 feet south of the proposed Maintenance Building, along Mill Road. Assuming a maximum noise level of 85 dBA L_{eq} at 50 feet from the proposed maintenance building, based on a worst-case assumption that equipment (e.g., air compressor) were to be located at the exterior of the structure, predicted noise levels at the outdoor activity area of the nearest residential land use would be approximately 62 dBA L_{eq}. Predicted operational noise levels would exceed the City's applicable noise standards (refer to Table 4). As a result, this impact would be considered ***potentially significant.***

Mitigation Measures

Noise-1. The following mitigation measures shall be implemented to reduce operational noise levels associated with the proposed maintenance building:

a. Mechanical equipment (e.g., air compressors) shall be located within the interior of the proposed maintenance building.
b. Bay doors on the maintenance building shall be closed to the extent possible.
c. Doors and windows shall not be installed along the southern façade of the proposed maintenance building.
d. The operation of maintenance building mechanical equipment and power tools (e.g., air compressors, pneumatic tools, grinders) shall be limited to the hours of 7:00 a.m. to 7:00 p.m.

Significance after Mitigation

With implementation of the above mitigation measures, operational activities associated with the proposed maintenance building would be limited to the daytime hours of 7:00 a.m. to 7:00 p.m. The enclosure of mechanical equipment would reduce operational noise levels by approximately 10 dBA, or more. With mitigation, predicted noise levels at the nearest residence would be reduced to approximately 52 dBA L_{eq}. Predicted operational noise levels would not exceed the City's daytime noise standard of 55 dBA L_{eq}. With mitigation, this impact would be considered ***less than significant***.

Off-Site Vehicle Traffic

The project is predicted to generate 3,220 new daily trips (CCTC 2023). A doubling of vehicle traffic is typically required before a noticeable increase (e.g., 3 dB, or greater) in traffic noise levels occurs. Based on Caltrans 2021 traffic data (Caltrans 2023), the segment of SR-46 adjacent to the project site has an average daily traffic (ADT) volume of 27,000. The project would not result in a doubling of vehicle volumes and would, therefore, not result in a noticeable increase in traffic noise levels. As a result, increases in traffic noise levels would be considered ***less than significant***.

Compatibility of Proposed Land Uses

As noted earlier in this report, the City has established "normally acceptable" exterior and interior noise standards for exposure to transportation noise sources. For hotel land uses, the City's exterior noise standard for outdoor activity areas is 65 dBA L_{dn} and 45 dBA L_{dn} for interior areas.

Predicted future year onsite traffic noise levels would be highest along the northern boundary of the project site, associated with vehicular traffic along SR-46. Traffic noise levels for SR-46 were calculated using the FHWA Traffic Noise Model, version 2.5, based on future year data derived from the traffic analysis prepared for this project and the California Department of Transportation.

The nearest proposed hotel units are located approximately 200 feet from SR-46. Based on the modeling conducted, predicted exterior traffic noise levels at the outdoor activity areas of the nearest proposed hotel units would be approximately 72 dBA L_{dn}. Predicted interior noise levels would be approximately 50 dBA L_{dn}. Noise levels at the hotel units adjacent to the SR-46 would exceed the City's exterior and interior noise standards of 65 and 45 dB L_{dn}, respectively. As a result, this impact would be considered ***potentially significant.***

Mitigation Measures

Noise-2. The following mitigation measures shall be implemented to reduce predicted onsite traffic noise levels at proposed hotel land uses:

a. A noise barrier shall be constructed along the northern property line of the project site sufficient to shield proposed hotel units located within approximately 75 feet of SR-46 from direct line of sight of SR-46. The barrier shall be constructed of masonry block, or material of similar density/usage, to a minimum height of 10 feet above ground level. The recommended noise barrier location is depicted in Figure 4.

Significance after Mitigation

With construction of an approximately 10-foot noise barrier, predicted noise levels at the nearest hotel units would be approximately 64 dBA L_{dn} within outdoor activity areas and 40 dBA L_{dn} within the interior of the units. With mitigation, predicted noise levels would not exceed the City's exterior outdoor activity area standard of 65 dB L_{dn} nor the City's interior standard of 45 dB L_{dn}. With mitigation, the proposed land use would not conflict with the City's General Plan noise standards for land use compatibility.

Impact Noise-B.	***Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?***

In comparison to existing operations, operational activities associated with the proposed project would not involve the use of any new equipment or processes that would result in potentially significant levels of ground vibration. Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction equipment required for proposed project typically includes smaller equipment (e.g., concrete saws, concrete mixers, welders, forklifts, compressors, pneumatic tools, and jack hammers). Groundborne vibration levels associated with these types of construction equipment would be approximately 0.003 in/sec ppv at 25 feet (Caltrans 2020).

The nearest existing off-site structures in relation to proposed onsite construction areas would be located approximately 175 feet, or more, from on-site construction areas. Based on this distance and assuming a maximum vibration level of 0.003 in/sec ppv at 25 feet, predicted vibration levels at the nearest off-site structures would be <0.01 in/sec ppv. Predicted vibration levels at the nearest existing structures would not be projected to exceed commonly applied criteria for structural damage or human annoyance (i.e., 0.5 and 0.2 in/sec ppv, respectively). As a result, this impact would be considered **less-than-significant**.

Impact Noise-C.	***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 the project expose people residing or working in the project area to excessive noise levels?***

The nearest airport is the Paso Robles Municipal Airport located approximately 1.5 miles north of the project site. The proposed project site is not located within the projected noise contours of Paso Robles Municipal Airport (City of Paso Robles 2019). Implementation of the proposed project would not result in the exposure of sensitive receptors to excessive aircraft noise levels, nor would the proposed project affect airport operations. This impact is considered **less-than-significant**.

Figure 4. Recommended Noise Barrier Location

REFERENCES

California Department of Transportation (Caltrans). 2002. *Caltrans Airport Land Use Planning Handbook.*

California Department of Transportation (Caltrans). 2022. *EIR/EA Annotated Outline*.

California Department of Transportation (Caltrans). 2020. *Transportation and Construction Vibration Guidance Manual.*

California Department of Transportation (Caltrans). 2023. Traffic Volumes. Website url: https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes.

California, Governor's Office of Planning and Research (GOPR). 2017. *State of* California *General Plan Guidelines*.

Central Coast Transportation Consulting (CCTC). June 6, 2023. *Hunter Ranch Resort – Drat Transportation Impact Analysis*.

City of Paso Robles. Updated February 27, 2023. *Code of Ordinances – Title 21 – Zoning– Chapter 21.60.040 – General Noise Regulations*. Website url: https://library.municode.com/ca/el_paso_de_robles/codes/code_of_ordinances?nodeId=TIT21ZO_ARTVNO_CH21.60NO_21.60.040GENORE.

City of Paso Robles. November 5, 2019. *General Plan – Noise Element*. Website url: https://www.prcity.com/DocumentCenter/View/28224/20191105-Adopted-Noise-Element.

United States Department of Transportation, Federal Transit Administration (FTA). April 2018. *Transit Noise and Vibration Impact Assessment Manual. Website url: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.*

U.S. Environmental Protection Agency (U.S. EPA). December 31, 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*.

U.S. Environmental Protection Agency (U.S. EPA). 1974. *Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*.

APPENDIX A

Noise Prediction Modeling & Supportive Documentation

NOISE MEASUREMENT SURVEY FORM

SHEET	1	OF	1

DATE:	10/3/2023
PROJECT:	HUNTER RANCH
LOCATION:	PASO ROBLES, CA
MONITORING STAFF:	KURT LEGLEITER

LOCATION MAP:

Locations are approximate. Not to scale.

NOISE MEASUREMENT CONDITIONS & EQUIPMENT

MET CONDITIONS & MONITORING EQUIPMENT:	TEMP: 79-80 F. | HUMIDITY: 30-32 % | WIND SPEED: 0-3 MPH | SKY: CLEAR | GROUND: DRY				
	CLOUD COVER BY CLASS (OC=OVERCAST):	3	(1. HEAVY OC, 2. LIGHT OC, 3. SUNNY, 4. CLEAR NIGHT, 5. OC NIGHT)		
	MET. METER:	KESTREL 5500			
NOISE MONITORING EQUIPMENT:	LARSON DAVIS SLM MODEL:	SoftdB Picollo Type II			
	CALIBRATOR:	CAL200			
NOISE MONITORING SETUP:	WITHIN 10 FT OF REFLECTIVE SURFACE?:	NO	MICROPHONE HEIGHT AGL (FT):		5
	CALIBRATED PRIOR TO AND UPON COMPLETION OF MEASUREMENTS:	YES	METER SETTINGS:	A-WHT	SLOW

NOISE & TRAFFIC MEASUREMENTS

MEASUREMENT		DURATION			MEASURED NOISE LEVELS		
LOCATION	DATE/TIME	(Minutes)	MEASUREMENT LOCATION	PRIMARY NOISE SOURCES NOTED	LEQ		
1	9/28/2022, 13:40	10	Near the northern property line, north of existing maintenance buiding, ~80' from SR46 near travel lane	Vehicle traffic on SR46	57.1		
2	9/28/2022, 14:05	10	Near the northern property line, ~120' from SR46 near travel lane	Vehicle traffic on SR46	58.2		
3	9/28/2022, 14:25	10	Near southern property line along Mill Rd.	Distance vehicle traffic on SR46 and Mill Rd.	42.5		

Appendix E

Transportation Impact Analysis

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

MEMORANDUM

Date: July 17, 2024 (Revision 1)

To: Warren Frace, Community Development Director, City of Paso Robles

From: Michelle Matson and Joe Fernandez, Central Coast Transportation Consulting

Subject: Hunter Ranch Resort –Transportation Impact Analysis

This memorandum summarizes the Transportation Impact Analysis (TIA) for the proposed Hunter Ranch Resort development on State Route 46 East (SR 46E) in the City of Paso Robles. The existing site contains an 18-hole golf course and supporting facilities. The proposed project would add a 402-unit resort hotel, two event centers, and supporting facilities (including restaurants, retail, medical spas, wedding chapel, tennis and pickleball courts). The full project would generate 272 net new AM peak hour trips, 386 net new PM peak hour trips, and 347 net new Sunday peak hour trips.

SUMMARY

SR 46E/Hunter Ranch/Sensorio driveway (#1) and SR 46E/Mill Road (#2) intersections operate unacceptably during multiple peak hours with and without the addition of project traffic; however, the project would not have a significant impact on vehicle miles traveled (VMT). Outbound event trips are not recommended at any uncontrolled intersection on SR 46E and secondary access to Union Road is recommended prior to use of the event centers. We recommend the following transportation mitigation measures:

- TR 1.0: Prior to occupancy of any structure, the applicant shall construct a two-lane paved roadway connection from the existing SR 46E/Hunter Ranch/Sensorio driveway (#1) to Mill Road.
- TR 2.0: Prior to occupancy of the Southern Conference Center (regardless of total project trips developed to date), the applicant shall construct the new SR 46E parallel route connector from Mill Road to Union Road and a new bridge over Huer Huero Creek
- TR 3.0: Prior to the occupancy of any structure in the Northern Addition, the applicant shall coordinate with Caltrans to improve the SR 46E/Hunter Ranch/Sensorio driveway (#1) to increase the available turn lane storage to a minimum of 200 feet or restrict northbound left turns out of the driveway.
- TR 4.0: Prior to occupancy of the Northern Wedding/Meeting Center (regardless of total project trips developed to date), the SR 46E parallel route connector from Mill Road to Union Road shall be constructed,
  or the applicant shall prepare an event traffic management plan (TMP) for review and approval by City and Caltrans staff.

Other regional improvements to access SR 46E are included in the City's Development Impact Fees and payment of the fees would constitute the project's fair share contribution. The following sections summarize the background, trip generation, California Environmental Quality Act (CEQA) analysis, and local transportation analysis.

BACKGROUND

CCTC prepared a TIA for the Hunter Ranch project in 2020, 2023, early 2024. The 2020 and 2023 TIAs were reviewed by Caltrans and discussed at a meeting with the City of Paso Robles and Caltrans staff and the

applicant team on November 12, 2020, and July 11, 2023. At the meeting with Caltrans on July 11, 2023, staff indicated that the encroachment permits division would likely require a prohibition of left turns out of the driveway, consistent with the treatment at the Sensorio driveway located on the north side of SR 46. Passenger cars would maintain the ability to turn right out of the driveway and U-turn on SR 46E; however, trucks would need to access Mill Road to turn left on to SR 46 at the Mill/SR 46 intersection and an on-site roadway connection to Mill Road would be required prior to development.

The City has also developed a conceptual plan to develop a parallel route connecting Mill Road to Union Road, which would reduce dependence on SR 46E for local trips and reduce uncontrolled turns on SR 46E. The proposed connection to Mill Road should not conflict with full buildout of the planned Union Road/SR 46E interchange. The connection would allow local traffic to access the project without using SR 46E and would allow left turns on to SR 46E to occur at a signalized intersection and ultimately the planned Union Road overcrossing.

TRIP GENERATION

The Institute of Transportation Engineers (ITE) *Trip Generation Manual* 11th Edition was used to estimate project trip generation. Since the Resort Hotel land use category includes supporting facilities such as golf courses, the existing golf course trips were subtracted from the gross trip generation to obtain net new trips. **Table 1** summarizes the project trip generation.

Table 1: Trip Generation

Hunter Ranch Trip Generation												
			Weekday							Sunday		
				AM Peak Hour			PM Peak Hour				Peak Hour	
Land Use	**Size**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**Daily**	**In**	**Out**	**Total**
Lodging[1]	204 rooms	1,138	47	18	65	36	48	84	834	38	42	80
Medical[2]	11.40 KSF	382	27	7	34	13	30	43	13	2	1	3
Medical Internal Trips[3]		*-55*	*-7*	*-2*	*-9*	*-3*	*-8*	*-11*	*-5*	*-1*	*0*	*-1*
Restaurant[4]	15.00 KSF	1,258	6	5	11	78	39	117	1,080	74	43	117
Restaurant Internal Trips[5]		*-255*	*-3*	*-2*	*-5*	*-34*	*-17*	*-51*	*-255*	*-32*	*-19*	*-51*
Conference Center[6]	36.50 KSF	390	71	7	78	7	71	78	395	7	72	79
New Trips (Southern Addition)		**2,858**	**141**	**33**	**174**	**97**	**163**	**260**	**2,062**	**88**	**139**	**227**
Lodging[1]	198 rooms	1,097	45	18	63	35	46	81	813	37	41	78
Medical[2]	5.37 KSF	123	13	4	17	6	13	19	6	1	0	1
Medical Internal Trips[3]		*-25*	*-3*	*-1*	*-4*	*-2*	*-3*	*-5*	*0*	*0*	*0*	*0*
Retail[7]	8.00 KSF	436	11	8	19	33	33	66	238	18	18	36
Retail Internal Trips[8]		*-130*	*-5*	*-3*	*-8*	*-13*	*-13*	*-26*	*-70*	*-7*	*-7*	*-14*
Wedding/Meeting Center[6]	4.80 KSF	215	39	4	43	4	39	43	138	4	40	44
New Trips (Northern Addition)		**1,716**	**100**	**30**	**130**	**63**	**115**	**178**	**1,125**	**53**	**92**	**145**
Existing Golf Course[9]	*18 holes*	*-547*	*-25*	*-7*	*-32*	*-28*	*-24*	*-52*	*-340*	*-3*	*-22*	*-25*
Net New Trips		**4,027**	**216**	**56**	**272**	**132**	**254**	**386**	**2,847**	**138**	**209**	**347**

1. ITE Land Use Code #330, Resort Hotel. Average rates used for Weekday. Sunday rates and Daily estimated from #310, Hotel.
2. ITE Land Use Code #720, Medical-Dental Office Building. Fitted curve equations used for Weekday. Average rates used for Sunday.
3. Internal trips assumed to be 25%. Daily assumed to be 5 times the PM peak.
4. ITE Land Use Code #931, Fine Dining. Average rates used.
5. Internal trips assumed based on PM peak hour pass-by rate of LU #931 Fine Dining. Daily assumed to be 5 times the PM peak.
6. Southern Addition maximum of 540 attendees. Northern Addition maximum of 300 attendees. Assumed weekday events were one third the size of maximum attendees, 33% and 67% of attendees would staying on-site on weekdays and weekends, respectively, and 10% of off-site trips would be dropped off. Assumed 1.6 vehicle occupancy for weekday events and 2.5 for weekend events. Daily assumed to be 5 times the PM peak.
7. ITE Land Use Code #822, Strip Retail Plaza (<40k). Average rates used for AM Peak and weekday daily. Fitted curve equation used for PM Peak. Sunday rates estimated from #820, Shopping Center. Sunday Daily estimated form weekday.
8. Internal trips assumed based on PM peak hour pass-by rate of Land Use #821 Shopping Plaza. Daily assumed to be 5 times the PM peak.
9. ITE Land Use Code #430, Golf Course. Average rates used.

Source: ITE *Trip Generation Manual*, 11th Edition and *Trip Generation Handbook*, 3rd Edition.

The proposed project would generate 272 net new AM peak hour trips, 386 net new PM peak hour trips, and 347 net new Sunday peak hour trips. Without the two event centers, the project would generate 151 net new AM peak hour trips, 265 net new PM peak hour trips, and 224 net new Sunday peak hour trips

Although the Resort Hotel land use includes retail and restaurant amenities, the retail component is separate from the lodge and the restaurant is larger than a typical hotel restaurant. In addition, both of the spa facilities offer medical services. These uses were conservatively added to the trip generation. The project also proposes two event centers also included in **Table 1**, with assumed event characteristics described in footnote 6.

The project trip distribution was estimated using the SLOCOG Travel Demand Model (TDM) as shown in **Figures 1 and 2**.

CEQA ANALYSIS

Vehicle miles traveled (VMT) and safety were analyzed consistent with recently mandated changes to the California Environmental Quality Act (CEQA) and state Office of Planning and Research (OPR) guidance. The City's 2022 Transportation Impact Analysis (TIA) Guidelines Supplement provides VMT and safety thresholds consistent with OPR guidance. The Supplement notes that projects resulting in a net decrease in regional VMT would have a less than significant impact, and that retail and hotel projects may have a significant impact if they cause a net increase in regional VMT.

Projects may have a significant impact if they exacerbate an existing high-priority or similar safety location, introduce a design feature that substantially increases hazards, or propose features that do not meet City design standards.

Caltrans relies on VMT and safety to evaluate transportation impacts and published a VMT Focused TIS Guide in May 2020 which replaced the prior guide reliant on LOS. The TIS Guide notes that lead agencies have the discretion to choose VMT thresholds and methods and generally conforms to OPR guidance.

Vehicle Miles Traveled (VMT)

The hotel and employment-based uses are evaluated separately below since they have different thresholds. **Table 2** presents total regional VMT with and without the proposed hotel.

Table 2: Daily Regional Vehicle Miles Traveled

Daily Regional Vehicle Miles Traveled	
Scenario	**Regional VMT**
Baseline No Project	8,797,565
Baseline Plus Hotel/Retail	8,801,720
Change	*4,155*
Source: SLOCOG Travel Demand Model, CCTC, 2024	

The addition of the hotel results in a net increase in regional VMT of 4,155 miles.

Table 3 presents the commute VMT per employee calculations for employees at the project site. This reflects the home-based-work trips per employee to the project.

Table 3: Employment Vehicle Miles Traveled

Employment Vehicle Miles Traveled	
VMT/Employee	
Countywide Average	11.88
Threshold (85% of Avg)	10.09
Project Employment VMT	8.08
Impact?	*No*
Source: SLOCOG Travel Demand Model, CCTC, 2024	

The project's commute VMT per employee levels are 8.08 work VMT per employee, below the 10.09 work VMT per employee threshold, indicating a less-than-significant impact for this project component.

When analyzed independently, the hotel portion of the project would result in a net increase in regional VMT of 4,155 miles. The commute VMT per employee is less than 85 percent of the regional average. The full project would generate 43,428 VMT before accounting for the mix of uses on the site and provision of golf carts for guests. The interaction between hotel visitors and project amenities such as recreation facilities, restaurants, and

spas will reduce the demand for external trips beyond the project boundaries. A 9.6 percent (4,155/43,428) reduction in VMT would result in a less-than-significant VMT impact.

NCHRP Report 684, *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments* was applied to estimate the interactions between land uses on the site. This method yields an estimated internal capture percentage of 15%, which would reduce the hotel VMT to a less-than-significant level. Additional VMT reductions would be expected due to the project's proximity to the planned Mill Road Class 1 trail, which is planned as a part of the Mill Road connection to Union Road. The project will be required to make a fair share contribution towards this multi-modal facility.

The City's TIS Guidelines Supplement includes guidance from CAPCOA for VMT reductions associated with various project features. Suburban sites with Neighborhood Electric Vehicles (NEVs, proposed as golf carts by the project) can achieve reductions up to 15 percent for accommodation of NEVs, provision of bicycle and pedestrian infrastructure, and a mix of land uses. This supports the finding that these measures would reduce VMT by over 9.6%, the level needed for a less-than-significant finding.

The County of San Luis Obispo also developed a VMT Estimation tool that applies the same thresholds as the City for hotel uses. This tool was tested for the hotel land use on a parcel adjacent to the proposed project, which is located at the City/County boundary. The County tool indicates a less-than-significant impact to VMT.

The employment-based uses proposed on the site would generate work VMT per employee below the City's threshold. The hotel uses would result in an increase in regional VMT before accounting for the mix of uses, pedestrian and bicycle facilities, and provision of electric golf carts on the site. Once those project features are included, the hotel VMT would be less-than-significant. The County's VMT tool also indicates a less-than-significant VMT impact.

Therefore, the project would have a less than significant impact on VMT.

