GUARD DOG OF HESPERIA SELF-STORAGE AND RV PARKING EXPANSION PROJECT

Initial Study / Mitigated Negative Declaration

March 2023

Prepared for:

City of Hesperia
Development Services Department
Planning Department
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TABLE OF CONTENTS

GUARD DOG OF HESPERIA SELF-STORAGE AND RV PARKING EXPANSION PROJECT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Page

ENVIRONMENTAL CHECKLIST 1

Aesthetics 8
Agricultural and Forest Resources 9
Air Quality 10
Biological Resources 15
Cultural Resources 22
Energy 24
Geology and Soils 28
Greenhouse Gas Emissions 32
Hazards and Hazardous Materials 36
Hydrology and Water Quality 38
Land Use and Land Use Planning 43
Mineral Resources 44
Noise 45
Population and Housing 48
Public Services 49
Recreation 50
Transportation 51
Tribal Cultural Resources 53
Utilities and Service Systems 54
Wildfire 57
Mandatory Findings of Significance 59

APPENDICES

A. Air Quality, Greenhouse Gas Emissions, & Energy Supporting Information
B. Biological Resources Assessment & Protected Plant Preservation Plan
C. Arborist Report
D. Cultural Resources Assessment
E. Mitigation Monitoring and Reporting Program

LIST OF FIGURES

Figure 1 Regional Location 2
Figure 2 Project Location 3
Figure 3 Site Plan 4

Page

LIST OF TABLES

Table AQ-1 Estimated Maximum Daily Construction Emissions 12
Table AQ-2 Estimated Annual Construction Emissions 12
Table AQ-3 Estimated Daily Operational Emissions 13
Table AQ-4 Estimated Annual Operational Emissions 14
Table BIO-1 Federal and State Listed Species and State Species of Special Concern 17
Table BIO-2 Special Status Wildlife and Insects Documented in the Region 17
Table GHG-1 Estimated Annual Operational GHG Emissions 34
Table NOI-1 Operational Noise Standards 46