Collision Evaluation

Traffic collision data for the study intersections was obtained from the Caltrans Traffic Accident Surveillance and Analysis System (TASAS) and the Statewide Integrated Traffic Records System (SWITRS). Three collisions occurred within 250' of the Hunter Ranch driveway between October 2017 and September 2022 as shown in **Table 4**.

Table 4: SR 46E/Hunter Ranch Collision History

Collision History SR 46E (MP 33.529) at Hunter Ranch/Sensorio Driveway							
Date	Time	Secondary Road	Distance	Injury Degree[1]	Primary Collision Factor	Collision Type	Alcohol Involved
3/9/2018	12:08	MP 33.50	310' East	Property Damage Only	Auto DUI	Hit Object	Yes
2/8/2019	13:51	RT 46 4041	0'	Fatality (Motorcycle)	Auto ROW	Broadside	Yes
11/10/2019	12:01	JARDINE	6072' West	Complaint of Pain	Auto ROW	Broadside	No
Source: Statewide Integrated Traffic Records System (SWITRS) database. October 2017 through September 2022.							

Two of the three collisions occurred with a vehicle exiting the driveway failing to yield when making a left turn on to SR 46E, and one resulted in a fatality with alcohol involved. The other occurred when an eastbound driver under the influence ran off the road.

Five collisions occurred within 250' of the intersection of Mill Road/SR 46E (#2) between October 2017 and September 2022 as shown in **Table 5.**

Table 5: SR 46E/Mill Road Collision History

Collision History SR 46E (MP 32.650) at Mill Road							
Date	Time	Secondary Road	Distance	Injury Degree[1]	Primary Collision Factor	Collision Type	Alcohol Involved
11/17/2018	20:16	MILL	60' North	Severe Injury	Auto ROW	Broadside	No
9/21/2019	23:10	MILL	0'	Complaint of Pain	Auto ROW	Broadside	Yes
11/3/2019	16:17	MILL	0'	Severe Injury	Auto DUI	Broadside	Yes
9/5/2021	22:37	MILL	0	Complaint of Pain	Auto ROW	Broadside	No
10/15/2021	22:50	MILL	0	Complaint of Pain	Auto ROW	Broadside	Yes
Source: Statewide Integrated Traffic Records System (SWITRS) database. October 2017 through September 2022.							

Four of the five collisions occurred with a vehicle exiting Mill Road failing to yield when making a left turn on to SR 46E, two resulted in severe injuries and two involved alcohol. The other occurred when a northbound driver making a right turn onto SR 46E failed to yield to eastbound traffic, alcohol was involved. Four of the five collisions occurred after 10:00 PM, and at least two of these occurred when a concert was held at Vina Robles.

Table 6 summarizes the intersection collision rates for the intersection of SR 46E/Hunter Ranch and SR 46E/Mill Road.

Table 6: SR 46E/Hunter Ranch Collision Rates

Collision Rates									
	Collisions			Actual Rate[1]			State Ave Rate[1]		
Intersection	F	I	All	F	F+I	All	F	F+I	All
1. SR 46E/Driveway	1	1	**3**	0.021	0.04	**0.06**	0.005	0.15	**0.40**
2. SR 46E/Mill Rd	0	5	**5**	0.000	0.10	**0.10**	0.003	0.09	**0.22**
I = Injury(severe, visible and complaint of pain), F = Fatal, MV = million vehicles.									
1. Rates are in units of collisions per million vehicles entering for intersections.									
Source: Caltrans Traffic Accident Surveillance and Analysis System (TASAS). October 2017 to September 2022.									

The overall intersection collision rate at the Hunter Ranch driveway is substantially below (under 1/5th of) the State average rate. However, due to the single fatality that occurred, the fatality rate is higher than the State average rate. No collisions were reported at the driveway between 2020 and 2023.

The overall intersection collision rate at the intersection of SR 46E and Mill Road is substantially below (under 1/2nd of) the State average rate. However, due to the high number of injuries, the combined fatality and injury rate is slightly higher than the State average rate.

Site Access

The existing SR 46E/Hunter Ranch/Sensorio driveway (#1) is two-way stop controlled with full access. Three deceleration lanes are provided: 660 feet for eastbound left, 640 feet for eastbound right, and 750 feet for westbound left. Two median acceleration lanes are provided: 640 feet for northbound left and 690 feet for southbound left. The posted speed on SR 46E at the intersection is 65 mph. Per the Highway Design Manual (HDM) Table 405.2B, a length of 530 feet is needed to stop from 60 mph. Therefore, the deceleration lanes are all adequate since there is limited vehicle queuing in these lanes.

Sight distance at SR 46E/Hunter Ranch/Sensorio driveway (#1) was reviewed in the field. Per the HDM for private road intersections, the corner sight distance was evaluated using the value for minimum stopping sight distance. For a design speed of 70 mph, the minimum stopping sight distance is 750 feet. Sight distance is adequate assuming routine mowing of brush along the driveway flares.

A connection from the existing driveway on SR 46E to Mill Road is recommended for secondary access to the existing facilities. The Southern Addition will primarily use the SR 46E/Mill Road (#2) intersection to access the site.

LOCAL TRANSPORTATION ANALYSIS

Existing Traffic Conditions

Turning movement counts were collected in May 2020 at the intersection of SR 46E/Hunter Ranch/Sensorio (#1) during the Weekday AM, Weekday PM, Friday PM, and Sunday PM peak hours. The turning movement counts are provided as **Attachment A**. Since the counts were collected during the COVID-19 pandemic, the data was adjusted to obtain typical baseline conditions. July 2021 volumes from west of the project driveway were used to adjust the through movements on SR 46E. ITE trip generation data for Golf Courses was used for the Hunter Ranch driveway turning movements since it was generally higher than the count data. The trip distribution from the count data was applied to the ITE trip generation data for the Hunter Ranch driveway. The Sensorio driveway turning movements were not adjusted under existing conditions, but future development traffic is included under the Near Term scenario.

Turning movement counts were collected in June and July of 2021 at the intersection of SR 46E/Mill Road (#2) intersection. The Existing (baseline) volumes and lane configurations are shown on **Figures 1 and 2**.

Table 7 presents the existing level of service (LOS) for the study intersections based on the Highway Capacity Manual 6th Edition (HCM 6) using the Synchro 11 software. The Synchro output sheets are included in **Attachment B**.

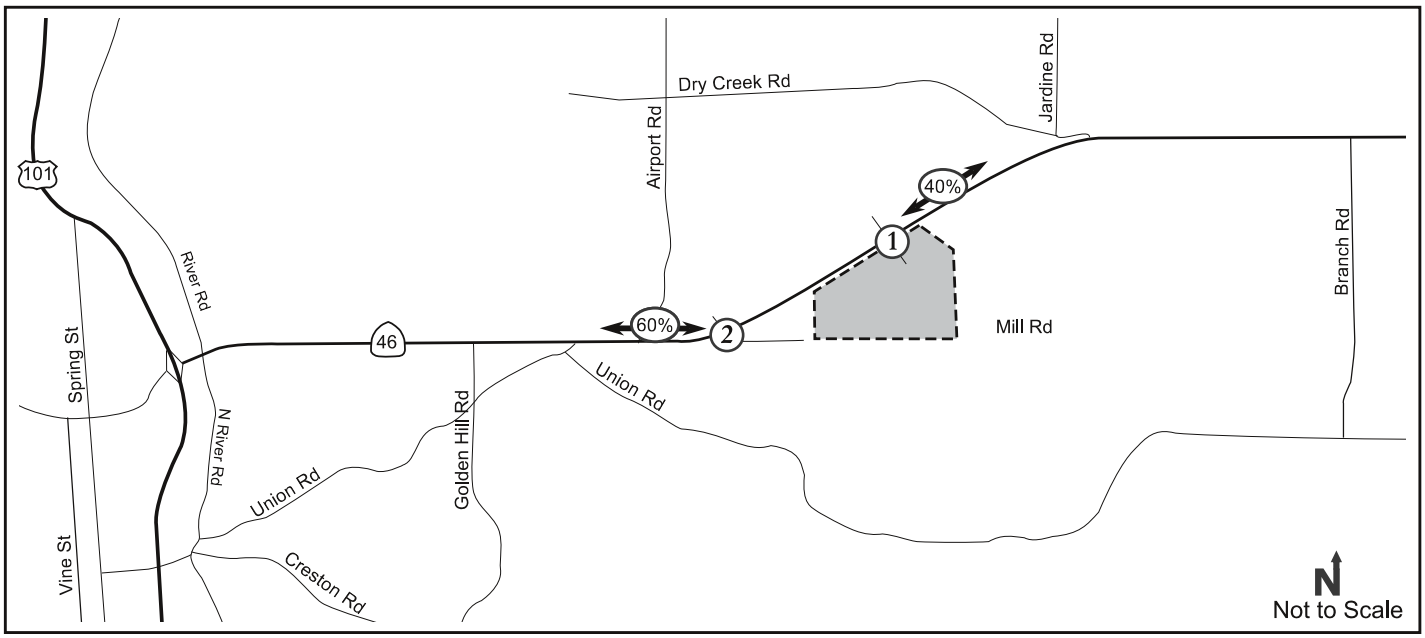
Table 7: Existing Levels of Service

Existing Intersection Auto Levels of Service			
Peak Hour	**Peak Hour**	**Delay[1]**	**LOS**
Weekday AM	1. SR-46/Driveway	0.1 (16.8)	- (C)
	2. SR-46/Mill Rd	0.1 (13.9)	- (B)
Weekday PM	1. SR-46/Driveway	0.3 (27.8)	- (D)
	2. SR-46/Mill Rd	0.5 (31.0)	- (D)
Friday PM	1. SR-46/Driveway	0.3 (34.4)	- (D)
	2. SR-46/Mill Rd	0.3 (34.6)	- (D)
Sunday PM	1. SR-46/Driveway	0.4 (53.0)	- (F)
	2. SR-46/Mill Rd	0.3 (42.7)	- (E)

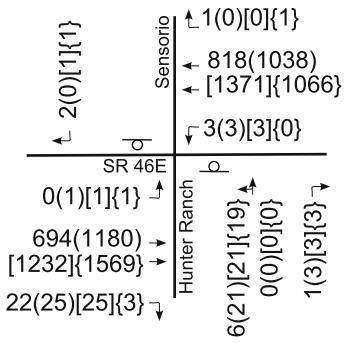
1. HCM 6th average control delay in seconds per vehicle. For two-way stop controlled (TWSC) intersections the worst approach's delay is reported in parentheses next to the overall intersection delay.

Under existing conditions, both intersections operate at LOS D or better during the weekday peak hours. However, the intersection operates at LOS E or F during the Sunday peak hour. The northbound approach experiences the highest level of delay during all peak hours. Under existing conditions, no queues exceed their storage length.

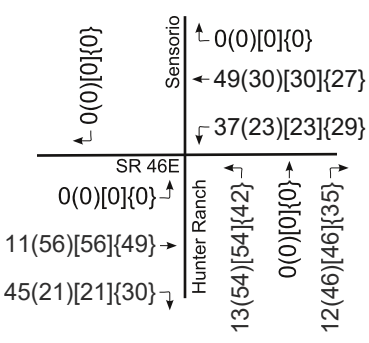
Figure 1: Volume Summary Intersection 1



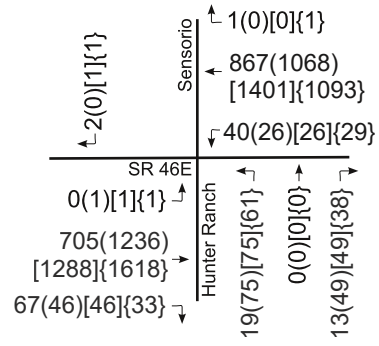
Existing Volumes and Lane Configuration



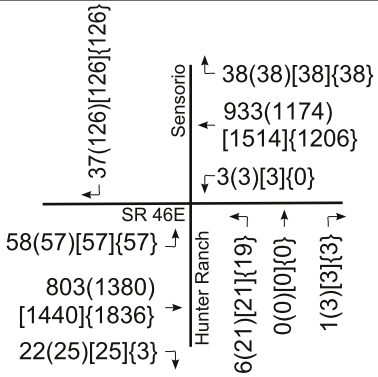
Project Trip Assignment



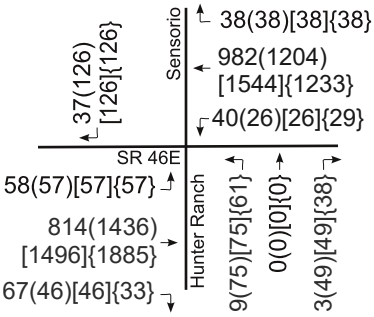
Existing Plus Project Volumes



Near Term Volumes



Near Term Plus Project Volumes



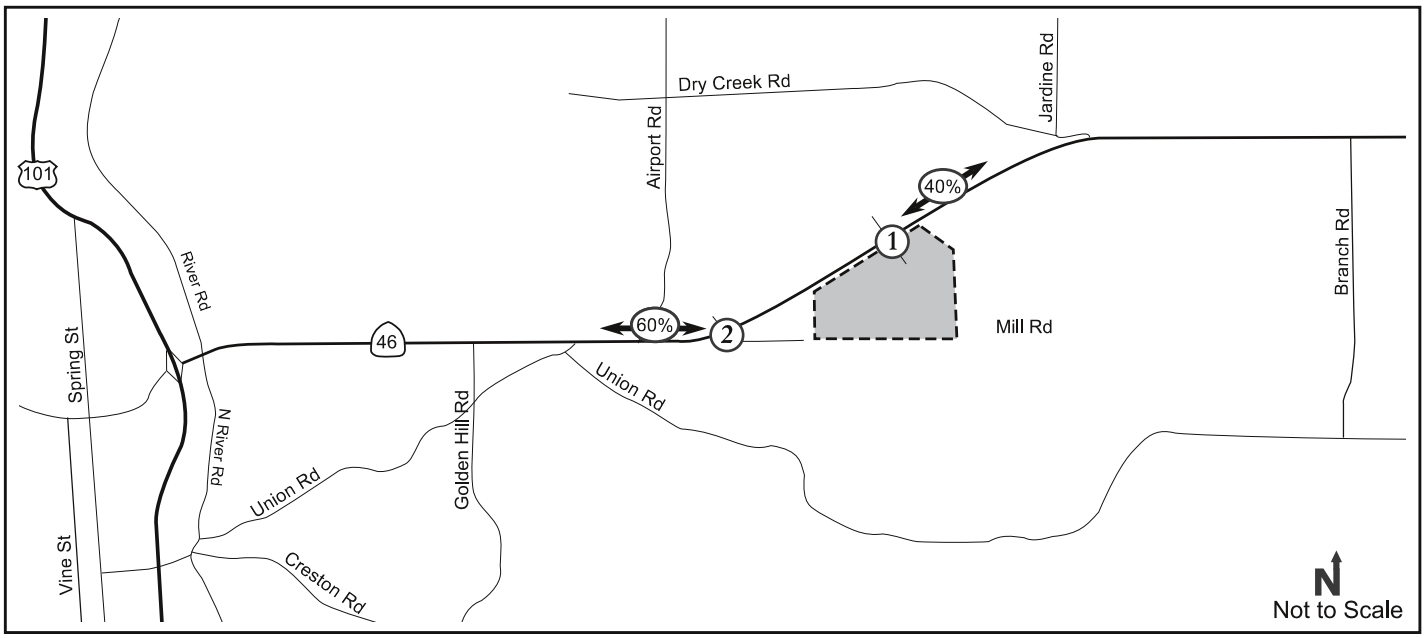
Legend:

ww(xx)[yy]{zz} - Weekday AM
(Weekday PM)
[Friday PM]
{Sunday PM}
Peak Hour Traffic Volumes

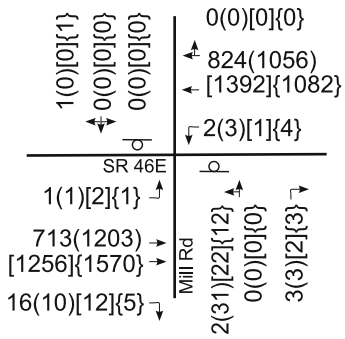
- Project Site
- (x) - Study Intersection
- Stop Sign
- x% - Project Trip Distribution

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

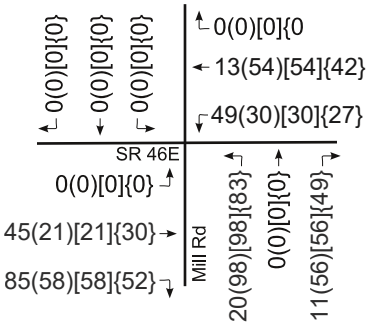
Figure 2: Volume Summary Intersection 2



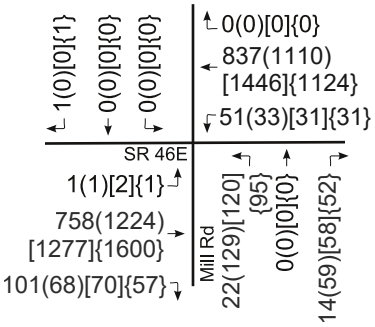
Existing Volumes and Lane Configuration



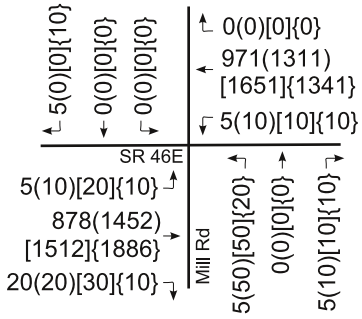
Project Trip Assignment



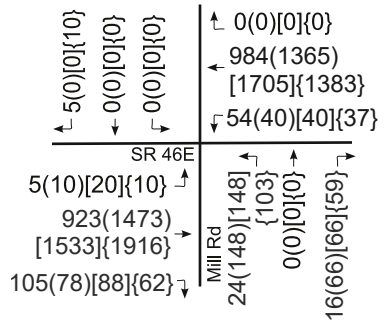
Existing Plus Project Volumes



Near Term Volumes



Near Term Plus Project Volumes



Legend:

ww(xx)[yy]{zz} - Weekday AM
(Weekday PM)
[Friday PM]
{Sunday PM}
Peak Hour Traffic Volumes

- Project Site
- (x) - Study Intersection
- Stop Sign
- x% - Project Trip Distribution

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

Vina Robles Events

Vina Robles is accessed from the intersection of SR 46E/Mill Road. The amphitheater hosts approximately 14 events a year with a maximum occupancy of 3,300 seats and an expected vehicle generation of 1,100 vehicles during a maximum occupancy event. Concerts start at 6:30 PM at the earliest and the outbound peak hour for the site is between 10:00 PM and 11:00 PM. This analysis does not reflect conditions during an event at Vina Robles since they occur outside of peak hours.

Existing Plus Project Intersection Operations

Table 8 presents the LOS with and without the project and **Table 9** presents the queues. The Synchro output sheets are included in **Attachment B**. The Existing Plus Project volumes are shown in **Figures 1 and 2**. Phase 1 includes all development except the Southern Addition Conference Center and Northern Addition Wedding/Meeting Center.

Table 8: Existing and Existing Plus Project Levels of Service

Existing Plus Project Intersection Auto Levels of Service							
		Existing		Existing + Phase 1[2]		Existing + Project	
Peak Hour		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
Weekday AM	1. SR-46/Driveway	0.1 (16.8)	- (C)	0.4 (16.0)	- (C)	0.6 (16.4)	- (C)
	2. SR-46/Mill Rd	0.1 (13.9)	- (B)	0.4 (16.5)	- (C)	0.7 (17.3)	- (C)
Weekday PM	1. SR-46/Driveway	0.3 (27.8)	- (D)	1.2 (29.4)	- (D)	1.9 (36.6)	- (E)
	2. SR-46/Mill Rd	0.5 (31.0)	- (D)	2.2 (45.2)	- (E)	5.5 (74.0)	- (F)
Friday PM	1. SR-46/Driveway	0.3 (34.4)	- (D)	1.3 (39.9)	- (E)	2.6 (55.9)	- (F)
	2. SR-46/Mill Rd	0.3 (34.6)	- (D)	2.2 (55.5)	- (F)	6.2 (102.8)	- (F)
Sunday PM	1. SR-46/Driveway	0.4 (53.0)	- (F)	1.4 (58.9)	- (F)	3.5 (96.6)	- (F)
	2. SR-46/Mill Rd	0.3 (42.7)	- (E)	2.0 (71.7)	- (F)	7.5 (148.3)	- (F)

1. HCM 6th average control delay in seconds per vehicle. For two-way stop controlled (TWSC) intersections the worst approach's delay is reported in parentheses next to the overall intersection delay.
2. Phase 1 includes all development except the Conference Center and Wedding/Meeting Center.

During the Weekday PM peak hour, the full project buildout would cause the LOS to change from D to E for the SR 46E/Hunter Ranch/Sensorio driveway (#1) and would cause the LOS to change from D to F for the SR 46E/Mill Road (#2) intersection. Northbound is the worst approach during all peak hours.

Table 9: Existing and Existing Plus Project Queues

Existing and Existing Plus Project Queues						
				95th Percentile Queues[1] (ft)		
NBL Movement	Movement	Storage Length (ft)	Peak Hour	Existing	Existing + Phase I[2]	Existing + Project
1. SR-46/Driveway	NBL	-	Weekday AM	3	5	5
			Weekday PM	10	35	60
			Friday PM	15	50	90
			Sunday PM	20	50	103
	NBR	25	Weekday AM	0	3	3
			Weekday PM	0	8	10
			Friday PM	0	8	13
			Sunday PM	0	8	13
2. SR-46/Mill Rd	NBL	-	Weekday AM	0	5	8
			Weekday PM	18	75	148
			Friday PM	15	83	170
			Sunday PM	10	73	170
	NBR	25	Weekday AM	0	5	3
			Weekday PM	0	5	13
			Friday PM	0	5	15
			Sunday PM	0	5	15

1. Queue length that would not be exceeded 95 percent of the time.
2. Phase 1 includes all development except the Conference Center and Wedding/Meeting Center.

The addition of project traffic would increase the northbound left turn queue length at the study intersections, blocking the northbound right turn movement during the PM peak hours.

Near Term Conditions

This scenario includes traffic from approved and pending projects in the City, including the Beechwood and Olsen-Chandler Specific Plans among other pipeline and approved projects. Existing baseline volumes for the Hunter Ranch movements were maintained for this scenario. Volumes for the Sensorio movements were developed using the Trip Generation Comparison for the La Entrada Project (ATE, 2013). Volumes on SR 46E were developed using other recent traffic studies.

Near Term Plus Project Intersection Operations

Table 10 presents the LOS with and without the project and **Table 11** presents the queues. The Synchro output sheets are included in **Attachment B**. The Near Term and Near Term Plus Project volumes are shown on **Figures 1 and 2**. Phase 1 includes all development except the Southern Addition Conference Center and Northern Addition Wedding/Meeting Center.

Table 10: Near Term and Near Term Plus Project Levels of Service

Near Term Plus Project Intersection Auto Levels of Service							
		Near Term		Near Term + Phase 1[2]		Near Term + Project	
Peak Hour		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
Weekday AM	1. SR-46/Driveway	0.7 (23.5)	- (C)	1.1 (21.8)	- (C)	1.2 (22.6)	- (C)
	2. SR-46/Mill Rd	0.2 (17.1)	- (C)	0.6 (20.1)	- (C)	0.8 (21.4)	- (C)
Weekday PM	1. SR-46/Driveway	1.5 (51.7)	- (F)	3.1 (70.0)	- (F)	5.7 (113.9)	- (F)
	2. SR-46/Mill Rd	1.3 (58.5)	- (F)	6.9 (143.9)	- (F)	- (>200)	- (F)
Friday PM	1. SR-46/Driveway	2.0 (89.3)	- (F)	6.0 (181.3)	- (F)	- (>200)	- (F)
	2. SR-46/Mill Rd	1.8 (89.8)	- (F)	- (>200)	- (F)	- (>200)	- (F)
Sunday PM	1. SR-46/Driveway	1.8 (136.1)	- (F)	- (>200)	- (F)	- (>200)	- (F)
	2. SR-46/Mill Rd	0.9 (77.8)	- (F)	- (>200)	- (F)	- (>200)	- (F)

1. HCM 6th average control delay in seconds per vehicle. For two-way stop controlled (TWSC) intersections the worst approach's delay is reported in parentheses next to the overall intersection delay. When the approach delay is >200 seconds, average delay is not reported due to potential errors.

2. Phase 1 includes all development in the Northern and Southern Addition except the two event centers.

The addition of project traffic would exacerbate LOS F operations at the study intersections during the Weekday PM, Friday PM, and Sunday PM peak hours. Northbound is the worst approach during all peak hours.

Most side street stop-controlled intersections on SR 46E experience long delays during peak periods. As delays increase, drivers may become more aggressive and accept smaller gaps in traffic, potentially resulting in more risky maneuvers. Greater than 200 seconds of delay indicate that the left turn movement is over capacity and left turn restrictions are recommended consistent with Sensorio prior to project buildout. Left turn restrictions at the SR 46E/Hunter Ranch/Sensorio driveway (#1) would improve the northbound operations to LOS C during the weekday PM peak hour and LOS D during the Friday PM and Sunday PM peak hour. Left turn restrictions could also be considered at the SR 46E/Mill Road (#2) intersection when the parallel route is constructed.

Caltrans has indicated that an encroachment permit will trigger left turn restrictions at the SR 46E/Hunter Ranch/Sensorio driveway (#1). The project previously proposed a 200-foot northbound left turn lane at the SR 46E/Hunter Ranch/Sensorio driveway (#1); however, with the left turn restriction, the improvements are not needed. Prior to development of the Northern Addition, we recommend coordination with Caltrans to improve the SR 46E/Hunter Ranch/Sensorio driveway (#1) to increase the available turn lane storage to a minimum of 200 feet or restrict the northbound left turns out of the driveway.

U-Turns on SR 46E can be made at the driveway located 2,000 feet east of the SR 46E/Hunter Ranch/Sensorio driveway (#1); however, there are no acceleration lanes. U-Turn movements can also be made at Jardine Road located approximately 6,000 feet from the SR 46E/Hunter Ranch/Sensorio driveway (#1) where there are acceleration lanes.

Table 11: Near Term and Near Term Plus Project Queues

Near Term and Near Term Plus Project Queues						
				95th Percentile Queues[1] (ft)		
Intersection	Movement	Storage Length (ft)	Peak Hour	Near Term	Near Term + Phase I[2]	Near Term + Project
1. SR-46/Driveway	NBL	-	Weekday AM	3	8	10
			Weekday PM	20	73	128
			Friday PM	35	123	195
			Sunday PM	43	98	178
	NBR	25	Weekday AM	0	3	3
			Weekday PM	0	8	13
			Friday PM	0	10	15
			Sunday PM	0	8	15
2. SR-46/Mill Rd	NBL	-	Weekday AM	3	10	13
			Weekday PM	53	170	285
			Friday PM	73	218	348
			Sunday PM	35	138	270
	NBR	25	Weekday AM	0	3	3
			Weekday PM	3	10	18
			Friday PM	3	10	20
			Sunday PM	3	13	25

1. Queue length that would not be exceeded 95 percent of the time.
2. Phase 1 includes all development except the Conference Center and Wedding/Meeting Center.

The addition of project traffic would increase the northbound left turn queue length at the study intersections, blocking the northbound right turn movement during the PM peak hours.

Outbound event trips are not recommended at any uncontrolled intersection on SR 46E and secondary access to Union Road via a new parallel route connection is recommended. We recommend the construction of a new SR 46E parallel route connector from Mill Road to Union Road and a new bridge over the Huer Huero Creek. If construction of the parallel route is not feasible prior to the Northern Wedding/Meeting Center, we recommend the preparation of an event traffic management plan (TMP) for review and approval by City and Caltrans staff prior to occupancy of either event center. The TMP should describe the timing and duration of special events, along with measures such as shuttles to ensure the events to not impact the transportation network.

Other regional improvements to access on SR 46 E, including the Union Road interchange project, are included in the City's Development Impact Fees.

ATTACHMENTS

Attachment A: Turning Movement Counts

Attachment B: Synchro Output Sheets

REFERENCES

Associated Transportation Engineers. 2013. Trip Generation Comparison for the La Entrada Project/Black Ranch Conditional Use Permit Modification.

California Department of Transportation. May 2020. Vehicle Miles Traveled-Focused Transportation Impact Study Guide.

_____. 2020. Highway Design Manual.

_____. 2014, Revision 6. California Manual on Uniform Traffic Control Devices.

California Department of Transportation. 2020. Highway Design Manual.

City of El Paso De Robles. 2018. Bicycle & Pedestrian Master Plan.

_____. 2018. General Plan Circulation Element.

_____. 2013. Transportation Impact Analysis Guidelines.

_____. 2022. Transportation Impact Analysis Guidelines Supplement.

Federal Highway Administration. 2014. Restricted Crossing U-Turn Intersection Informational Guide.

Institute of Transportation Engineers (ITE). 2017. Trip Generation Handbook, 3rd Edition.

_____. 2017. Trip Generation Manual, 10th Edition.

Transportation Research Board. 2017. Highway Capacity Manual, 6th Edition.

Appendix F

Water Demand and Wastewater Generation Estimate

Water Demand Estimate

Project: Hunter Ranch Golf Course
Project Address/APN: 4041 CA-46 Paso Robles CA 93446
Date: 03/19/2024

WALSH ENGINEERING
WALSHENGINEERING.NET (805) 319-4948
1108 GARDEN STREET, SUITE 202-204 SAN LUIS OBISPO, CA 93401

MILL RD SOUTHERN ADDITION

DOMESTIC DEMANDS

PHASE 1 - PARCEL 3	Quantity	Type	Flow Rate	Facility Demand (GPD)
1. LODGE BUILDING (62 rms)	62	Unit[1]	60	3,720
2. LODGE SUITES (28 rms)	28	Unit[1]	120	3,360
3. RESTAURANT/LOUNGE #3 (15k)	1	Unit[3]	1495	1,495
4. BACK OF HOUSE AND GARAGE (30k)	n/a			
5. CONFERENCE CENTER (36.5k + 18 rms)	150	Employee[10]	20	3,000
6. 233 (P) PARKING SPACES	n/a			
			Subtotal	11,575

PHASE 1 - PARCEL 2	Quantity	Type	Flow Rate	Facility Demand (GPD)
1. SPA CENTER (11.4k)	20	Guest[4]	10	200
2. SPA CASITAS (13 bldgs - 26 rms)	13	Unit[2]	240	3,120
4. 60 (P) PARKING SPACES	n/a			
			Subtotal	3,320

PHASE 1 - PARCEL 4	Quantity	Type	Flow Rate	Facility Demand (GPD)
1. VAQUERO LODGE I (30 ROOMS)	30	Unit[1]	60	1,800
2. VILLAS AND CASITAS (20 rms)	10	Unit[2]	240	2,400
3. 75 (P) PARKING SPACES	n/a			
			Subtotal	4,200

PHASE 1 - PARCEL 1	Quantity	Type	Flow Rate	Facility Demand (GPD)
1. TENNIS/SPORTS COURT	n/a			
2. CASITAS (10 bldgs - 20 rms)	10	Unit[2]	240	2,400
			Subtotal	2,400

(75% occupancy for average day demand)
(100% occupancy for max day demand)
(720 minutes per 12 hour day)

Total	21,495	GPD
Average Day	16,121	GPD
Max Day Demand	21,495	GPD
	30	GPM
Peaking Factor	1.79	
Peak Hour Demand	53	GPM

FIRE FLOW DEMANDS

PHASE 1 - PARCEL 3	Floor Area (sf)	FS Per CFC Section	Facility Demand (GPM)
1. GOVERNING HYDRANT SUPPLY - LODGE BUILDING (90 rms)	40,000	903.3.1.1	1,000

PHASE 1 - PARCEL 2	Floor Area (sf)	FS Per CFC Section	Facility Demand (GPM)
2. GOVERNING HYDRANT SUPPLY - SPA CASITAS (13 bldgs-26 rms)	1,450	903.3.1.2	1,500

PHASE 1 - PARCEL 4	Floor Area (sf)	FS Per CFC Section	Facility Demand (GPM)
1. GOVERNING HYDRANT SUPPLY - VAQUERO LODGE I (30 rms)	13,000	903.3.1.1	1,000

PHASE 1 - PARCEL 1	Floor Area (sf)	FS Per CFC Section	Facility Demand (GPM)
2. GOVERNING HYDRANT SUPPLY - CASITAS (10 bldgs - 20 rms)	1,450	903.3.1.2	1,500

MILL RD NORTHERN ADDITION

DOMESTIC DEMANDS

PHASE 2 - PARCEL 1	Quantity	Type	Flow Rate	Facility Demand (GPD)
1. LOBBY CHECK-IN (2.6k)	4	Employee[6]	20	80
2. LAUNDRY (2k)	7.5	Cycle[7]	50	375
3. CASITAS (69 bldgs - 138 rms)	69	Unit[2]	240	16,560
4. CONVERT MAINT. TO WEDDING FACILITY AND MEETING CENTER	150	Guest[9]	5	750
5. GOLF CART FACILITY (open air)	4	Employee[6]	20	80
6. RESTAURANT #2 (2k)	1	Unit[3]	2,340	2,340
7. GOLF VILLAS (5 bldgs - 20 rms)	5	Unit[1&2]	360	1,800
8. WEDDING CHAPEL (1k)	100	Guest[9]	5	500
9. RETAIL VILLAGE (8k)	8,000	SF[8]	1	800
10. VAQUERO LODGE II (28 rms)	28	Unit[1]	60	1,680
11. VILLAS AND CASITAS (AT HWY 46) (6 bldgs - 12 rms)	6	Unit[2]	240	1,440
12. REPLACEMENT MAINTENANCE BLDG	4	Employee[6]	20	80
13. 321 (P) PARKING SPACES	n/a			
14. MED-SPA (3.6k)	8	Unit[5]	250	2,000
15. RESTAURANT #1 EXISTING	1	Unit[3]	1144	1,144
16. GOLF COURSE RESTROOMS/FACILITIES	30	Employee[6]	20	600
17. PRO SHOP/RESTAURANT #1 EMPLOYEE/STAFF	15	Employee[6]	20	300
			Subtotal	30,529

(75% occupancy for average day demand)
(100% occupancy for max day demand)
(720 minutes per 12 hour day)

Total	30,529	GPD
Average Day	22,897	GPD
Max Day Demand	30,529	GPD
	42	GPM
Peaking Factor	1.79	
Peak Hour Demand	76	GPM

FIRE FLOW DEMANDS

PHASE 2 - PARCEL 1	Floor Area (sf)	FS Per CFC Section	Facility Demand (GPM)
3. GOVERNING HYDRANT SUPPLY - CASITAS (69 bldgs - 138 rms)	1,450	903.3.1.2	1,500

Notes:
CPC Table H 201.1(4) was used to determine gpd for each use:
1. Hotel no kitchen CPC Table H 201.1(4) Estimated @ 60 gal/bed
2. Motel with kitchen CPC Table H 201.1(4) Estimated @ 60 gal/bed space
3. Restaurants: [CPC Table H 201.1(4) Estimated patrons @ 7 gal/patron + Kitchen/Dinning/Garbage Demand @ 6 gal/meal]; Restaurant #1 Existing - 50 seats with dinning turnover expected at 88 patrons total, 88 meals; Restaurant #2 - 120 seats with dinning turnover expected at 180 patrons total, 180 meals; Restaurant #3 -75 seats with dinning turnover expected at 115 patrons total, 115 meals.
4. Pool/Spa CPC Table H 201.1(4) Estimated @ 10 gal/person
5. Medical use assessed with CPC Table 201.1(4) as like kind with Hospitals @ 250 gal/bed.
6. Employee CPC Table H 201.1(4) Estimated @ 20 gal/employee
7. Laundry Facilities CPC Table H 201.1(4) Estimated @ 50 gal/cycle. Assumes 1/4 of rooms to wash per day with 2 rooms per machine cycle.
8. Stores with restrooms assessed with CPC Table 201.1(4) estimated @ 1 gal/10 SF of floor space
9. Event center assessed with code as dance hall CPC Table H 201.1(4) Estimated @ 5 gal/person
10. Offices CPC Table 201.1(4) Estimated @ 20gpd/employee.

Waste Water
Demand Estimate

Project: Hunter Ranch Golf Course
Project Address/APN: 4041 CA-46 Paso Robles CA 93446
Date: 03/19/2024

WALSH ENGINEERING
WALSHENGINEERING.NET (805) 319-4948
1108 GARDEN STREET, SUITE 202-204 SAN LUIS OBISPO, CA 93401

EXISTING FACILITIES				
Use	Quantity	Type	Flow Rate per Unit (GPD)	Flow from Facility (GPD)
GOLF COURSE RESTROOMS/FACILITIES	30	Employee[6]	20	600
RESTAURANT #1 EXISTING	1	Unit[3]	1144	1,144
CARETAKER UNIT	1	Unit[2]	180	180
PRO SHOP/RESTAURANT #1 EMPLOYEE/STAFF	15	Employee[6]	20	300
Total Average Flow=				**2,224**

PROPOSED PHASE 1				
Use	Quantity	Type	Flow Rate per Unit (GPD)	Flow from Facility (GPD)
CASITAS (DUPLEX)	33	Unit[2]	240	7,920
LODGE BUILDING (62 rms)	62	Unit[1]	60	3,720
LODGE SUITES (28 rms)	28	Unit[1]	120	3,360
RESTAURANT/LOUNGE #3 (15k)	1	Unit[3]	1495	1,495
CONFERENCE CENTER (36.5k + 18 rms)	150	Employee[10]	20	3,000
SPA CENTER (11.4k)	20	Guest[4]	10	200
VAQUERO LODGE I (30 ROOMS)	30	Unit[1]	60	1,800
Phase 1 Total Average Flow*=				**21,495**

*Permit Criteria: RWQCB Small Domestic Wastewater Treatment System Nitrogen Effluent Limit Evaluation 20,000-100,000 gpd

PROPOSED PHASE 2				
Use	Quantity	Type	Flow Rate per Unit (GPD)	Flow from Facility (GPD)
CASITAS (DUPLEX)	75	Unit[2]	240	18,000
LOBBY CHECK-IN (2.6k)	4	Employee[6]	20	80
LAUNDRY (2k)	7.5	Cycle[7]	50	375
CONVERT MAINT. TO WEDDING FACILITY AND MEETING CENTER	150	Guest[9]	5	750
GOLF CART FACILITY (open air)	4	Employee[6]	20	80
RESTAURANT #2 (2k)	1	Unit[3]	2,340	2,340
GOLF VILLAS (5 bldgs - 20 rms)	5	Unit[1&2]	360	1,800
WEDDING CHAPEL (1k)	100	Guest[9]	5	500
RETAIL VILLAGE (8k)	8,000	SF[8]	1	8,000
VAQUERO LODGE II (28 rms)	28	Unit[1]	60	1,680
REPLACEMENT MAINTENANCE BLDG	4	Employee[6]	20	80
MED-SPA (3.6k)	8	Unit[5]	250	2,000
Phase 2 Total Average Flow=				**35,685**
Phase 1&2 Total Average Flow*=				**57,180**

*Permit Criteria: RWQCB Small Domestic Wastewater Treatment System Nitrogen Effluent Limit Evaluation 20,000-100,000 gpd

Notes:
CPC Table H 201.1(4) was used to determine gpd for each use:
1. Hotel no kitchen CPC Table H 201.1(4) Estimated @ 60 gal/bed
2. Motel with kitchen CPC Table H 201.1(4) Estimated @ 60 gal/bed space
3. Restaurants: [CPC Table H 201.1(4) Estimated patrons @ 7 gal/patron + Kitchen/Dinning/Garbage Demand @ 6 gal/meal]; Restaurant #1 Existing - 50 seats with
4. Pool/Spa CPC Table H 201.1(4) Estimated @ 10 gal/person
5. Medical use assessed with CPC Table 201.1(4) as like kind with Hospitals @ 250 gal/bed.
6. Employee CPC Table H 201.1(4) Estimated @ 20 gal/employee
7. Laundry Facilities CPC Table H 201.1(4) Estimated @ 50 gal/cycle. Assumes 1/4 of rooms to wash per day with 2 rooms per machine cycle.
8. Stores with restrooms assessed with CPC Table 201.1(4) estimated @ 1 gal/10 SF of floor space
9. Event center assessed with code as dance hall CPC Table H 201.1(4) Estimated @ 5 gal/person
10. Offices CPC Table 201.1(4) Estimated @ 20gpd/employee.

Appendix G

Technical Design Report for Offsite Improvements

TECHNICAL DESIGN REPORT

Mill to Union Wet Utility Corridor

Mill Road Area
City of Paso Robles

July 2025

Prepared By:

WALSH ENGINEERING

WALSHENGINEERING.NET (805) 319-4948

1108 GARDEN STREET, SUITE 202-204 SAN LUIS OBISPO, CA 93401

Page left blank intentionally

Table of Contents

1. Introduction 4
2. Design Criteria and Constraints 4
2.1: City of Paso Robles Standards 4
2.2: Design Constraints 4
3. Sewer Demand Calculations 5
4. Sewer Hydraulic Calculations 6
5. Huer-Huero Crossing Inverted Siphon 7
5.1: Siphon Calculations 8
5.2: Trenchless HDD 8
5.3: Easements 9
6. Conclusion 10
Appendices 10
A: Proposed Sewer System Exhibit 10
B: Sewer Demand Calculations 10
C: Gravity Sewer Hydraulic Calculations 10
D: Preliminary Geotechnical Investigation 10

1. Introduction

The City of Paso Robles has requested the preparation of a report to provide technical support for the proposed connection of public sanitary sewer and water from Union Road to Mill Road. The proposed utility corridor is approximately 7,765 linear feet in total and routes through 14 properties as seen in Exhibit A. The proposed utilities will be located within an easement dedicated to the City where not located within public right of way.

This report relies on data from a technical memo from WSC titled "Mill Road Area Facilities Alignment and Sizing" dated March 8, 2022 (WSC Memo). The WSC Memo determined the size of the utilities required for the Union to Mill connection and included data for the sanitary sewer and water demands of the associated parcels. The sanitary sewer demand data from the WSC Memo will be incorporated into the sewer system calculations included in this report. This report will update site specific parcel demand and reanalyze the sanitary sewer hydraulic calculations to size the sanitary sewer main.

This report will also provide design and technical information for the utility corridor crossing under Huer-Huero Creek. The sewer and water crossings are proposed to be constructed utilizing trenchless horizontal directional drilling (HDD) with the sewer being designed as an inverted siphon.