ENVIRONMENTAL CHECKLIST

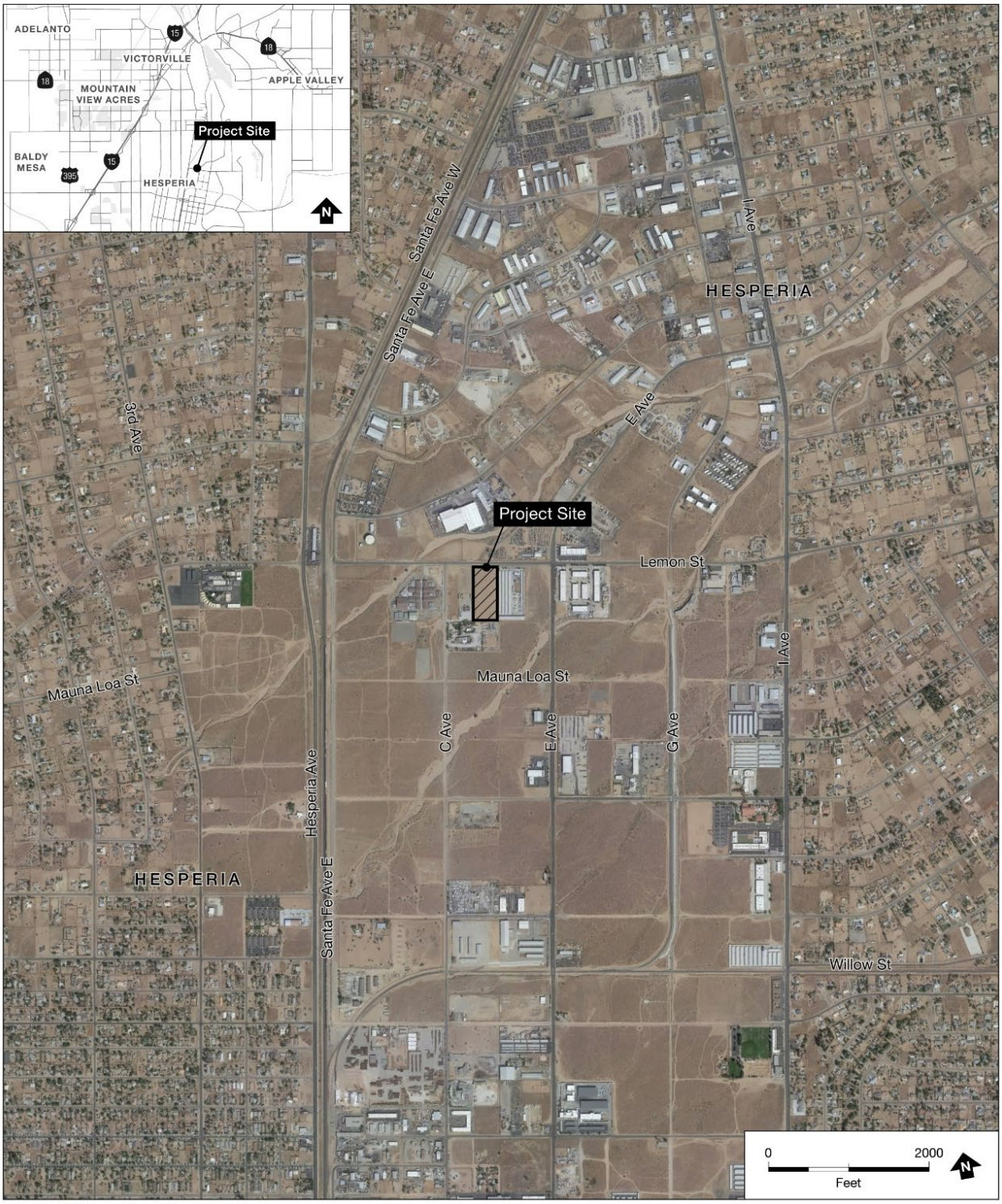
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1. Project Title:	Guard Dog of Hesperia Self-Storage and RV Parking Expansion Project
2. Lead Agency Name and Address:	City of Hesperia Development Services Department Planning Department 9700 7th Avenue Hesperia, CA 92345
3. Contact Person and Phone Number:	Edgar Gonzales, Associate Planner egonzalez@cityofhesperia.us (760) 947-1330
4. Project Location:	APN #0410-011-32 and #0410-011-33 Directly west of the existing Guard Dog Storage of Hesperia and directly south of Lemon Street, Hesperia, CA
5. Project Sponsor:	Guard Dog Storage of Hesperia, LLC Billy Phong 17147 Lemon Street Hesperia, CA 92345
6. General Plan Designation:	General Industrial (GI)
7. Zoning:	General Industrial (GI)

8. Description of Project:

Guard Dog Storage of Hesperia, LLC (the Applicant) is proposing to develop an enclosed self-storage and RV parking facility on a ±5.24-acre parcel of undeveloped land zoned General Industrial (GI) (APN #0410-011-32 and #0410-011-33) in the City of Hesperia, CA. The proposed project requires compliance with the California Environmental Quality Act (CEQA) because the proposed project requires discretionary approvals for the required Conditional Use Permit to allow the use of self-storage and RV parking in GI zoning. **Figure 1** shows the regional location, **Figure 2** shows the project location and **Figure 3** shows the site plan.