2. Design Criteria and Constraints

2.1: City of Paso Robles Standards

The City of El Paso De Robles Standard Specifications are the basis for the proposed utility corridor design. Section VI for Sanitary Sewers was used to prepare and analyze the proposed sanitary sewer main and key criteria are briefly summarized below:

- Minimum Pipe slope = .0020 Feet/Foot
- Maximum Manhole spacing = 500 feet
- Minimum cleansing velocity = 2 fps
- Maximum velocity = 10 fps
- Maximum d/D ratio = 50%

Another source utilized for this report is the 2019 Wastewater Collection System Renewal Strategy and Master Plan. Information used from this report prepared by WSC dated October 2019 is briefly summarized as follows:

- Peak Hour Dry Weather Flow "PHDWF" Factor = 2.0
- Peak Hour Wet Weather Flow "PHWWF" Factor = 3.62

2.2: Design Constraints

One major constraint for this project is the crossing at Huer-Huero Creek. Alternatives have been discussed and analyzed for facilitating the sewer connection from Mill to Union across the existing creek bed. The most feasible alternatives being attaching the sewer to a new bridge crossing to maintain

gravity flow or directional drilling installation with an inverted siphon design. HDD construction with the sewer being designed as an inverted siphon has developed into the more favorable alternative. Since the timing of future construction in the vicinity of the creek is unknown, having the sewer installation tied to the construction of a bridge could cause delays and would require much more design coordination between multiple consultants as well as additional costs. Installing the sewer and water underground will separate the future construction project from the utility corridor connection project and allow a much more streamlined design to the installation timeline. Without the need to construct a bridge, the HDD construction with an inverted siphon sewer design is also the cost saving option.

Another constraint to consider for this utility corridor design and construction is the flood zone along the Huer-Huero Creek. The FEMA flood zone delineation from the FIRM Map Number 06079C0394G is shown in Exhibit A. Zone A corresponds to the 100-year flood zone and Unshaded Zone X is outside of the 100-year flood zone. To account for the chance of flooding, proposed sanitary sewer manhole lids within the flood zone are noted to be watertight. Vented manholes are proposed upstream of the siphon as these are located outside of the flood zone and are needed to prevent pressure buildup in the proposed siphon system.

There is also an existing 24-inch corrugated metal storm drain culvert that crosses the proposed utility corridor alignment near station 69+00. The storm drain culvert is to remain in place with the proposed sewer crossing underneath with 12 inches clear. The proposed 12-inch ductile iron domestic water pipe is to cross over the existing culvert with 6 inches clear from top of culvert to bottom of water pipe. Since the water crossing over the culvert will have cover less than the city standard of 4 feet, the shallow water is proposed to be backfilled with a concrete slurry for protection. Since the crossing between the existing culvert and proposed domestic water is less than 12 inches, there shall be no joints in the proposed water pipe for a distance of 22 feet centered on the culvert crossing per the California Health Code.

A geotechnical report for the lift station at the end of the proposed sewer system was prepared by Earth Systems Pacific dated 3/15/24 and is included in Appendix D. In addition, deep soil borings and CPT logs at Huer-Huero Creek were provided by Todd Groundwater in a report dated 2/22/2017, also included in Appendix D. The deep soil borings went down to a depth of approximately 150 feet. The proposed inverted siphon design has a maximum depth of approximately 55 feet. The bottom of the creek consists of gravelly coarse sand to a depth of 33 feet, then sandy clayey silt and silty clayey coarse sand to a depth of 43 feet, then there is a layer of silty sandy clay to a depth of 50 feet. The lowest portion of the proposed inverted siphon will be in clayey silty coarse sand that extends from a depth of 50 feet to a depth of 90 feet.

3. Sewer Demand Calculations

As mentioned in the introduction, the WSC Memo data for sanitary sewer demands of the parcels to be served by the proposed sanitary sewer main will largely be utilized for the updated sanitary sewer hydraulic calculations. An updated demand estimate for the Hunter Ranch Golf Course was prepared based on site specific information, see calculations in Appendix B. The table below summarizes the

demands used in the sewer hydraulic calculations section of this report, see Appendix B for additional information.

ID	APN	Description	Peak Design Flow Rate (cfs)
1	025-371-021	Juliet E. Hayley	0.029
2	025-371-022	Michael S Hayley	0.029
3	025-371-024	David P O'Brien	0.059
4	025-371-029	K&K Belmont Revocable Trust	0.009
5	025-371-032	Paso Robles Athletic Club	0.023
6	025-371-034	Ravine Water Park	0.117
7	025-701-004	Hunter Ranch Golf Course	0.325
8	025-701-005	Vina Robles - Vineyard	0.034
9	025-701-006	Vina Robles - Amphitheatre	0.044
10	026-211-008	O'Neill Beverages Co. LLC	0.060
11	026-211-011	Collins Vineyard	0.006
12	026-211-035	Lois Chaplin Family Trust	0.002
13	026-211-040	Darren E. Mitchell Family Trust - Mitchella Vineyard & Winery	0.061
14	026-211-041	Darren E. Mitchell Family Trust - Mitchella Vineyard & Winery	0.059
15	026-211-043	O'Neill Beverages Co. LLC - Robert Hall Winery	0.002

4. Sewer Hydraulic Calculations

Design Flow data from the revised sewer demand calculations presented in Section 3 were used to analyze the gravity flow hydraulic conditions within the proposed sewer network utilizing Autodesk's AutoCAD Civil 3d Hydraflow Express Extension. The following table summarizes the completed sewer Hydraulic Calculations included in Appendix C.

The proposed gravity sewer network consists of 12-inch diameter pipe with a minimum slope of 0.25%. Identified d/D values meet City of Paso Robles specifications and range from 0.22 to 0.45. Calculated

velocities exceed the minimum cleansing velocity of 2 feet per second and are below the maximum velocity of 10 fps for all gravity pipe segments.

Pipe ID*	Slope (%)	Flow Rate (cfs)	Velocity (fps)	Depth (ft)	d/D
1	0.30	0.331	2.01	0.24	0.24
2	0.90	0.435	3.15	0.23	0.23
3	1.00	0.469	3.40	0.23	0.23
4	0.73	0.469	3.04	0.25	0.25
5	1.16	0.470	3.63	0.22	0.22
6	0.25	0.470	2.07	0.33	0.33
7	0.25	0.529	2.23	0.34	0.34
8	0.25	0.529	2.23	0.34	0.34
9	3.88	0.590	6.07	0.18	0.18
10	0.31	0.649	2.54	0.36	0.36
11	0.83	0.649	3.57	0.28	0.28
12	1.50	0.649	4.47	0.24	0.24
13	1.00	0.651	4.71	0.23	0.23
14	3.51	0.710	5.87	0.21	0.21
15	1.23	0.710	4.13	0.27	0.27
16	6.97	0.827	7.89	0.19	0.19
17	0.25	0.827	2.47	0.44	0.44
18	0.25	0.827	2.47	0.44	0.44
19	0.25	0.827	2.47	0.44	0.44
20	----	----	See Huer-Huero Crossing Calculations		
21	0.25	0.850	2.46	0.45	0.45
22	0.25	0.850	2.46	0.45	0.45
23	0.25	0.850	2.46	0.45	0.45
24	0.25	0.859	2.49	0.45	0.45

5. Huer-Huero Crossing Inverted Siphon

The sewer and water crossings at Huer-Huero Creek are proposed to be constructed utilizing trenchless horizontal directional drilling (HDD) with the sewer being designed as an inverted siphon. A double barrel inverted siphon for the sanitary sewer crossing is proposed and will consist of two 12-inch pipes with two manholes and a diversion box on both sides of the siphon. The manholes and diversion boxes

allow the wastewater flow to be directed to one siphon at a time allowing for maintenance activities. The upstream manholes at the top of each siphon will be vented manholes to prevent any pressure from building up in the system and ensuring the siphon performs as expected. Venting the siphon will prevent airlocks and reduce the frequency of required maintenance.

5.1: Siphon Calculations

The 12-inch inverted siphon was modeled in Autodesk's Storm and Sanitary Analysis Software. To model the siphon the pipe was split into four segments with the lengths and average slopes listed below. The hydrodynamic link routing method was used for hydraulic routing through the siphon to determine the data in the table below. The model consists of one 12-inch inverted siphon as the double-barrel design is so that one barrel will be utilized at a time, allowing the other to be maintained while not disrupting services.

Calculated velocities exceed the minimum cleansing velocity of 2 feet per second and are below the maximum velocity of 10 fps for all siphon pipe segments.

Pipe ID	Upstream node	Downstream node	Length (ft)	Average Slope (%)	Peak Flow Velocity (fps)	Invert at Downstream Node	Max HGL at Outlet
20A	SSMH 20	J1	201.37	27.64	4.31	695.00	-
20B	J1	J2	214.51	6.99	2.97	680.00	-
20C	J2	J3	230.28	-9.23	2.97	701.25	-
20D	J3	SSMH 21	148.06	-29.20	3.56	743.43	743.85
20	SSMH 20	SSMH 21	787.00	-	-	-	-

5.2: Trenchless HDD

HDD is a trenchless construction method where a pipeline is installed along an arcing drill path, that begins and ends at the ground surface and passes under the conflicting feature in between. A drill rig is set up on one side of the crossing and begins by drilling a pilot bore to the exit point. The alignment typically begins with a tangent section that transitions to a vertical curve with a large radius that depends on drill pipe size, product pipe diameter, product pipe material, and required alignment. After passing beneath the obstacle, the alignment will rise to the surface with an upward tangent.

The pilot bore is then reamed in one or more passes to obtain the required diameter needed for pullback of the prefabricated pipe string. To provide adequate space in the bore for the pullback of the product pipe string, the bore is reamed to a diameter larger than the product pipe diameter. Once reaming is complete, the drill pipe is connected to the product pipe with a swivel and pulling head at the exit side of the alignment and pulled into place in one continuous operation.

During the pilot bore steering is accomplished using a slanted-face bit and rotating drill pipe. To advance the bore in a straight line, the bit is rotated and advanced simultaneously. To turn, the operator aligns the slanted face of the bit and advances the drill stem without rotating. As the bit is advanced, soil resistance develops against the slanted face and deflects the bit in the intended direction.

Guidance of the system for a typical river crossing is accomplished by the use of a downhole wireline steering tool located in a non-magnetic drill pipe, immediately behind the bit. This tool measures the pitch, clock face position, and magnetic azimuth of the bit and sends the data back to the surface to the drill rig operator. The position of the bit is calculated after each successive drill pipe has been pushed using the pipe length, average pitch, and average azimuth angle reported for that reach. Accuracy of the downhole wireline system can be improved with the use of an energized surface coil. These systems create a magnetic field at the ground surface that can be detected and interpreted by the downhole tool to triangulate the position of the drill head. An eight to ten gauge copper wire coil must be laid on the surface around the bore path with a width between the wire grid equal to at least twice the depth of the bore. The corners and any bends of the coil are then surveyed prior to drilling so that the induced magnetic field can be predicted.

HDD can be used in most soil conditions and rock. Additionally, it can be used to install pipelines below the water table and is therefore well suited for river crossings. HDD is often used for river crossings and has been used to install pipelines as long as 7,000 feet. The equipment can be categorized into three size categories: small, medium, and large rigs. The cost, staging area required, and construction duration increases as rig size increases. Small HDD rigs are generally used for product pipes up to approximately 8 inches in diameter, or bundles of smaller 2 to 4-inch pipes. Medium size rigs can install single pipes or bundles of pipe up to approximately 18 inches in diameter and large rigs are used for larger pipes up to approximately 54 inches, or for very long bores that have high pullback forces. The Huer-Huero Crossing is anticipated to use a medium size rig with a staging area that fits within the limits of construction as shown in Exhibit A.

5.3: Easements

Construction staging areas are required for HDD on both sides of the crossing. HDD methods require a lay-down surface area for the assembled pipeline, and a more robust staging area on the uphill side. Construction limits needed for this construction are outlined in Exhibit A.

A medium to large size horizontal directional drill rig requires 60 to 70 feet to be available behind the entry point. For the Huer-Huero crossing, we have allocated 100 feet behind the entry point on the Union Road entry side. This area would provide sufficient space for the bores to be drilled. On the exit side, the limits of construction area is maximized to allow for fusing and fabrication of the pipe string at approximately 500 feet by 75 feet.

It is recommended that the HDD contractor use a wireline tracking system for steering guidance of the bores. This system requires a thin coil of wire be laid along the alignment, offset up to 100 feet from the centerline. To lay and later remove the wire, workers on foot would need limited access to walk the bore alignment at the beginning and conclusion of the job. Upon completion of the bores, access would be required again for removal of the wire.

Line and grade accuracy limitations of the HDD installations dictate the required separation between bores. This separation requirement has been accounted for with the recommended 60-foot permanent easement along the new siphon alignment.

6. Conclusion

The proposed utility corridor design from Mill to Union Road consists of a 12-inch DIP domestic water pipe sized per the WSC Memo and a 12-inch sanitary sewer pipe sized per this report utilizing demands provided in the WSC Memo with site specific updates. The 12-inch sanitary sewer pipe is proposed to be PVC SDR 35 for pipes up to 12 feet deep, PVC SDR 26 for pipes deeper than 12 feet, and DR11 IPS HDPE for the inverted siphon segment. The sanitary sewer system, both gravity and siphon portions, has been designed such that the minimum cleansing velocity of 2 fps is exceeded but does not exceed the maximum 10 fps velocity per City of Paso Robles design standards.

The report has also provided design and technical information to support the utility corridor crossing under Huer-Huero Creek. The sewer and water crossings are proposed to be constructed utilizing trenchless horizontal directional drilling (HDD) with the sewer being designed as an inverted siphon. This option for crossing Huer-Huero Creek is preferred over the bridge crossing option since the trenchless construction will have minimal effect on the creek bed and have a simpler construction permitting process. In addition, operations and maintenance of the siphons are anticipated to be more routine with familiar structure access for maintenance. HDD construction is also the time and cost saving option when compared to bridge construction. Lastly, the inverted siphon design utilizes a double-barrel design of which each siphon is capable of handling the design flow individually. This provides a redundant system which facilitates maintenance and offers an extra layer of assurance of a consistently operable system.

Appendices

A: Proposed Sewer System Exhibit

B: Sewer Demand Calculations

C: Gravity Sewer Hydraulic Calculations

D: Preliminary Geotechnical Investigation

Appendix A: Proposed Sewer System Exhibit

GENERAL LEGEND

EXISTING/PROPOSED CENTERLINE (℄)

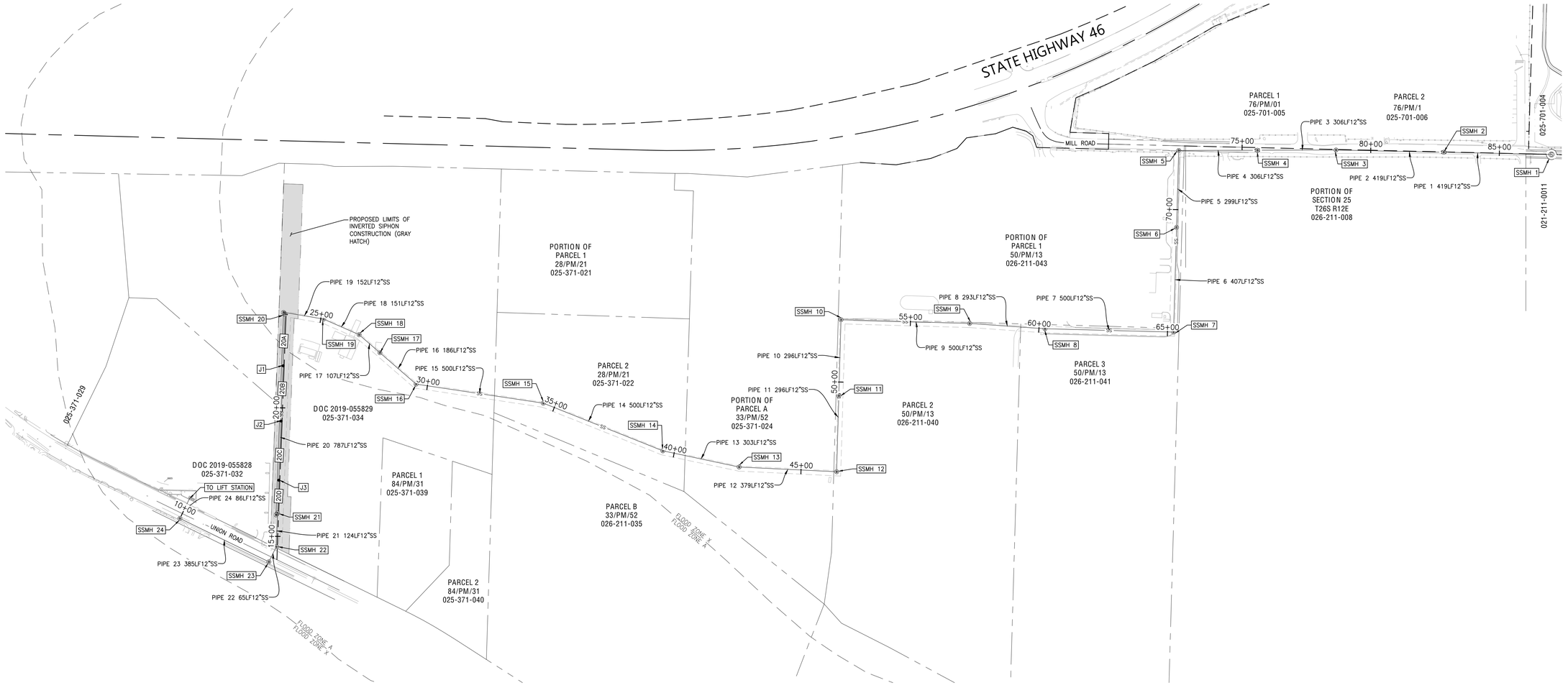
EXISTING PROPERTY LINE (EX. ℄)

EXISTING/PROPOSED EASEMENT

SANITARY SEWER LEGEND:

75LF10"SS@2.0% SANITARY SEWER PIPE LENGTH, SIZE AND SLOPE (SS)

SANITARY SEWER MANHOLE (SSMH)



0 200' 400'

SCALE: 1" = 200'

NO.	DATE	REVISIONS

WALSH ENGINEERING
WALSHENGINEERING.NET (805) 319-4948
1108 GARDEN STREET, SUITE 202-204 SAN LUIS OBISPO, CA 93401

MILL ROAD AREA UTILITY EXTENSION
MILL TO UNION UTILITY CORRIDOR
CITY OF PASO ROBLES, CA

REGISTERED PROFESSIONAL ENGINEER
MATTHEW R. WALSH
C 79026
STATE OF CALIFORNIA

NOT FOR CONSTRUCTION

DESIGNED BY:	EJC
CHECKED BY:	TW
APPROVED BY:	MRW
DATE:	07/25/2025

UTILITY CORRIDOR SEWER EXHIBIT

SHEET

1 OF 1

sheet: 7/25/2025, plotted: 7/28/2025, path: s:\projects_eng\2018036_hunter ranch_king ventures\sewer\utility corridor sewer exhibit.dwg

Appendix B: Site Specific Demand Calculations

Waste Water
Flow Rate Calculations

Project: Mill to Union Wet Utility Corridor
Project Location: Mill Road Area, Paso Robles
Date: July 2025

WALSH ENGINEERING
WALSHENGINEERING.NET (805) 319-4948
1108 GARDEN STREET, SUITE 202-204 SAN LUIS OBISPO, CA 93401

Determine Design Flow Rates

Dry Weather Peaking Factor* = 2.0
Wet Weather Peaking Factor* = 3.62

ID*	APN*	Description*	Existing AAF* (gpd)	Proposed AAF* (gpd)	Peak Hour Dry Weather Flow "PHDWF" (gpd)	Peak Hour Wet Weather Flow "PHWWF" (gpd)	Peak Design Flow Rate (cfs)
1	025-371-021	Juliet E. Hayley	124	5,250	10,500	19,005	0.029
2	025-371-022	Michael S Hayley	122	5,250	10,500	19,005	0.029
3	025-371-024	David P O'Brien	255	10,500	21,000	38,010	0.059
4	025-371-029	K&K Belmont Revocable Trust	2,755	1,560	3,120	5,647	0.009
5	025-371-032	Paso Robles Athletic Club	4,150	4,150	8,300	15,023	0.023
6	025-371-034	Ravine Water Park	14,809	20,900	41,800	75,658	0.117
7	025-701-004	Hunter Ranch Golf Course	**2,224**	**58,004**	116,008	209,974	0.325
8	025-701-005	Vina Robles - Vineyard	390	6,030	12,060	21,829	0.034
9	025-701-006	Vina Robles - Amphitheatre	537	7,800	15,600	28,236	0.044
10	026-211-008	O'Neill Beverages Co. LLC	909	10,760	21,520	38,951	0.060
11	026-211-011	Collins Vineyard	1,051	1,051	2,102	3,805	0.006
12	026-211-035	Lois Chaplin Family Trust	350	350	700	1,267	0.002
13	026-211-040	Darren E. Mitchell Family Trust - Mitchella Vineyard & Winery	284	10,916	21,832	39,516	0.061
14	026-211-041	Darren E. Mitchell Family Trust - Mitchella Vineyard & Winery	280	10,500	21,000	38,010	0.059
15	026-211-043	O'Neill Beverages Co. LLC - Robert Hall Winery	271	271	542	981	0.002
				Totals=	306,584	554,917	0.859

Notes:
*From 2019 Wastewater Master Plan and utilized in WSC Mill Road Area Facilities Alignment and Sizing TM dated 3/8/2022, unless otherwise noted.