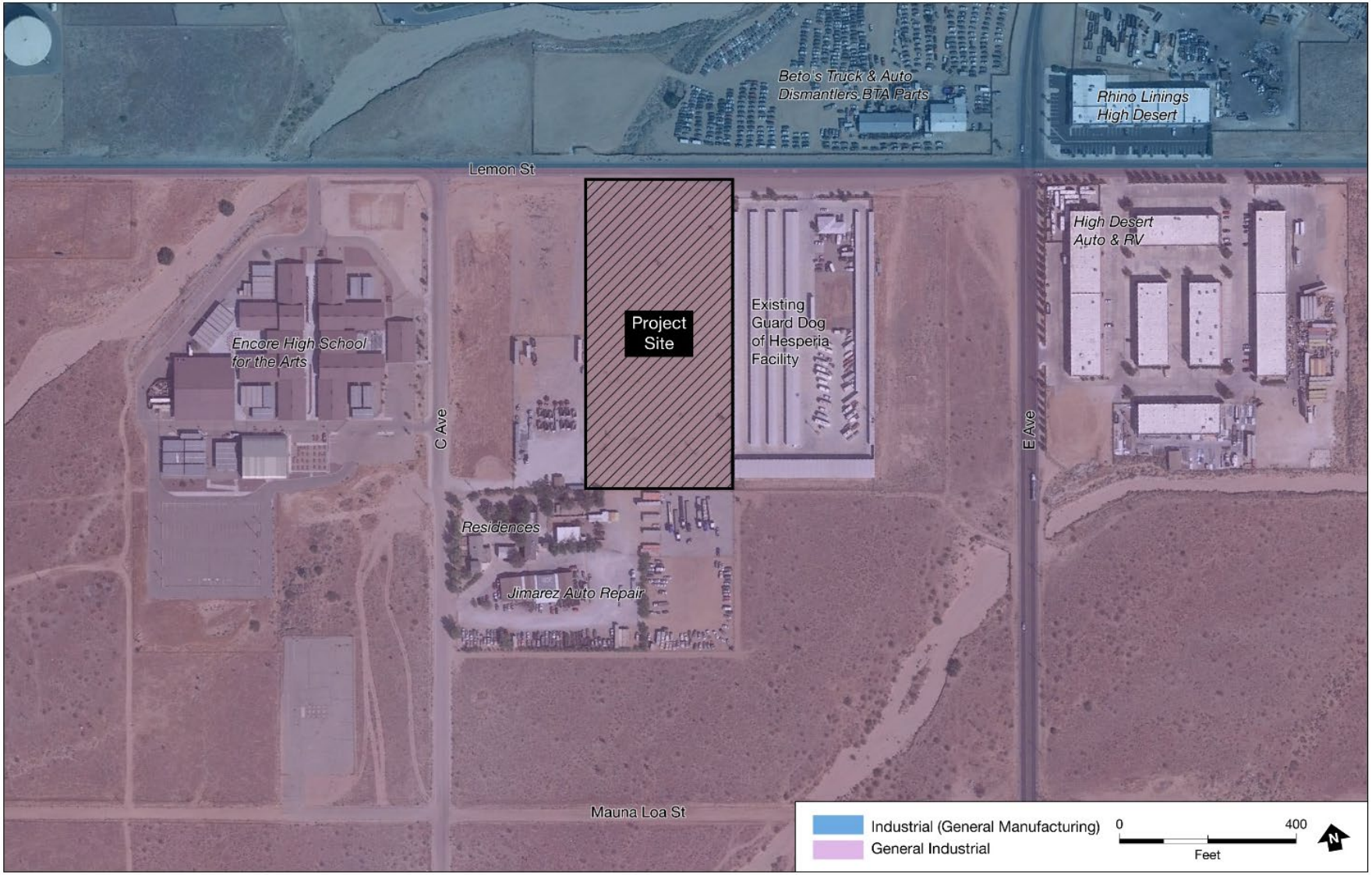
The "Project" would develop 7,340 square-feet of enclosed self-storage units (29 self-storage units located within two metal buildings) along the northern boundary of the Project site and approximately 156 RV parking stalls (see **Figure 3**). This Project would be an expansion of the existing Guard Dog Storage of Hesperia facility located directly east at 17147 Lemon Street, Hesperia, CA.