Waste Water
Demand Estimate

Project: Hunter Ranch Golf Course
Project Address/APN: 4041 CA-46 Paso Robles CA 93446
Date: July 2025

WALSH ENGINEERING
WALSHENGINEERING.NET (805) 319-4948
1108 GARDEN STREET, SUITE 202-204 SAN LUIS OBISPO, CA 93401

Determine Average Daily Flow

EXISTING FACILITIES				
Use	Quantity	Type	Flow Rate per Unit (GPD)	Flow from Facility (GPD)
GOLF COURSE RESTROOMS/FACILITIES	30	Employee[6]	20	600
RESTAURANT #1 EXISTING	1	Unit[3]	1144	1,144
CARETAKER UNIT	1	Unit[2]	180	180
PRO SHOP/RESTAURANT #1 EMPLOYEE/STAFF	15	Employee[6]	20	300
Existing Total Average Flow=				**2,224**
PROPOSED FACILITIES				
Use	Quantity	Type	Flow Rate per Unit (GPD)	Flow from Facility (GPD)
CASITAS (DUPLEX)	85	Unit[2]	240	20,400
LODGE BUILDING (62 rms)	62	Unit[1]	60	3,720
LODGE SUITES (28 rms)	28	Unit[1]	120	3,360
RESTAURANT/LOUNGE #3 (15k)	1	Unit[3]	1495	1,495
CONFERENCE CENTER (36.5k + 18 rms)	150	Employee[10]	20	3,000
SPA CASITAS (13 rms)	13	Unit[2]	240	3,120
VAQUERO LODGE I (50 ROOMS)	50	Unit[1]	60	3,000
LOBBY CHECK-IN (2.6k)	4	Employee[6]	20	80
LAUNDRY (2k)	7.5	Cycle[7]	50	375
CONVERT MAINT. TO WEDDING FACILITY AND MEETING CENTER	150	Guest[9]	5	750
GOLF CART FACILITY (open air)	4	Employee[6]	20	80
RESTAURANT #2 (2k)	1	Unit[3]	2,340	2,340
GOLF VILLAS (5 bldgs - 20 rms)	5	Unit[1&2]	360	1,800
WEDDING CHAPEL (1k)	100	Guest[9]	5	500
RETAIL VILLAGE (8k)	8,000	SF[8]	1	8,000
VAQUERO LODGE II (28 rms)	28	Unit[1]	60	1,680
REPLACEMENT MAINTENANCE BLDG	4	Employee[6]	20	80
MED-SPA (3.6k)	8	Unit[5]	250	2,000
Proposed Total Average Flow=				**58,004**

Notes:
CPC Table H 201.1(4) was used to determine gpd for each use:
1. Hotel no kitchen CPC Table H 201.1(4) Estimated @ 60 gal/bed
2. Motel with kitchen CPC Table H 201.1(4) Estimated @ 60 gal/bed space
3. Restaurants: [CPC Table H 201.1(4) Estimated patrons @ 7 gal/patron + Kitchen/Dinning/Garbage Demand @ 6 gal/meal]; Restaurant #1
4. Pool/Spa CPC Table H 201.1(4) Estimated @ 10 gal/person
5. Medical use assessed with CPC Table 201.1(4) as like kind with Hospitals @ 250 gal/bed.
6. Employee CPC Table H 201.1(4) Estimated @ 20 gal/employee
7. Laundry Facilities CPC Table H 201.1(4) Estimated @ 50 gal/cycle. Assumes 1/4 of rooms to wash per day with 2 rooms per machine cycle.
8. Stores with restrooms assessed with CPC Table 201.1(4) estimated @ 1 gal/10 SF of floor space
9. Event center assessed with code as dance hall CPC Table H 201.1(4) Estimated @ 5 gal/person
10. Offices CPC Table 201.1(4) Estimated @ 20gpd/employee.

Determine Peak Flow

Average Daily Flow "ADF" (gpd)	Dry Weather Peaking Factor *	Peak Hour Dry Weather Flow "PHDWF" (gpd)	Wet Weather Peaking Factor *	Peak Hour Wet Weather Flow "PHWWF" (gpd)
58,004	2.00	116,008	3.62	**209,974**

Notes:

*From 2019 Wastewater Master Plan and utilized in WSC Mill Road Area Facilities Alignment and Sizing TM dated 3/8/2022

Appendix C: Gravity Sewer Hydraulic Calculations

Waste Water
Hydraulic Calculations

Project: Mill to Union Wet Utility Corridor
Project Location: Mill Road Area, Paso Robles
Date: July 2025

WALSH ENGINEERING
WALSHENGINEERING.NET (805) 319-4948
1108 GARDEN STREET, SUITE 202-204 SAN LUIS OBISPO, CA 93401

Pipe Analysis

Manning's Coefficient for PVC = 0.011

Pipe ID*	Diameter (ft)	Length (ft)	Slope (%)	Slope (ft/ft)	Upstream Node	Parcel	Parcel Flow (cfs)	Flow Rate (cfs)	Velocity (fps)	Depth (ft)	d/D
1	1.00	419	0.30	0.0030	SSMH 1	025-701-004 021-211-0011	0.331	0.331	2.01	0.24	0.24
2	1.00	419	0.90	0.0090	SSMH 2	025-701-006 026-211-008	0.104	0.435	3.15	0.23	0.23
3	1.00	306	1.00	0.0100	SSMH 3	025-701-005	0.034	0.469	3.40	0.23	0.23
4	1.00	306	0.73	0.0073	SSMH 4		0.000	0.469	3.04	0.25	0.25
5	1.00	299	1.16	0.0116	SSMH 5	026-211-043	0.002	0.470	3.63	0.22	0.22
6	1.00	407	0.25	0.0025	SSMH 6		0.000	0.470	2.07	0.33	0.33
7	1.00	500	0.25	0.0025	SSMH 7	026-211-041	0.059	0.529	2.23	0.34	0.34
8	1.00	293	0.25	0.0025	SSMH 8		0.000	0.529	2.23	0.34	0.34
9	1.00	500	3.88	0.0388	SSMH 9	026-211-040	0.061	0.590	6.07	0.18	0.18
10	1.00	296	0.31	0.0031	SSMH 10	025-371-024	0.059	0.649	2.54	0.36	0.36
11	1.00	296	0.83	0.0083	SSMH 11		0.000	0.649	3.57	0.28	0.28
12	1.00	379	1.50	0.0150	SSMH 12		0.000	0.649	4.47	0.24	0.24
13	1.00	303	1.73	0.0173	SSMH 13	026-211-035	0.002	0.651	4.71	0.23	0.23
14	1.00	500	3.07	0.0307	SSMH 14	025-371-021 025-371-022	0.059	0.710	5.87	0.21	0.21
15	1.00	500	1.23	0.0123	SSMH 15		0.000	0.710	4.13	0.27	0.27
16	1.00	186	6.97	0.0697	SSMH 16	025-371-034	0.117	0.827	7.89	0.19	0.19
17	1.00	107	0.25	0.0025	SSMH 17		0.000	0.827	2.47	0.44	0.44
18	1.00	151	0.25	0.0025	SSMH 18		0.000	0.827	2.47	0.44	0.44
19	1.00	152	0.25	0.0025	SSMH 19		0.000	0.827	2.47	0.44	0.44
20	1.00	787		0.0000	SSMH 20		0.000	0.827	SEE HUER-HUERO CALCULATIONS		
21	1.00	124	0.25	0.0025	SSMH 21	025-371-032	0.023	0.850	2.46	0.45	0.45
22	1.00	65	0.25	0.0025	SSMH 22		0.000	0.850	2.46	0.45	0.45
23	1.00	385	0.25	0.0025	SSMH 23		0.000	0.850	2.46	0.45	0.45
24	1.00	86	0.25	0.0025	SSMH 24	025-371-029	0.009	0.859	2.49	0.45	0.45

Appendix D: Preliminary Geotechnical Investigation

GEOTECHNICAL ENGINEERING REPORT
UNION ROAD SEWER LIFT STATION
2975 UNION ROAD
PASO ROBLES, CALIFORNIA

March 15, 2024

Prepared for

Mr. Michael Kielborn
Cannon

Prepared by

Earth Systems Pacific
4378 Old Santa Fe Road
San Luis Obispo, CA 93401

Copyright © 2024

EARTH SYSTEMS
4378 Santa Fe Road | San Luis Obispo, CA 93401 | (805) 544-3276 | www.earthsystems.com

March 15, 2024

FILE NO.: 306545-001

Mr. Michael Kielborn
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401

PROJECT: UNION ROAD SEWER LIFT STATION
2975 UNION ROAD
PASO ROBLES, CALIFORNIA

SUBJECT: Geotechnical Engineering Report

REF: Proposal for a Geotechnical Engineering Report, Union Road Sewer Lift Station, 2975 Union Road, Paso Robles, California, Doc. No. SLO-2304-025.PRP, dated April 17, 2023

Dear Mr. Kielborn:

In accordance with the referenced proposal, this geotechnical engineering report has been prepared for use in the development of plans and specifications for the Union Road Lift Station project in Paso Robles, California. Preliminary geotechnical recommendations for site preparation, pipeline design and construction, shoring, buried structures, equipment pads, drainage and maintenance, and observation and testing are presented herein. An electronic copy of this report has been furnished for your use.

We appreciate the opportunity to have provided professional services for this project and look forward to working with you again in the future. If there are any questions concerning this report, please do not hesitate to contact the undersigned.

Sincerely,

Earth Systems Pacific

Aileen Flynn, EIT
Staff Engineer

Rob Down, PE
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
ROBERT W. DOWN
No. 70206
CIVIL
STATE OF CALIFORNIA

Doc. No.: 2403-048.SER/pm

TABLE OF CONTENTS

1.0 INTRODUCTION AND SITE SETTING 1
2.0 SCOPE OF SERVICES 1
3.0 FIELD INVESTIGATION 2
4.0 LABORATORY ANALYSIS 3
5.0 GENERAL SUBSURFACE PROFILE 3
6.0 CONCLUSIONS 4
Potential for Strong Seismic Shaking 4
Settlement Potential 4
Excavation Characteristics 4
Erosion Potential 5
Liquefaction Settlement 5
7.0 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS 6
Definitions 6
Site Preparation 6
Grading 7
Pipeline Design and Construction 8
Shoring 10
Buried Structures 11
Exterior Slabs-on-Grade 12
Drainage and Maintenance 13
Observation and Testing 14
8.0 CLOSURE 15
TECHNICAL REFERENCES 16

APPENDICES

APPENDIX A Site Vicinity Map
Boring Location Map
Boring Log Legend
Boring Logs

APPENDIX B Geotechnical Laboratory Test Results

1.0 INTRODUCTION AND SITE SETTING

Based on our correspondence, the project will involve the construction of a sewer lift station at 2975 Union Road in Paso Robles, California. The lift station is planned to be constructed on the Paso Robles Sports Club property, south of the tennis courts. The lift station will transport wastewater using existing 6-inch diameter force main. Additionally, 1,700 linear feet of sewer force main will be constructed to transport the wastewater to an existing manhole located at the intersection of Union Road and Tuley Road.

We understand the lift station is planned to be a buried structure consisting of a pre-cast concrete wet well with anticipated depth of 25 feet. We have assumed a vertical load of the structure of up to 3 kips per square foot (ksf) for the purposes of our analysis. Supporting equipment for the lift station may be supported on slabs-on-grade. We have assumed a system of sheeting-shoring excavation support will be utilized during installation.

The approximate site coordinates of latitude 35.6407N and longitude 120.6450W were obtained from the Google Earth website (Google Earth, 2024). The site is bounded by tennis courts of the Paso Robles Sports Club to the north, east and west and Union Road to the south. The site is currently an undeveloped planter area with drainage ditch and ascending slope to the south.

2.0 SCOPE OF SERVICES

The scope of work for this geotechnical engineering report included a general site reconnaissance, field exploration, laboratory testing, geotechnical analysis of the data gathered, and the preparation of this report. This report and recommendations are based on information provided by the client.

Preliminary geotechnical engineering recommendations for site preparation, pipeline design and construction, shoring, buried structures, equipment pads, drainage and maintenance, and observation and testing are presented to guide the development of project plans and specifications. As there may be geotechnical issues yet to be resolved, the geotechnical engineer should be retained to provide consultation as the design progresses, and to review project plans as they near completion to assist in verifying that pertinent geotechnical issues have been addressed and to aid in conformance with the intent of this report.

It is our intent that this report be used exclusively by the client to form the geotechnical basis of the design of the project and in the preparation of plans and specifications. Application beyond this intent is strictly at the user's risk.

This report does not address issues in the domain of contractors such as, but not limited to, site safety, cost estimating, temporary slope angles, dewatering, shoring, construction means and methods, etc. Analyses of site or areal geology, and of the soil for lead or mold potential, radioisotopes, asbestos (either man-made or naturally occurring), hydrocarbons, or other chemical properties are beyond the scope of this report. Evaluation of ancillary features such as fences, flag poles, signage, and nonstructural fills are all not within our scope and are also not addressed. Design and/or suitability of LID features such as retention basins, bioswales, or other improvements, and infiltration and percolation testing, determination of site suitability, and design of on-site effluent disposal systems are also beyond our scope.

Conclusions and recommendations regarding excavation stability, shoring etc., are included; however, they are intended for use strictly by the client for design and cost estimating purposes only. The conclusions and recommendations pertaining to excavation stability and shoring in no way relieve the contractor of their responsibility for developing their own excavation and dewatering design for this project.

In the event that there are any changes in the nature, design, or location of improvements, or if any assumptions used in the preparation of this report prove to be incorrect, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed, and the conclusions of this report modified or verified by the geotechnical engineer in writing. The criteria presented in this report are considered preliminary until such time as any peer review or review by any jurisdiction has been completed, conditions have been observed by the geotechnical engineer in the field during construction, and the recommendations have been verified as appropriate, or modified by the geotechnical engineer in writing.

3.0 FIELD INVESTIGATION

On February 26, 2024, one boring was drilled at the site to a depth of approximately 36.5 feet below the existing ground surface (bgs). The boring was drilled in Union Road, adjacent proposed lift station location, due to access constraints. The boring was drilled with a truck-mounted GTech GT8 drill rig equipped with a 6-inch outside diameter hollow stem auger and an automatic drop hammer for sampling. As the boring was drilled, soil samples were obtained using a 3-inch outside diameter ring-lined barrel sampler (ASTM D 3550-17 with shoe similar to ASTM D 2937-17) and Standard Penetration Tests (SPT) were conducted at selected depths within the borings (ASTM D 1586-18). A bulk sample was obtained from the auger cuttings. The boring was backfilled with soil cuttings and patched with cold-patch asphalt mix. The approximate location of the boring is shown on the Exploration Location Map in Appendix A.

Soils encountered in the boring were categorized and logged in general accordance with the Unified Soil Classification System and ASTM D 2488-17. A log of the boring is presented in Appendix A, along with a Boring Log Legend. In reviewing the boring log and legend, the reader should recognize that the legend is intended as a guideline only, and there are a number of conditions that may influence the characteristics observed during drilling. These include, but are not limited to, the presence of cobbles or boulders, cementation, variations in soil moisture, presence of groundwater, and other factors. Consequently, the logger must exercise judgment in interpreting soil characteristics, possibly resulting in soil descriptions that vary from the legend. The reader should also consider the sampler type used when reviewing the blow counts.

4.0 LABORATORY ANALYSIS

Selected samples from the borings were tested in our laboratory for bulk density (ASTM D 2937-17, modified for ring liners) and moisture content (ASTM D 2216-19), maximum density and optimum moisture content (ASTM D 1557-12 modified), direct shear (ASTM D 3080/D 3080M-11, in situ), and grain size distribution (sieve per ASTM D 422-63/07; D1140-17).

5.0 GENERAL SUBSURFACE PROFILE

Surface improvements encountered in the boring were measured to be approximately 3.0 inches of asphalt concrete over approximately 12.0 inches of aggregate base. Underlying the aggregate base, a woven geotextile fabric was encountered.

Based upon our subsurface exploration, the site is underlain with fill, alluvium, and soils of the Paso Robles Formation to maximum depths explored of approximately 36.5 feet bgs. The fill soil consisted of medium dense silty sand to a depth of approximately 7.0 feet bgs. Alluvium was underlying fill soils and consisted of medium dense poorly graded sands.

Fill was underlain with soils of the Paso Robles Formation, encountered at a depth of approximately 18.5 feet bgs. The Paso Robles formation is a sedimentary geologic formation that typically comprises mixtures of clay, silt, sand, and gravel. In some areas, the formation is characterized by rock-like structure, consistency and hardness, and is described as a sandstone, siltstone, claystone, or conglomerate material. In others, the material has more soil-like qualities. At the site, the formation is expressed as dense to very dense poorly graded sand and well graded sands with clay and varying amounts of gravel. Subsurface water was encountered during the exploration at a depth of approximately 35.5 feet bgs.

Please refer to the Boring Logs in Appendix A for a more detailed description of the subsurface conditions encountered.

6.0 CONCLUSIONS

In our opinion, the site is suitable, from a geotechnical engineering standpoint, for the proposed sewer lift station as discussed in the "Introduction and Site Setting" section of the report, provided the recommendations contained herein are implemented in the design and construction. The upper site soils were judges to be nonexpansive; therefore, no special measures with respect to expensive soils are considered necessary. The primary geotechnical engineering concerns at the site are the potential for strong seismic shaking, the potential for settlement, the excavation characteristics of the soils, the suitability of the soils for use as fill and backfill, the stability of the soils during grading, the erodible nature of the soils, and the potential for liquefaction and seismically induced settlement of dry sand.

Potential for Strong Seismic Shaking

The site is in a region of high seismic activity, with the potential for large seismic events that could generate strong ground shaking. A seismic analysis was undertaken using the general procedure to provide seismic acceleration design parameters; the results of the analysis are presented in the "Buried Structures" section of this report. Seismic acceleration parameters should be utilized in the design of the structures so that potential damage is reduced during a seismic event.

Settlement Potential

Undocumented fill was identified at the site the boring during the exploration. Settlement (total and differential) can occur when foundations and surface improvements span materials having variable consolidation, moisture, and density characteristics, such as the soils on this site. Such a situation can stress and possibly damage foundations and surface improvements, often resulting in severe cracks and displacement. To reduce this settlement potential, it is necessary for all foundations and surface improvements to bear on material that is as uniform as practicable. A program of overexcavation, scarification (in some cases), moisture conditioning, and compaction of the upper soils in equipment pad areas and below the foundations in the lift station area is recommended to provide more uniform soil moisture and density and appropriate support. A graded solution is recommended per the "Grading" section of this report.

Excavation Characteristics

The soils are anticipated to be excavatable with conventional earthmoving equipment; however, the stability of excavations is a concern. Based on our preliminary testing, the soils are considered to be "Type C" soils per the Cal/OSHA classification system. This classification should be verified by the contractor's "Competent Person" at the time of construction. Excavation sloping and shoring will be needed to safely work in, and to restrict the size of, the excavations. As with all

construction safety issues, the methods of excavation stabilization, sloping, and/or shoring are ultimately the responsibility of the contractor. Groundwater was encountered at a depth of 35.5 feet below existing ground surface during our exploration. Seepage should be anticipated at the alluvial soil / Paso Robles Formation contact especially during and following the winter months.

Erosion Potential

The site soils are considered to be highly erodible. Stabilization of surface soils, particularly those disturbed during construction, by vegetation or other means during and following construction is essential to reduce the potential of erosion damage. Care should be taken to establish and maintain proper drainage around the structures and improvements.

Liquefaction Settlement

The site is mapped by the County of San Luis Obispo (2014) as being in an area of low liquefaction potential. Liquefaction is the loss of soil strength caused by a significant seismic event. It occurs primarily in loose, fine to medium-grained sands, and in very soft to medium stiff silts that are saturated by groundwater. During a major earthquake, the saturated sands and silts tend to compress and decrease in volume. Pore water pressure builds up in the soil causing them to lose their strength and transition into a liquefied state.

During our exploration, groundwater was encountered at a depth of approximately 35.5 feet bgs, within the Paso Robles Formation soils. Due to the densities of the Paso Robles Formation soils encountered and the age of the formation, we believe the soils in our exploration have a low potential for liquefaction settlement.

Seismically induced settlement of dry sand is also caused by a significant seismic event, and may occur in lower density sand and silt soils that are not saturated by groundwater. During a major earthquake, the void spaces between the unsaturated soil particles that are filled with air tend to compress which translates to a decrease in volume or settlement.

To further understand the effects of liquefaction and seismically induced settlement of dry sand above the Paso Robles Formation, we performed an analysis of the boring data using ⅔ of the PGA_M of 0.545g (from the “Buried Structures” section of this report), an earthquake magnitude from all sources of 6.78 (USGS, 2024), and a groundwater depth deeper than 35.5 feet bgs. Based on the analysis, and provided the site is prepared in accordance with the “Grading” section of this report, total dynamic settlement due to liquefaction and seismically induced settlement of dry sand is considered negligible.

7.0 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

The following recommendations are applicable for the improvements as noted in the "Introduction and Site Setting" section of this report. If improvements not previously noted are included in the project, the geotechnical engineer should be contacted for revised recommendations.

Definitions

Unless otherwise noted, the following definitions are used in the following recommendations. Where specific terms are not defined, common definitions used in the construction industry are intended.

- **Lift Station Area:** The lift station area is defined as the area the area within and extending a minimum of 2 feet beyond the perimeter of the new foundations for the below-ground wet well.

- **Equipment Pad Area:** The equipment pad area is defined as the area the area within and extending a minimum of 2 feet beyond the perimeter of any equipment slabs-on-grade.

- **Scarified**: Ripping or plowing the exposed soil surface in two orthogonal directions to a minimum depth of 12 inches.

- **Moisture Conditioning:** Adjusting the soil moisture to optimum moisture content or slightly above, prior to the application of compaction effort.

- **Compacted or Recompacted:** Soils placed in level lifts not exceeding 8 inches in loose thickness and compacted to a minimum of 90 percent of maximum dry density, unless specified otherwise. The standard tests used to establish maximum dry density and field density should be ASTM D 1557-12 and ASTM D 6938-17, respectively, or other methods acceptable to the geotechnical engineer and jurisdiction.