Source: RCH Group, Google Earth Pro, 2022

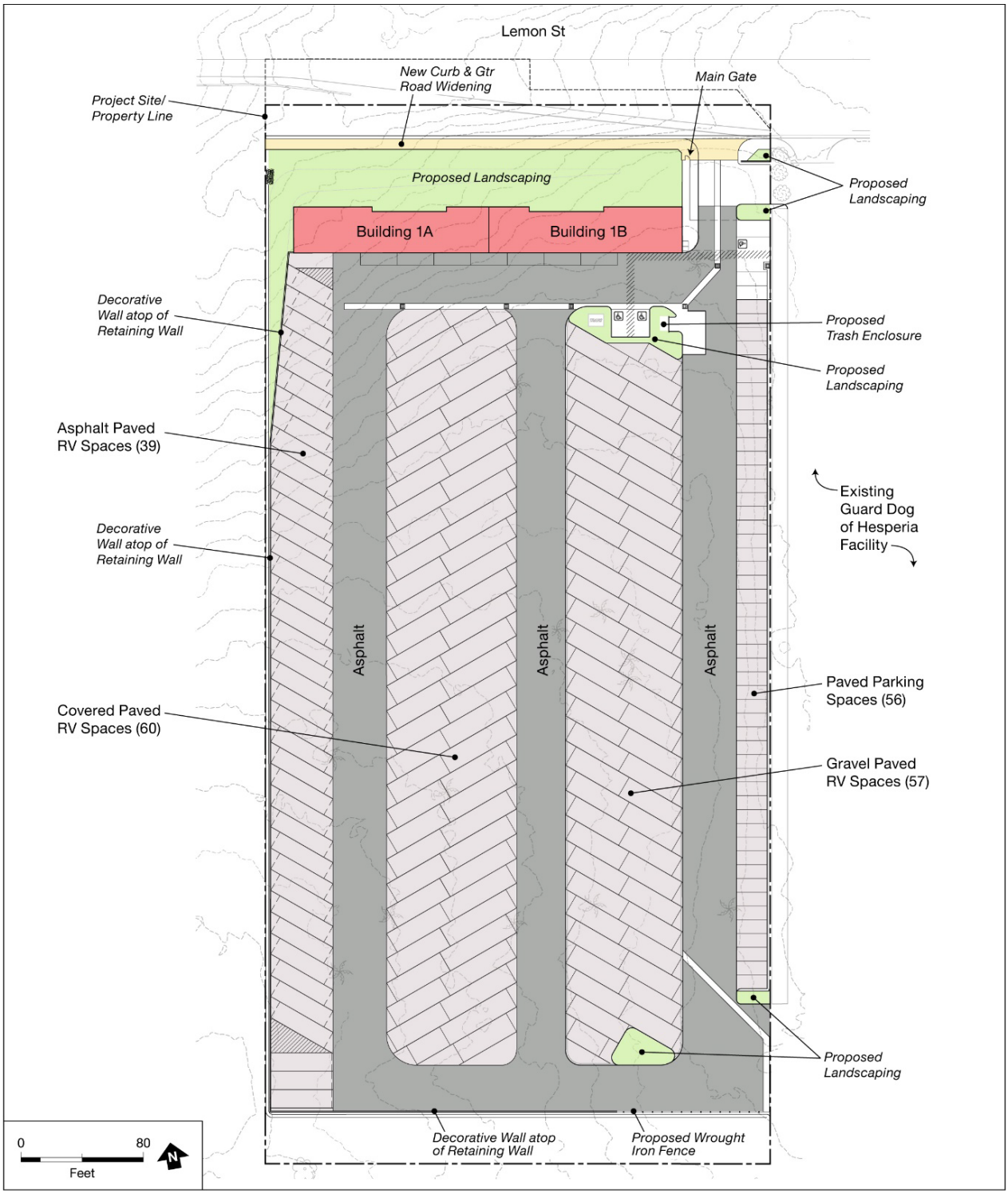
Figure 1
Regional Location

RCH GROUP
planning & environmental consulting



Source: RCH Group, Google Earth Pro, 2022; City of Hesperia, 2020

Figure 2
Project Location



Source: Omega Engineering Consultants, Magellan Architecture, 2022

Figure 3
Site Plan

Project History and Background

The ±5.24-acre parcel of undeveloped land was purchased by the applicant with the intent to expand the existing Guard Dog Storage of Hesperia facility and develop additional leasable self-storage units, RV parking stalls, and sale of items needed for storage uses. The rapidly growing population in the City of Hesperia and geographical location of the Project provides an ideal opportunity to provide additional storage services for City residents.