Site Preparation

1. The ground surface in the equipment pad areas should be prepared for construction by removing vegetation, large roots, debris, fill soil, and other deleterious materials.

2. Any existing utilities slated for removal should be removed or properly abandoned. The appropriate method of utility abandonment will depend upon the type and depth of the utility. Recommendations for abandonment can be made, as necessary.
3. Voids created by the removal of deleterious materials or utilities should be immediately called to the attention of the geotechnical engineer.

Grading

Above Grade Structures

1. Following site preparation, soils within the equipment pad area should be removed to a level plane to a minimum depth of 1 foot below the bottom of the deepest grade beam elevation or 3 feet below existing ground surface, whichever is deeper. During construction, locally deeper removals may be recommended based on field conditions. The resulting soil surface should be scarified, moisture conditioned, and compacted prior to placing any fill soil. Fill placed in the equipment pad areas should be properly moisture conditioned and compacted.

Below Grade Structures

2. Following site preparation, soils within the lift station area should be removed to a level plane to a minimum depth of 1-foot below the bottom of the lift station elevation.

3. The excavation may be backfilled with site soils or import non-expansive soils, crushed gravel (0.75-inch), or sand/cement slurry. Soil used as backfill should be moisture conditioned to or just above optimum, placed in level lifts not exceeding 6 inches in loose thickness, and compacted to a *minimum of 95 percent of maximum dry density*. If used, gravel should be placed in maximum 8-inch lifts and compacted with a vibrating place compactor, or other suitable means, as it is placed. Gravel should be fully encased in filter fabric conforming to Caltrans Section 88-1.02I – Class 8 (Caltrans 2010) to reduce the potential for infiltration of the native soil into the gravel.

4. An alternative to sand, backfill can consist of sand/cement slurry with 1 to 1.5 sacks of cementitious material per cubic yard. If used, slurry should be mechanically vibrated when placed.

Grading, General

5. Voids created by dislodging cobbles and/or debris during excavation and/or scarification should be backfilled and compacted, and the dislodged materials should be removed from the area of work.

6. On-site material and approved import materials may be used as general fill. All imported soil should be nonexpansive. Nonexpansive materials are defined as soils that fall in the GW, GM, GC, SP, SW, SC, and SM categories per ASTM D 2487-17, and that have an expansion index of 10 or less (ASTM D 4829-17). The clean sand layer described in the "Interior Slabs-on-Grade and Exterior Pedestrian Flatwork" section of this report (if utilized) is considered to be part of the minimum recommended thickness of nonexpansive material and not in addition to it.

7. All materials used as fill should be cleaned of any debris and rocks larger than 6 inches in diameter. When fill material includes rocks, the rocks should be placed in a sufficient soil matrix to ensure that voids caused by nesting of the rocks will not occur and that the fill can be properly compacted.

8. Long-term settlement of properly compacted native/imported sand or gravel backfill should be assumed to be about 0.5 to 1.0 percent of the depth of the backfill. Improvements that are constructed over significant backfill should be designed to accommodate the estimated settlement. Long-term settlement of properly placed sand/cement slurry should be assumed to be about 0.1 percent of the depth of backfill.

9. If the soils are overly moist so that they become unstable or if the recommended compaction cannot be readily achieved, drying the soil to optimum moisture content, or just above, may be necessary. Placement of gravel layers or geotextiles may also be necessary to help stabilize unstable soils. If such conditions are encountered, the geotechnical engineer can assist the contractor in selecting appropriate measures for stabilization of unstable soils.

Pipeline Design and Construction

Trench Stability and Trench Excavatability

1. Soils encountered in the borings generally consisted of silty and sandy soils. These soils may not remain stable in trench sidewalls, and could be subject to sloughing and caving. For preliminary design and estimating purposes, the site soils should be considered to be Type “C” material, per the CALOSHA standards. The final determination should be made by the contractor’s Competent Person at the time of construction.

2. All of the soil materials encountered are expected to be readily excavated using a backhoe or an excavator.

Trench Backfill

1. A select, noncorrosive, easily compacted sand should be used as bedding and shading immediately around utilities. Site soils or select import may be used as trench backfill within the remaining trench depths.

2. Utility trench backfill should be moisture conditioned and compacted to a minimum of 90 percent of maximum dry density. Trenches located within areas subject to vehicle loading should be compacted to a minimum of 95 percent of maximum dry density within the upper foot of subgrade and all aggregate base.

3. Trench backfill should be placed in level lifts not exceeding 6 inches in loose thickness, moisture conditioned, and compacted to the minimums noted above.

4. Long-term settlement of properly compacted, imported sand or crushed gravel trench backfill should be assumed to be about 0.2 to 0.5 percent of the depth of the backfill; long-term settlement of properly compacted site soil or crushed sandstone trench backfill should be assumed to be about 0.5 to 1 percent of the depth of the backfill. Improvements that are constructed over or near trenches should be designed to accommodate long-term settlement.

5. Compaction of trench backfill by jetting or flooding is not recommended except under extraordinary circumstances. However, to aid in *encasing* utility conduits, particularly corrugated drainpipes, and multiple, closely spaced conduits in a single trench, jetting or flooding may be useful. Flooding or jetting should only be attempted with extreme caution, and any jetting operation should be subject to review by the geotechnical engineer.

6. The recommendations of this section are minimums only and may be superseded by the requirements of the pipe manufacturers, utility companies, or the governing jurisdiction based upon soil corrosivity or other factors.

Thrust Blocks

1. Provided that the tops of vertical and horizontal thrust blocks are a minimum of 2.5 feet below finish grade, their minimum thickness is 1 foot, and they are cast against firm soil, thrust blocks may be designed using a maximum allowable sustained horizontal bearing capacity of 500 psf. For short term loads, such as those caused by sudden pressure fluctuations, a maximum horizontal bearing capacity of 800 psf may be used. For any downward (vertical) thrust resistance, a maximum allowable downward (vertical) bearing capacity of 1,200 psf may be assumed. In determining resistance to upward thrust, the client should use one of or a combination of the soil unit weights provided below.

2. Thrust blocks not conforming to the criteria presented above should be addressed on an individual basis by the geotechnical engineer.

Pipeline Design

1. Friction Coefficients:

   Compacted, imported sand backfill or
   sand/cement slurry to PVC pipe: 0.28

2. Soil Unit Weights (native sandy material/imported sand or gravel):

   Unsaturated, compacted backfill: 120 pcf

Shoring

The following discussion regarding shoring is provided to assist the client *in preliminary design and cost estimating purposes only*. The information provided below *does not* relieve the contractor of their responsibilities to properly design and construct shoring systems.

1. Construction backcuts and trenches should be excavated, sloped, and/or shored as per Cal/OSHA specifications. The soils are considered to be "Type C" per the Cal/OSHA classification system.

2. Shoring is anticipated to be necessary at the lift station installation. Shoring may also be planned in locations where open trenching cannot be sloped due to existing improvements or other factors. The following recommendations are based upon the assumption that the shoring will be relatively short-term (i.e., 60 days or less).

3. If sheet piles are incorporated into the project, careful consideration should be given to the vibrations caused by vibratory hammers used to install/remove sheet piles and the effect on adjacent improvements such as buildings, pipelines, and other improvements that are in place. Driving the sheet piles with an impact hammer rather than a vibratory driver may be a better option to reduce the potential for damage to nearby improvements. Regardless of the installation method for sheet piles, monitoring of nearby improvements should occur prior to, during, and following installation and removal of sheet piles.

4. Subsurface water was encountered at a depth of 35.5 feet in Union Road, adjacent to the lift station site. Excavations that extend between 18 and 30 feet or deeper below existing grade will likely encounter subsurface water especially during and following the winter months. We anticipate the water encountered will not be of a volume to require dewatering systems. We anticipate the water should be easily managed with small gravel layers and/or sump pumps, if needed.

5. Soil parameters for use in shoring design should be:

   Soil unit weight ..... 105 pcf
   Angle of Internal Friction .....30 degrees
   Cohesion .....70 psf
   K_a 0.33
   K_p 3.00

6. Equivalent fluid pressures may be calculated by multiplying the coefficients K_a and K_p with the soil unit weight listed above.

7. External factors that may affect the shoring include adjacent underground conduits and utilities, surface and subsurface structures, loading and vibration from traffic and construction equipment, and loads that may be applied by stockpiled construction materials and excavated soil. Such factors should be accommodated in the backcut and/or shoring design.

Buried Structures

1. The proposed lift station structures may be supported on prefabricated or cast-in-place concrete base foundations bearing on recompacted fill as recommended.

2. Buried structures supported on recompacted fill may be designed using a maximum allowable bearing capacity of 2,000 psf dead load and 2,500 psf dead plus live load. Using these values, maximum and differential settlements are not expected to exceed 3/4-inch. Design of the buried structure foundations is left to the design engineer.

3. Allowable capacities may be increased by one-third when transient loads such as seismicity are included.

4. In accordance with Chapter 20 of ASCE 7-16 (ASCE, 2017), Site Class D (Stiff Soil) was selected based on subsurface data from our borings. If the designer determined them to be needed, we have assumed that the Architect/Engineer intends to apply the exception allowed under Note 1 in ASCE 7-16 Supplement 3 (ASCE, 2021) to this project; therefore, we are providing the general procedure seismic design parameters based on the site coordinates stated in the “Introduction and Site Setting” section and Site Class D in accordance with Section 11.4.4 of ASCE 7-16. Seismic design parameters are shown in Table 1. The Architect/Engineer should verify these assumptions during the design process. The project was considered to be Risk Category II as described in Table 1604.5 of the CBC (CBC, 2022).

Mapped Spectral Response Acceleration		Site Class "D" Adjusted Values				Design Values	
Seismic Parameters	**Values (g)**	**Site Coefficients**	**Values**	**Seismic Parameters**	**Values (g)**	**Seismic Parameters**	**Values (g)**
S_S	1.180	F_a	1.04	S_{MS}	1.198	S_{DS}	0.798
S_1	0.428	F_v	1.88	S_{M1}	0.793	S_{D1}	0.528
Peak Mean Ground Acceleration (PGA_M) = 0.545g							
Seismic Design Category = D							

5. Retaining walls for the below-grade structures will likely be designed as fixed walls; therefore, at-rest pressures should be provided, and should be 70 pcf for site soils or imported nonexpansive materials. No surcharges are taken into consideration in the values presented above.

6. The pressures presented above are applicable to a horizontal retained surface behind the wall. Walls having a retained surface that slopes upward from the wall should be designed for an additional equivalent fluid pressure of 1.5 pcf for every two degrees of slope inclination.

7. Long-term settlement of properly compacted imported sand/gravel and site soil for retaining wall backfill should be assumed to be about 0.25 and 0.5 percent of the depth of the backfill. Improvements that are constructed near the tops of retaining walls should be designed to accommodate long-term settlement.

Exterior Slabs-on-Grade

1. Slabs-on-grade should have a minimum thickness of 4 inches. They should be reinforced and doweled to foundations per the specifications of the architect/engineer. At a minimum, interior slabs should be reinforced with No. 3 rebar at 24 inches on center each

way. All structural slabs should contain minimum rebar meeting the criteria of ACI 318 (ACI 2014). At a minimum, foundation dowels should be lap spliced to the slab rebar. The size and spacing of the dowels should match the size and spacing of the slab rebar.

2. Interior slabs-on-grade should have a thickened edge, grade beam, or foundation a minimum of 12 inches below the lowest adjacent grade along the perimeter of the slab.

3. To reduce shrinkage cracks in all exterior slabs-on-grade, the concrete aggregates should be of appropriate size and proportion, the water/cement ratio should be low, the concrete should be properly placed and finished, contraction joints should be installed, and the concrete should be properly cured. This is particularly applicable to slabs that will be cast directly upon a vapor retarder and those that will be protected from transmission of vapor by use of admixtures or surface sealers. Concrete materials, placement, and curing specifications should be at the direction of the architect/engineer; AC 302.1R-15 (ACI 2015) is suggested as a resource for the architect/engineer in preparing such specification.

Drainage and Maintenance

1. Unpaved ground surfaces should be *graded during construction* and *finish graded* to direct surface runoff away from the lift stations and other improvements at a minimum 5 percent grade for a minimum distance of 10 feet. If this is not practical due to terrain, proximity of other improvements, etc., swales with improved surfaces, area drains, or other drainage facilities should be used to collect and discharge runoff away from these areas.

2. The on-site soils are erodible. To reduce erosion damage, it is essential that soils, particularly those disturbed during construction, be stabilized *during and following construction*.

3. Maintenance of drainage and other improvements is critical to the long-term stability and integrity of the proposed improvements.

4. Runoff from area drains, weep holes, etc., should discharge to an appropriate outlet in a nonerosive manner away from foundations and other improvements in accordance with the requirements of the governing agencies. Erosion protection should be placed at all discharge points unless the discharge is to a paved surface. To reduce the potential for disruption of drainage patterns and undermining of improvements and slopes, rodent activity should be aggressively controlled.

Observation and Testing

1. It must be recognized that the recommendations contained in this report are based on a limited number of borings and rely on continuity of the subsurface conditions encountered. Therefore, the geotechnical engineer should be retained to provide consultation during the design phase, to review plans as they near completion, to interpret this report during construction, and to provide construction monitoring in the form of testing and observation.

2. At a minimum, the geotechnical engineer should be retained to provide:

    - Review of the project plans as they near completion
    - Professional observation during grading, backfill, and buried structure construction
    - Oversight of soil special inspection during grading, backfill, and foundation construction

3. Special inspection of grading and backfill should be provided as per Section 1705.6 and Table 1705.6 (CBC, 2022). The special inspector should be under the direction of the geotechnical engineer. It is our opinion that none of the grading construction is of a nature that should warrant continuous special inspection; periodic special inspection should suffice. Subject to approval by the Building Official, the exception to continuous special inspection is described in Section 1704.2 (CBC, 2022) and should be specified by the architect/engineer and periodic special inspection of the following items should be provided by the special inspector.

    - Stripping and clearing of vegetation and unsuitable materials
    - Overexcavation to the recommended depths
    - Scarification, moisture conditioning, and compaction of the soil
    - Fill quality, placement, and compaction
    - Utility trench and buried structure backfill
    - Foundation excavations

4. A program of quality control should be developed prior to beginning grading. The contractor or project manager should determine any additional inspection items required by the architect/engineer or the governing jurisdiction.

5. Locations and frequency of compaction tests should be as per the recommendation of the geotechnical engineer at the time of construction. The recommended test locations and frequency may be subject to modification by the geotechnical engineer, based upon soil and moisture conditions encountered, size and type of equipment used by the contractor, the general trend of the results of compaction tests, or other factors.

6. A preconstruction conference among the owner, the geotechnical engineer, the governing agency, the special inspector, the project inspector, the architect/engineer, and contractors is recommended to discuss planned construction procedures and quality control requirements.

7. The geotechnical engineer should be notified at least 48 hours prior to beginning construction operations. If Earth Systems Pacific is not retained to provide construction observation and testing services, it shall not be responsible for the interpretation of the information by others or any consequences arising therefrom.

8.0 CLOSURE

Our intent was to perform the investigation in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the locality of this project and under similar conditions. No representation, warranty, or guarantee is either expressed or implied. This report is intended for the exclusive use by the client as discussed in the “Scope of Services” Section. Application beyond the stated intent is strictly at the user's risk.

This report is valid for conditions as they exist at this time for the type of project described herein. The conclusions and recommendations contained in this report could be rendered invalid, either in whole or in part, due to changes in building codes, regulations, standards of geotechnical or construction practice, changes in physical conditions, or the broadening of knowledge. If Earth Systems Pacific is not retained to provide construction observation and testing services, it shall not be responsible for the interpretation of the information by others or any consequences arising therefrom.

If changes with respect to project type or location become necessary, if items not addressed in this report are incorporated into plans, or if any of the assumptions used in the preparation of this report are not correct, this firm shall be notified for modifications to this report. Any items not specifically addressed in this report should comply with the CBC (CBC, 2022) and the requirements of the governing jurisdiction.

The preliminary recommendations of this geotechnical report are based upon the geotechnical conditions encountered at the site and may be augmented by additional requirements of the architect/engineer, or by additional recommendations provided by the geotechnical engineer based on conditions exposed at the time of construction.

This document, the data, conclusions, and recommendations contained herein are the property of Earth Systems Pacific. This report shall be used in its entirety, with no individual sections reproduced or used out of context. Copies may be made only by Earth Systems Pacific, the client, and the client's authorized agents for use exclusively on the subject project. Any other use is subject to federal copyright laws and the written approval of Earth Systems Pacific.

Thank you for this opportunity to have been of service. If you have any questions, please feel free to contact this office at your convenience.

End of Text.

TECHNICAL REFERENCES

ACI (American Concrete Institute). 2015. *Guide for Concrete Floor and Slab Construction.* Document 302.1R-15.

ACI (American Concrete Institute). 2019. *Building Code Requirements for Structural Concrete.* Document 318-19.

ASCE (American Society of Civil Engineers). 2017. *Minimum Design Loads for Buildings and other Structures,* Standards ASCE/SEI 7-16.

ASCE (American Society of Civil Engineers). 2018. *Minimum Design Loads for Buildings and other Structures* Supplement 1, effective December 12, 2018.

ASCE (American Society of Civil Engineers). 2021. *Minimum Design Loads for Buildings and other Structures, Supplement 3,* Effective November 5, 2021.

ASTM (ASTM International). Various Dates. *Annual Book of Standards*.

CBSC (California Building Standards Commission). 2022. *California Building Code*. California Code of Regulations, Title 24, Part 2.

Google Earth. 2024. Google Earth [website], retrieved from: http://www.google.com/earth/index.html

Pradel, Daniel. 1998. *Procedure to Evaluate Earthquake-Induced Settlements in Dry Sandy Soils.*

SEAOC (Structural Engineers Association of California). 2024. Seismic Design Map Tool. Retrieved from: https://seismicmaps.org/

USGS (United States Geological Survey), 2024. “Unified Hazard Tool." United States Geological Survey. Retrieved from: http://earthquake.usgs.gov/hazards/interactive/

APPENDIX A

Site Vicinity Map
Boring Location Map
Boring Log Legend
Boring Logs

N

NOT TO SCALE

BASE MAP PROVIDED BY: Google Earth (2024)

Earth Systems Pacific
4378 Old Santa Fe Road, San Luis Obispo, CA 93401
www.earthsystems.com
(805) 544-3276 ● Fax (805) 544-1786

SITE VICINITY MAP

Union Road Sewer Lift Station
2975 Union Road
Paso Robles, California

Date
March 2024

Project No.
306545-001

Figure 1

306545-001 UNIONROADLIFTSTATIONmaps.dwg

LEGEND

B1 Boring Location (Approx.)

BASE MAP PROVIDED BY: Google Earth (2024)

NOT TO SCALE

Earth Systems Pacific
4378 Old Santa Fe Road, San Luis Obispo, CA 93401
www.earthsystems.com
(805) 544-3276 • Fax (805) 544-1786

EXPLORATION LOCATION MAP

Union Road Sewer Lift Station
2975 Union Road
Paso Robles, California

Date
March 2024

Project No.
306545-001

Figure 2

306545-001 UNIONROADLIFTSTATIONmaps.dwg

Earth Systems Pacific

BORING LOG LEGEND

SAMPLE / SUBSURFACE WATER SYMBOLS	GRAPH. SYMBOL
CALIFORNIA MODIFIED	
STANDARD PENETRATION TEST (SPT)	
SHELBY TUBE	
BULK	
SUBSURFACE WATER DURING DRILLING	
SUBSURFACE WATER AFTER DRILLING	

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

MAJOR DIVISIONS	GROUP SYMBOL	TYPICAL DESCRIPTIONS	GRAPH. SYMBOL
COARSE GRAINED SOILS (MORE THAN HALF OF MATERIAL IS LARGER THAN #200 SIEVE SIZE)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
	GP	POORLY GRADED GRAVELS, OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, NON-PLASTIC FINES	
	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, PLASTIC FINES	
	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
	SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES	
	SM	SILTY SANDS, SAND-SILT MIXTURES, NON-PLASTIC FINES	
	SC	CLAYEY SANDS, SAND-CLAY MIXTURES, PLASTIC FINES	
FINE GRAINED SOILS (HALF OR MORE OF MATERIAL IS SMALLER THAN #200 SIEVE SIZE)	ML	INORGANIC SILTS AND VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	
	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
	PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	

OBSERVED MOISTURE CONDITION

DRY	SLIGHTLY MOIST	MOIST	VERY MOIST	WET (SATURATED)

CONSISTENCY

COARSE GRAINED SOILS			FINE GRAINED SOILS		
BLOWS/FOOT		DESCRIPTIVE TERM	BLOWS/FOOT		DESCRIPTIVE TERM
SPT	CA SAMPLER		SPT	CA SAMPLER	
0-10	0-16	LOOSE	0-2	0-3	VERY SOFT
11-30	17-50	MEDIUM DENSE	3-4	4-7	SOFT
31-50	51-83	DENSE	5-8	8-13	MEDIUM STIFF
OVER 50	OVER 83	VERY DENSE	9-15	14-25	STIFF
			16-30	26-50	VERY STIFF
			OVER 30	OVER 50	HARD

GRAIN SIZES

U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENING		
# 200	# 40	# 10	# 4	3/4"	3"	12"

SILT & CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

TYPICAL BEDROCK HARDNESS

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
EXTREMELY HARD	CORE, FRAGMENT, OR EXPOSURE CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CAN ONLY BE CHIPPED WITH REPEATED HEAVY HAMMER BLOWS
VERY HARD	CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CORE OR FRAGMENT BREAKS WITH REPEATED HEAVY HAMMER BLOWS
HARD	CAN BE SCRATCHED WITH KNIFE OR SHARP PICK WITH DIFFICULTY (HEAVY PRESSURE); HEAVY HAMMER BLOW REQUIRED TO BREAK SPECIMEN
MODERATELY HARD	CAN BE GROOVED 1/16 INCH DEEP BY KNIFE OR SHARP PICK WITH MODERATE OR HEAVY PRESSURE; CORE OR FRAGMENT BREAKS WITH LIGHT HAMMER BLOW OR HEAVY MANUAL PRESSURE
SOFT	CAN BE GROOVED OR GOUGED EASILY BY KNIFE OR SHARP PICK WITH LIGHT PRESSURE, CAN BE SCRATCHED WITH FINGERNAIL; BREAKS WITH LIGHT TO MODERATE MANUAL PRESSURE
VERY SOFT	CAN BE READILY INDENTED, GROOVED OR GOUGED WITH FINGERNAIL, OR CARVED WITH KNIFE; BREAKS WITH LIGHT MANUAL PRESSURE

TYPICAL BEDROCK WEATHERING

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
UNWEATHERED	NO DISCOLORATION, NOT OXIDIZED
SLIGHTLY WEATHERED	DISCOLORATION OR OXIDATION IS LIMITED TO SURFACE OF, OR SHORT DISTANCE FROM, FRACTURES: SOME FELDSPAR CRYSTALS ARE DULL
MODERATELY WEATHERED	DISCOLORATION OR OXIDATION EXTENDS FROM FRACTURES, USUALLY THROUGHOUT; Fe-Mg MINERALS ARE "RUSTY", FELDSPAR CRYSTALS ARE "CLOUDY"
HIGHLY WEATHERED	DISCOLORATION OR OXIDATION THROUGHOUT; FELDSPAR AND Fe-Mg MINERALS ARE ALTERED TO CLAY TO SOME EXTENT, OR CHEMICAL ALTERATION PRODUCES IN SITU DISAGGREGATION
DECOMPOSED	DISCOLORATION OR OXIDATION THROUGHOUT, BUT RESISTANT MINERALS SUCH AS QUARTZ MAY BE UNALTERED; FELDSPAR AND Fe-Mg MINERALS ARE COMPLETELY ALTERED TO CLAY

drafting/masters/Boring Log Legend 062719.dwg

Earth Systems Pacific

Boring No. 1

LOGGED BY: A. Flynn
DRILL RIG: GTech GT 8 with Automatic Hammer
AUGER TYPE: 6" Hollow Stem

PAGE 1 OF 1
JOB NO.: 306545-001
DATE: 02/23/2024

Union Road Sewer Lift Station
2975 Union Road
Paso Robles, California

DEPTH (feet)	USCS CLASS	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0		3.0" ASPHALT CONCRETE / 12.0 AGGREGATE BASE / WOVEN GEOTEXTILE FABRIC					
2	SM	SILTY SAND: brown, medium dense, moist (Fill)	1.5 - 5.0	◯			
5			5.0 - 6.5	■	110.7	8.3	10 17 21
6		trace gravel					
7	SP	POORLY GRADED SAND: very light yellowish brown, medium dense, slightly moist (Alluvium)					
10			10.0 - 11.5	■	96.8	1.2	6 9 11
14		trace gravel					
15			15.0 - 16.5	■	90.9	0.8	9 17 22
19	SP-SC	POORLY GRADED SAND WITH CLAY: dark yellowish brown, dense, moist (Paso Robles Formation)					
20			20.0 - 21.5	■	113.5	7.6	19 32 50
25			25.0 - 26.5	■	98.2	15.5	21 33 50
26	SW-SC	WELL GRADED SAND WITH CLAY AND GRAVEL: dark yellowish brown, very dense, moist					

LEGEND: ■ Ring Sample ◯ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 1

LOGGED BY: A. Flynn
DRILL RIG: GTech GT 8 with Automatic Hammer
AUGER TYPE: 6" Hollow Stem

JOB NO.: 306545-001
DATE: 02/23/2024

Union Road Sewer Lift Station
2975 Union Road
Paso Robles, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
27	SW-SC		WELL GRADED SAND WITH CLAY AND GRAVEL: same as above					
28	SP-SC		POORLY GRADED SAND WITH CLAY: dark yellowish brown, very dense, moist, trace gravel					
30				30.0 - 31.0	■	112.3	6.2	21 50/6"
33			dense					
35			wet	35.0 - 36.5	●			11 18 23
37			End of Boring @ 36.5' Subsurface water encountered @ 35.5'					

LEGEND: ■ Ring Sample ◯ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

APPENDIX B

Geotechnical Laboratory Test Results

City of Paso Robles
Union Road Lift Station

306545-001

BULK DENSITY TEST RESULTS

ASTM D 2937-17 (modified for ring liners)

March 12, 2024

BORING NO.	DEPTH feet	MOISTURE CONTENT, %	WET DENSITY, pcf	DRY DENSITY, pcf
1	6.0 - 6.5	8.3	119.9	110.7
1	11.0 - 11.5	1.2	98.0	96.8
1	16.0 - 16.5	0.8	91.7	90.9
1	21.0 - 21.5	7.6	122.2	113.5
1	26.0 - 26.5	15.5	113.4	98.2
1	30.5 - 31.0	6.2	119.3	112.3

City of Paso Robles
Union Road Lift Station

306545-001

MOISTURE-DENSITY COMPACTION TEST

ASTM D 1557-12 (Modified)

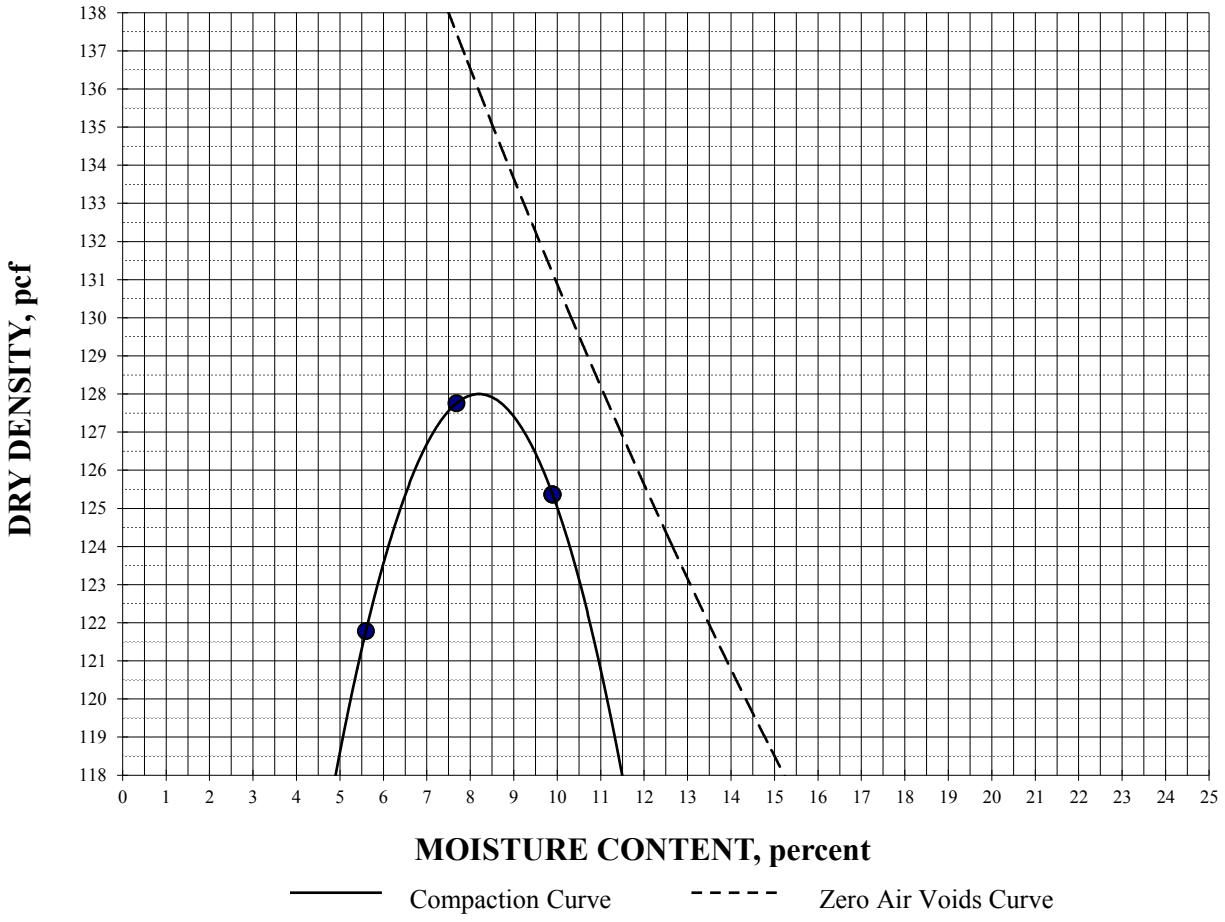
PROCEDURE USED: A
PREPARATION METHOD: Moist
RAMMER TYPE: Mechanical
SPECIFIC GRAVITY: 2.65 (assumed)

March 12, 2024
Boring #1 @ 1.5 - 5.0'
Brown Silty Sand (SM)

SIEVE DATA:

Sieve Size	% Retained (Cumulative)
3/4"	0
3/8"	0
#4	0

MAXIMUM DRY DENSITY: 127.9 pcf
OPTIMUM MOISTURE: 8.2%



City of Paso Robles
Union Road Lift Station

306545-001

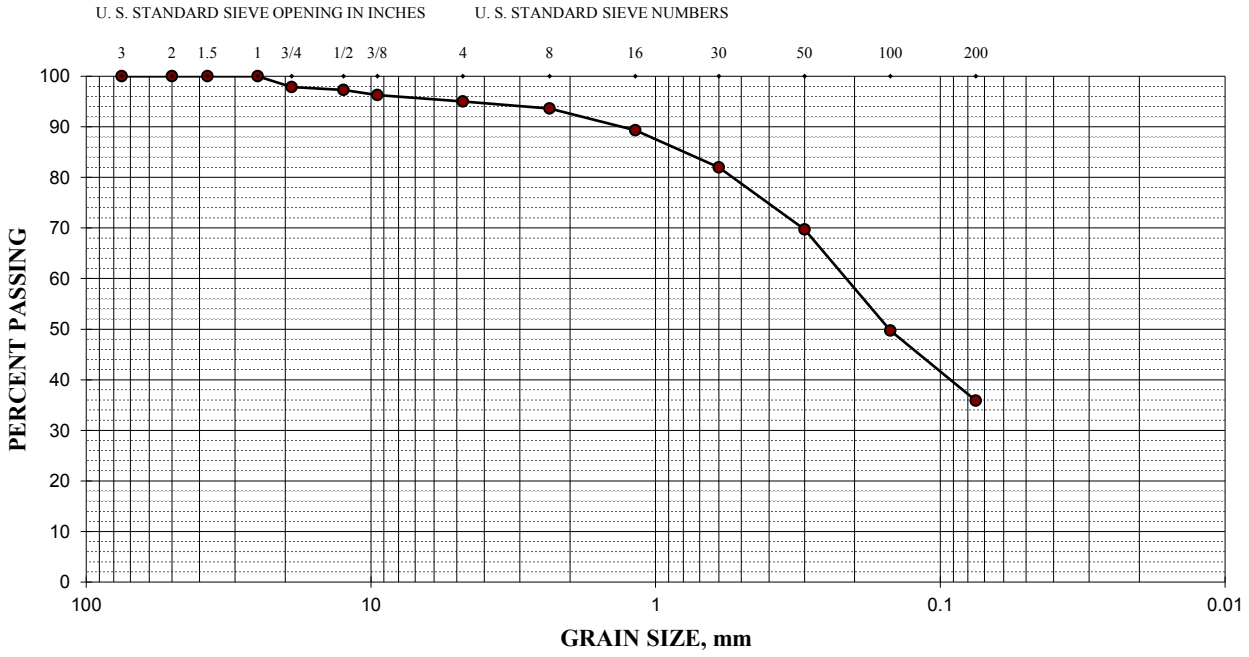
PARTICLE SIZE ANALYSIS

ASTM D 422-63/07; D 1140-017

Boring #1 @ 6.0 - 6.5'
Brown Silty Sand (SM)

March 12, 2024

Sieve size	% Retained	% Passing
1" (25-mm)	0	100
3/4" (19-mm)	2	98
1/2" (12.5-mm)	3	97
3/8" (9.5-mm)	4	96
#4 (4.75-mm)	5	95
#8 (2.36-mm)	6	94
#16 (1.18-mm)	11	89
#30 (600-µm)	18	82
#50 (300-µm)	30	70
#100 (150-µm)	50	50
#200 (75-µm)	64	36



City of Paso Robles
Union Road Lift Station

306545-001

PARTICLE SIZE ANALYSIS

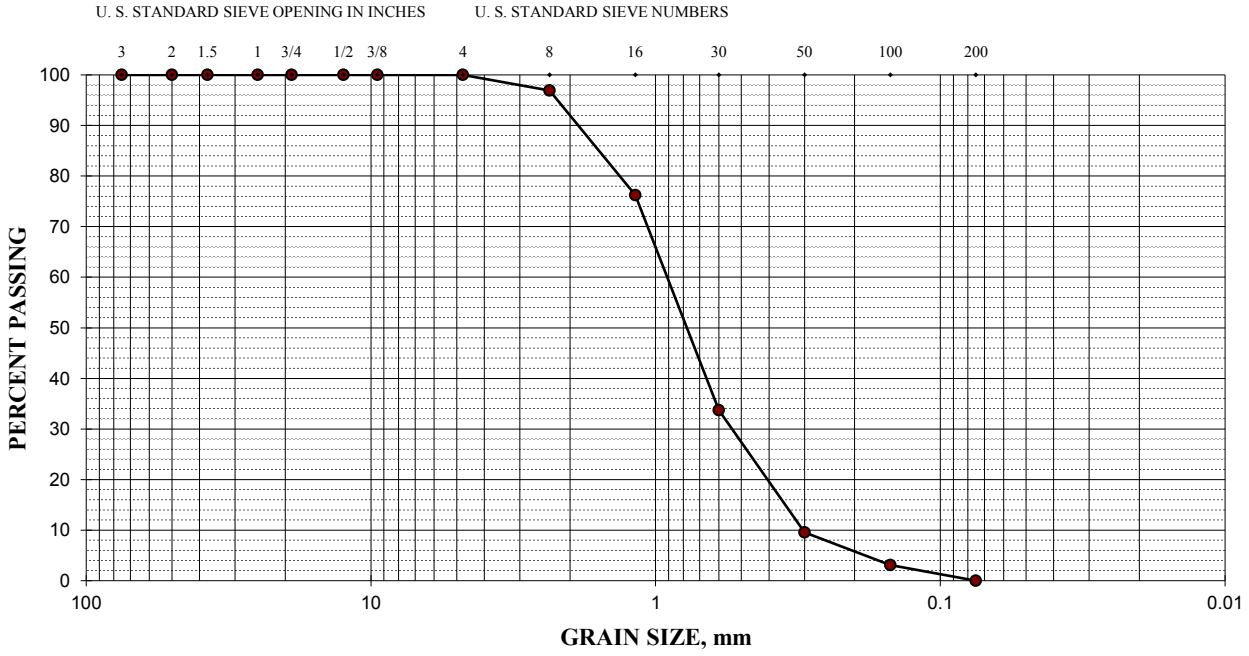
ASTM D 422-63/07; D 1140-017

Boring #1 @ 11.0 - 11.5'

March 12, 2024

Very Light Yellow Brown Poorly Graded Sand (SP)

Sieve size	% Retained	% Passing
#4 (4.75-mm)	0	100
#8 (2.36-mm)	3	97
#16 (1.18-mm)	24	76
#30 (600-µm)	66	34
#50 (300-µm)	90	10
#100 (150-µm)	97	3
#200 (75-µm)	98	1.7



City of Paso Robles
Union Road Lift Station

306545-001

PARTICLE SIZE ANALYSIS

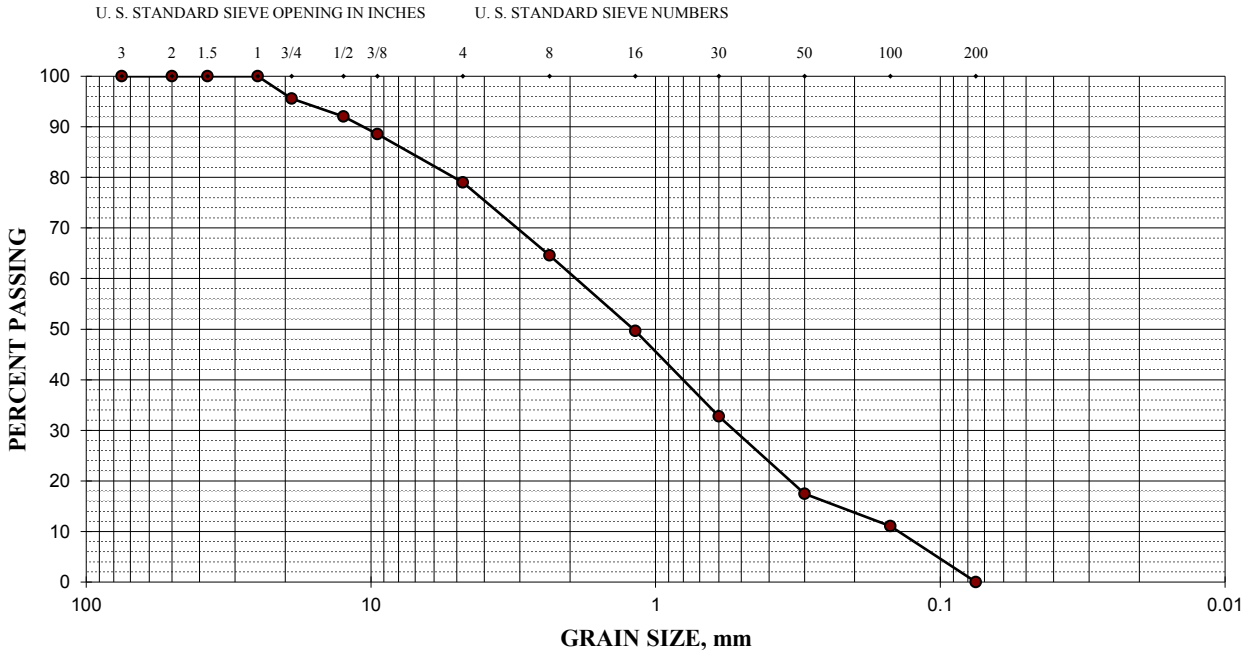
ASTM D 422-63/07; D 1140-017

Boring #1 @ 26.0 - 26.5'

March 12, 2024

Dark Yellow Brown Well-Graded Sand with Clay and Gravel (SW-SC)

Sieve size	% Retained	% Passing
1" (25-mm)	0	100
3/4" (19-mm)	4	96
1/2" (12.5-mm)	8	92
3/8" (9.5-mm)	11	89
#4 (4.75-mm)	21	79
#8 (2.36-mm)	35	65
#16 (1.18-mm)	50	50
#30 (600-µm)	67	33
#50 (300-µm)	83	17
#100 (150-µm)	89	11
#200 (75-µm)	92	8.1



City of Paso Robles
Union Road Lift Station

306545-001

DIRECT SHEAR

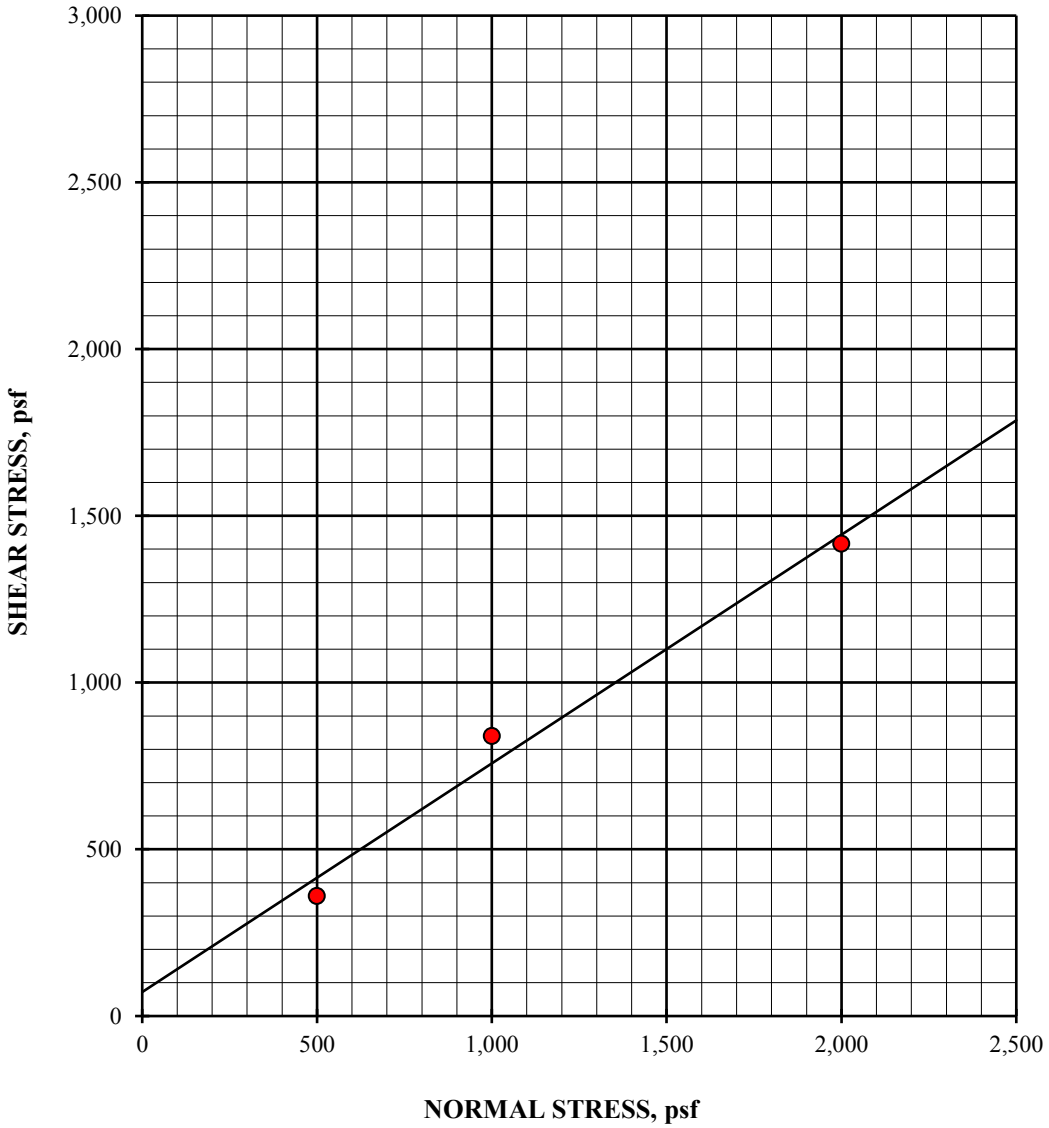
ASTM D 3080/D3080M-11 (modified for consolidated, undrained conditions)