Proposed Operations

Professional management personnel would be on-site during normal operating hours. Normal operating office hours would be Tuesday through Saturday, 9:30 a.m. to 6:00 p.m. The office would be closed Sundays and Mondays. The security gate access for established self-storage customers with current account status would be accessible from 7:00 a.m. to 7:00 p.m., seven days a week, except for major holidays.

Access and Parking

The Project site would be accessed from Lemon Street via the main gate located on the northeast corner of the Project site. The Project site can also be accessed by proposed access gates that are accessible from the existing Guard Dog Storage of Hesperia facility on the southeast and northeast corners of the Project site. The Project would also include a sliding access gate for emergency access that would be located on the northeast corner of the Project site. The emergency access gate would be accessed from Lemon Street. The Project would include 65 standard parking stalls located on the eastern boundary of the Project site (including 3 ADA parking spaces).

Stormwater and Drainage

Two gravel filled infiltration trenches would be constructed for stormwater retention and treatment in the northeastern area of the Project site. The infiltration trenches consist of an upper trench (approximately 3,900 sq.ft.) and a lower trench (approximately 12,000 sq. ft.). Stormwater runoff would flow into the upper trench. Once full, the upper trench would overflow via surface flow to the lower trench and into two 8” perforated drains that would route water into an infiltration facility. When the infiltration facility is full, overflow would occur via a ribbon gutter that routes stormwater to the gutter system on Lemon Street. Theses infiltration trenches would be designed to capture, retain, and infiltrate site stormwater runoff for storms up to and including the 100-year flow.

Construction Phasing and Schedule

Construction of the Project would occur intermittently over approximately 6 months, with construction anticipated to begin December of 2023 and end in May of 2024. Construction of the Project would require site preparation, grading, building construction, paving, and architectural coating.

9. Surrounding Land Uses and Setting:

The current condition of the Project is vacant, cleared land. As shown in **Figure 2**, there is an auto repair shop to the northeast. The existing Guard Dog Storage of Hesperia facility is located directly east of the Project site. There are a few rural residences and an auto repair shop located directly south of the Project site. Vacant land zoned for industrial uses exists directly west of the Project site.

As shown in **Figure 2,** other nearby uses include Encore High School for the Arts (located approximately 500 feet west of the Project site), High Desert Auto & RV (located approximately 900 feet east of the Project site) and Rhino Linings High Desert (located approximately 1,200 feet northeast of the Project site).

10. Required Agency Approvals:

The Project requires the City of Hesperia to adopt the Mitigated Negative Declaration (MND) and approve the Mitigation Monitoring and Reporting Program (MMRP), the Conditional Use Permit, and other related permits including a Grading Permit and Building Permits.

11. Tribal Consultation:

The City of Hesperia commenced the AB 52 process by sending out consultation invitation letters to tribes previously requesting notification, pursuant to Public Resources Code §21080.3.1. The Yuhaaviatam of San Manuel Nation (YSMN) responded to the notification and requested the Cultural Resources Report prepared for the Project and other Project plans. After review of the Project, the YSMN did not have concerns with the Project's implementation. The YSMN did suggest Mitigation Measures for Tribal Cultural Resources that have been included as Mitigation Measures in this Initial Study.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The proposed project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use /Planning	☐ Mineral Resources
☐ Noise	☐ Population /Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial study:

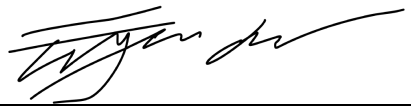
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.