March 12, 2024

Boring #1 @ 16.0 - 16.5'
Very Light Yellow Brown Poorly Graded Sand (SP)
Ring sample, saturated

INITIAL DRY DENSITY: 93.9 pcf
INITIAL MOISTURE CONTENT: 0.8 %
PEAK SHEAR ANGLE (Ø): 34°
COHESION (C): 72 psf

SHEAR vs. NORMAL STRESS



City of Paso Robles
Union Road Lift Station

306545-001

DIRECT SHEAR continued

ASTM D 3080/D3080M-11 (modified for consolidated, undrained conditions)

Boring #1 @ 16.0 - 16.5'

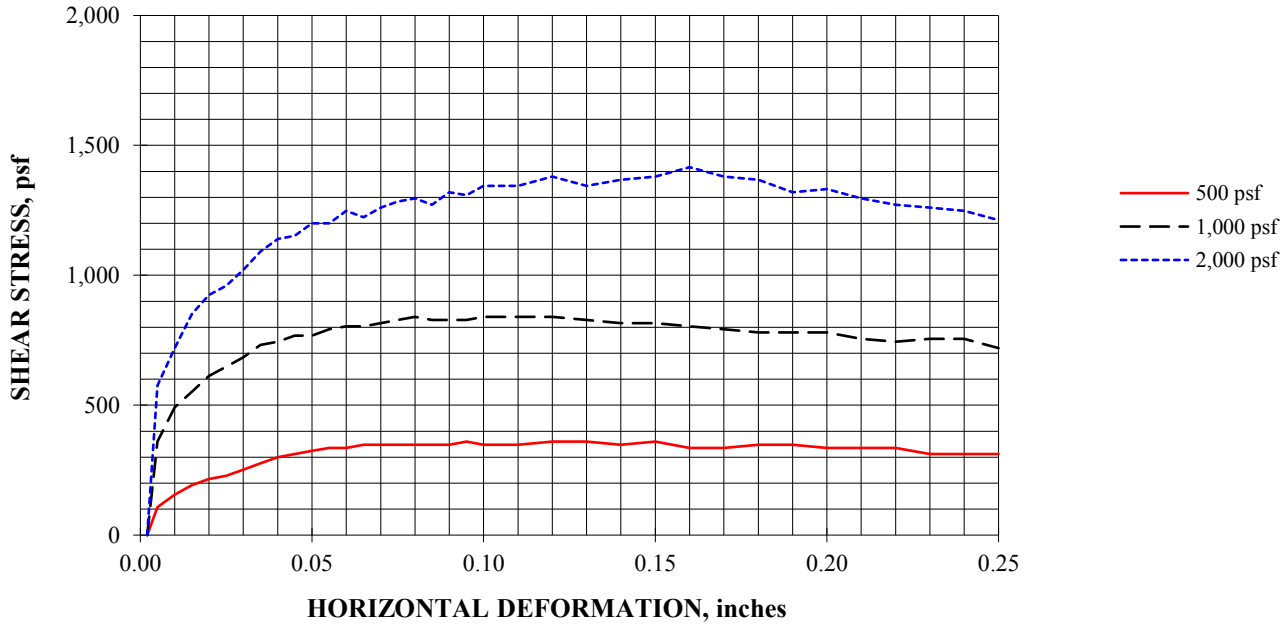
March 12, 2024

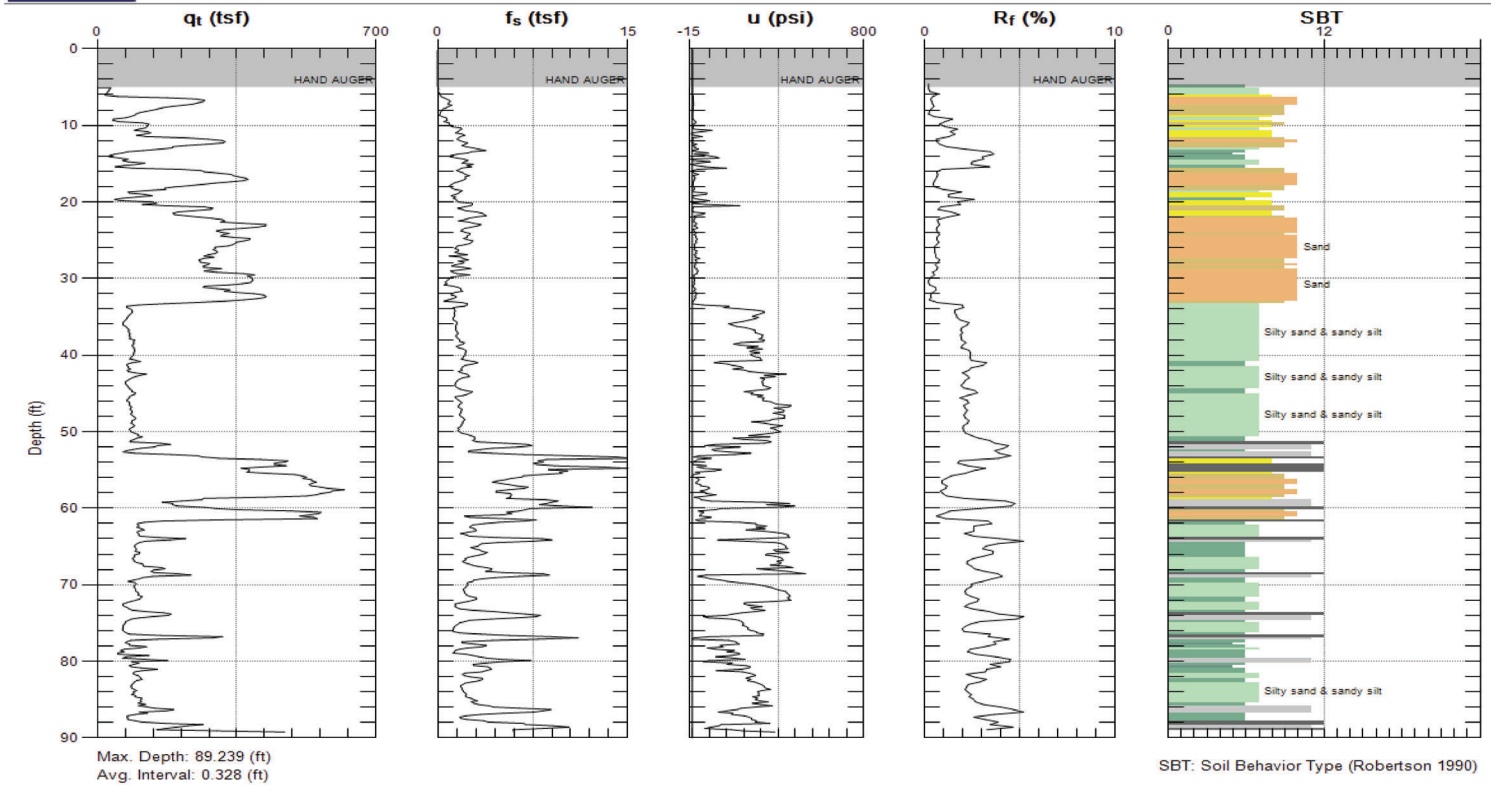
Very Light Yellow Brown Poorly Graded Sand (SP)

Ring sample, saturated

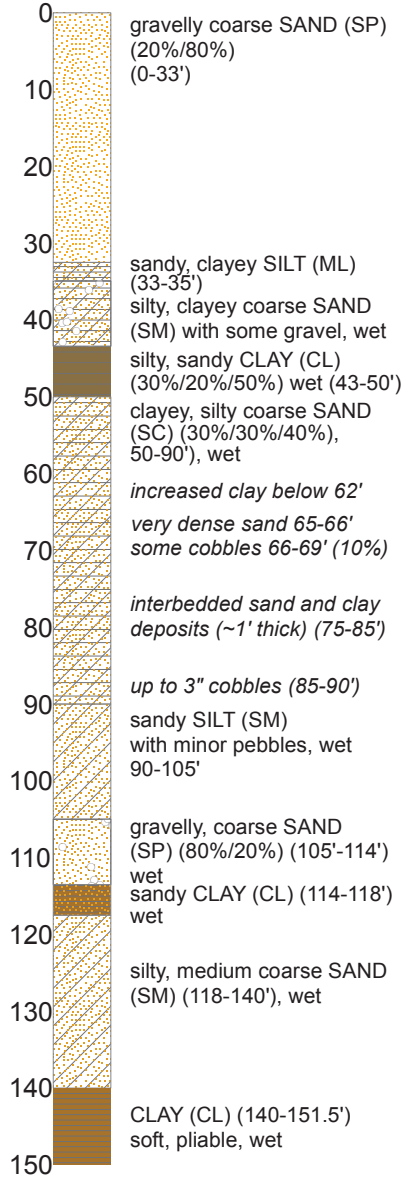
SPECIFIC GRAVITY: 2.65 (assumed)

SAMPLE NO.:	1	2	3	AVERAGE
INITIAL				
WATER CONTENT, %	0.8	0.8	0.8	0.8
DRY DENSITY, pcf	90.5	96.8	94.4	93.9
SATURATION, %	2.6	3.0	2.8	2.8
VOID RATIO	0.828	0.709	0.752	0.763
DIAMETER, inches	2.410	2.410	2.410	
HEIGHT, inches	1.00	1.00	1.00	
AT TEST				
WATER CONTENT, %	7.8	7.8	7.3	
DRY DENSITY, pcf	93.9	101.5	100.7	
SATURATION, %	27.2	32.8	30.0	
VOID RATIO	0.760	0.629	0.642	
HEIGHT, inches	0.96	0.95	0.94	





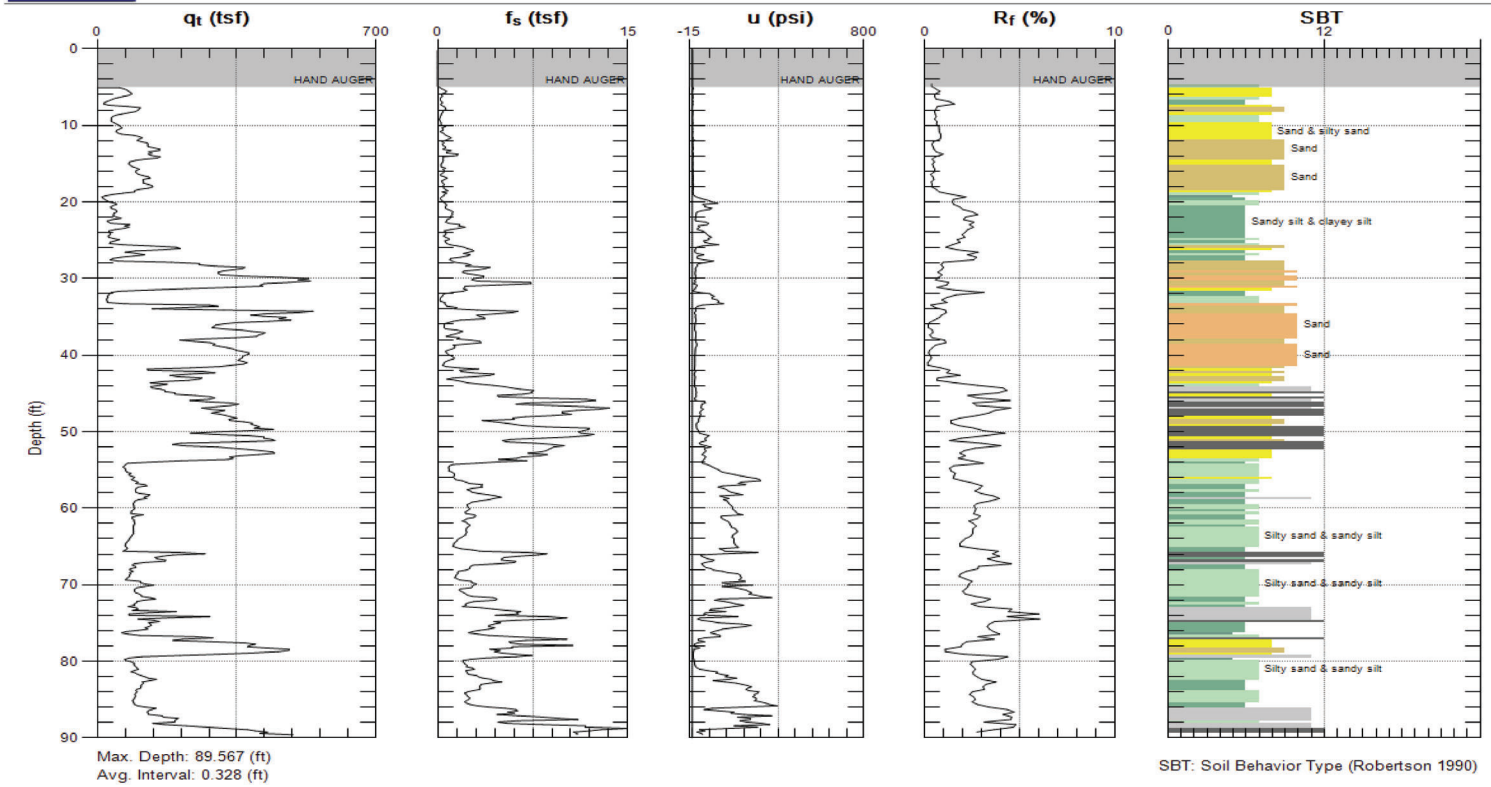
Lithologic Log Soil Boring B4 (in-channel)



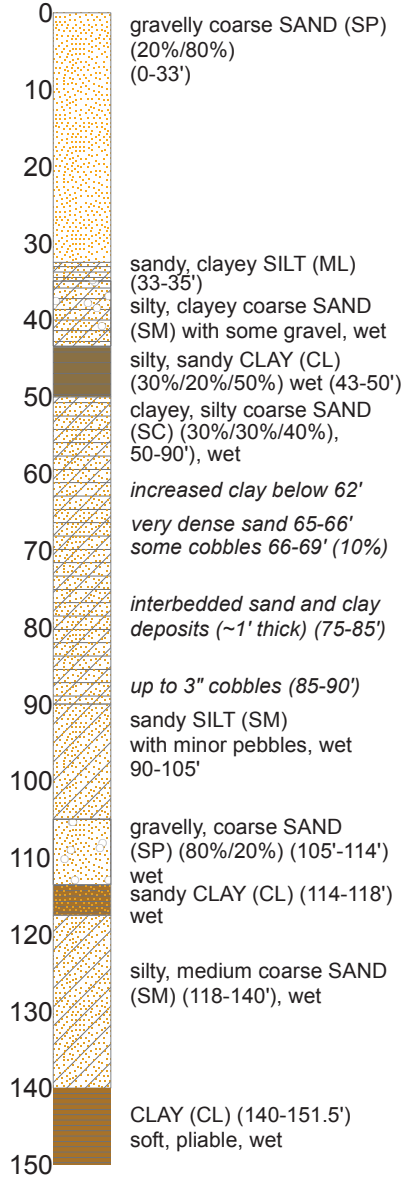
Provided by City Utilities Department
Location of the boring and CPTs is ~ 900 LF WNW of the proposed inverted siphon site.

Figure 8
Site 4
Soil Boring (SB4) and CPT (CPT4a) Logs

TODD GROUNDWATER



Lithologic Log
Soil Boring B4
(in-channel)



gravelly coarse SAND (SP) (20%/80%) (0-33')

sandy, clayey SILT (ML) (33-35')

silty, clayey coarse SAND (SM) with some gravel, wet

silty, sandy CLAY (CL) (30%/20%/50%) wet (43-50')

clayey, silty coarse SAND (SC) (30%/30%/40%), 50-90'), wet

increased clay below 62'

very dense sand 65-66'
some cobbles 66-69' (10%)

interbedded sand and clay deposits (~1' thick) (75-85')

up to 3" cobbles (85-90')

sandy SILT (SM) with minor pebbles, wet 90-105'

gravelly, coarse SAND (SP) (80%/20%) (105'-114') wet

sandy CLAY (CL) (114-118') wet

silty, medium coarse SAND (SM) (118-140'), wet

CLAY (CL) (140-151.5') soft, pliable, wet

boring terminated at 151.5 ft-bgs

Provided by City Utilities Department
Location of the boring and CPTs is ~ 900 LF WNW of the proposed inverted siphon site.

Figure 9
Site 4
Soil Boring (SB4) and CPT (CPT4b) Logs

TODD GROUNDWATER

TODD GROUNDWATER

EXPLORATORY BORING/WELL LOG

PROJECT NO.: 68302
HOLE NO.: SB4
ELEVATION: 735' msl
DATE STARTED: 12/5/2016
PROJECT LOCATION: Huer Huero Creek
HOLE LOCATION: Site 4 - Paso Robles Sports Club
LOGGED BY: Edwin Lin
DATE FINISHED: 12/6/2016

DRILLING INFORMATION

DRILLING AGENCY: Gregg Drilling
DRILLER: Colton Young
DRILLING EQUIPMENT: Marl #5 Rhino
DRILLING METHOD: Hollow Stem Auger
DRILL BIT: None
DRILLING FLUID: None
SAMPLES TAKEN:
SAMPLE TYPE:
NUMBER OF SAMPLES:
SAMPLING INTERVAL:
FIRST WATER: 35'
TOTAL DEPTH: 151.5'
DRILLED DIAMETER: 6-inch

COMPLETION/DESTRUCTION INFORMATION

Provided by City Utilities Department
Location of the boring and CPTs is ~ 900 LF WNW of the proposed inverted siphon site.

DEPTH (FEET)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG: LITHOLOGY	GRAPHIC LOG: COMPLETION/ DESTRUCTION	WATER CONTENT (%)	SAMPLES: TYPE	SAMPLES: INTERVAL	SAMPLES: PENETRATION RESISTANCE (BLOWS)	REMARKS
0	10YR 6/2 light brownish grey coarse SAND and GRAVEL (80/20), dry (SP)							
10	moist							
15	10YR 5/2 greyish brown							
20	trace gravel							
25	Very coarse sand							
30								
35	10YR 5/2 grayish brown coarse sandy, clayey SILT (ML), wet							
40	10YR 5/2 grayish silty coarse SAND (SM) with some GRAVEL and CLAY (50/30/10/10), wet trace pebbles up to 3/4"							
45	10YR 6/2 light brownish gray silty sandy CLAY (30/20/50) (SC), wet							
50	10YR 6/2 light brownish gray clayey silty coarse SAND (SC) (30/30/40)							
55								
60	more clay 10YR 6/5 yellowish brown							
65	more sand very dense 65'-66'							
	some cobbles and gravel 66'-69'							

TODD GROUNDWATER

EXPLORATORY BORING/WELL LOG

PROJECT NO.: 68302 | PROJECT LOCATION: Huer Huero Creek
HOLE NO.: SB4 | HOLE LOCATION: Site 4 - Paso Robles Sports Club
ELEVATION: 735' msl | LOGGED BY: Edwin Lin
DATE: 12/5/2016 | DATE FINISHED: 12/6/2016

DEPTH (FEET)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG: LITHOLOGY	GRAPHIC LOG: COMPLETION/ DESTRUCTION	WATER CONTENT (%)	SAMPLES: TYPE	SAMPLES: INTERVAL	SAMPLES: PENETRATION RESISTANCE (BLOWS)	REMARKS
75	10YR 4/6 yellowish brown coarse SAND mixed with CLAY (SC/CL), approximately 1" thick interbedded lenses							
80								
85	up to 3" cobbles rounded							
90	10YR 4/6 yellowish brown sandy SILT (ML) with minor pebbles							
95								
100	10YR 6/5 brownish yellow							
105	10YR 4/6 yellowish brown coarse SAND and GRAVEL (80/20) (SP)							
110								
115	10YR 4/6 yellowish brown sandy CLAY (CL) (50/50)							
120	10YR 4/6 yellowish brown silty SAND (SM)							
125								
130								
135	very wet below 135'							
140	10YR 4/6 yellowish brown soft lean CLAY (CL)							
145								
150						X		150'-151.5'
	boring terminated at 151.5'							

Provided by City Utilities Department
Location of the boring and CPTs is ~ 900 LF WNW of the proposed inverted siphon site.