3/14/2023

Signature Date

Edgar Gonzalez

Printed Name

AESTHETICS

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
1.	**AESTHETICS —** Except as provided in Public Resources Code Section 21099, **would the proposed project:**				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point. If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

Introduction

The City of Hesperia General Plan (2010) Open Space Element identifies scenic resources as a significant characteristic that defines the nature of the community and the quality of life that Hesperia residents enjoy.

Discussion

a) **No Impact.** The Project site is currently vacant and is located directly east of the existing Guard Dog Storage of Hesperia. Industrial operations exist to the north and south. Vacant land exists directly west of the Project site. There are no identifiable scenic vistas in the immediate area of the Project. Development of the Project would not result in substantial adverse effects to scenic vistas. Therefore, the Project would result in no impact.

b) **Less-than-Significant Impact.** The Project site is not within or near a designated state scenic highway. There are no identifiable scenic resources within the Project site, such as historic buildings or rock outcroppings. The Project would not substantially damage scenic resources within a state scenic highway. There are no trees on the Project site. Therefore, the Project would result in a less-than-significant impact.

c) **Less-than-Significant Impact.** The Project involves the expansion of an existing conventional self-storage facility in an area of the City that is dominated by industrial land uses. Development of the Project would comply with the City Development Code which is intended to reduce any potential degradation to visual character and quality of public views. The Project would not substantially degrade existing visual character or degrade any existing public views that are publicly accessible from a vantage point. Therefore, the Project would result in a less-than-significant impact.

d) **Less-than-Significant Impact.** The Project would provide new sources of light including parking lot lighting and lighting used for safety and security purposes. There could be a potential increase of light and/or glare from the proposed lighting fixtures, albeit very minor due to the location of the Project site and the surrounding industrial land uses. Project development would comply with the City Development Code. The City Development Code provides development standards for lighting, including requirements for downward facing lighting fixtures and other design features to reduce any potential light and glare from spilling off-site. Therefore, the Project would result in a less-than-significant impact.

References

City of Hesperia General Plan. 2010. *Open Space Element.*

Magellan Architects. 2021. *Arborist Final Report for Parcels 0410-11-32 and 0410-11-33*. December 4, 2021.

RCA Associates. 2021. *Protected Plant Preservation Plan, City of Hesperia, California, APN: 0410-011-32 and 0410-011-33.* February 8, 2021.

AGRICULTURAL AND FOREST RESOURCES

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
2. AGRICULTURAL AND FOREST RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the proposed project:**				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Introduction

Both subject parcels are zoned for GI uses in the City of Hesperia General Plan and zoning map (see **Figure 2**). The Project site is not agricultural land, forest land or timberland and is not under a Williamson Act contract.

Discussion

a) **No Impact.** The Project site does not contain any areas of Farmland of Statewide Importance. The Project site would not convert any farmland or agricultural uses to non-agricultural uses. Therefore, the Project would result in no impact. The Project site has not been used for agriculture and is not under a Williamson Act contract. The Project site would not convert any farmland or agricultural uses to non-agricultural uses. No forest land, timberland, or farmland is located within the vicinity that may be affected by development of the Project. Therefore, the Project would result in no impact.

b) **No Impact.** The Project site has not been used for agriculture and is not under a Williamson Act contract. Therefore, the Project would result in no impact.

c) **No Impact.** There are no areas classified as forest land, timberland, or farmland within the vicinity of the Project that may be affected by development of the Project. Therefore, the Project would result in no impact.

d) **No Impact.** There are no forest lands located within the vicinity of the Project and the Project would not result in loss or conversion of forest land to a non-forest use. Therefore, the Project would have no impact.

e) **No Impact.** The Project would not result in loss of farmland or forest land. Therefore, the Project would have no impact.

AIR QUALITY

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
3. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. **Would the proposed project:**				
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?	☐	☐	☒	☐

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

Introduction

This air quality analysis is consistent with the methods described in the Mojave Desert Air Quality Management District (MDAQMD) *CEQA and Federal Conformity Guidelines* (MDAQMD, 2020). The air quality analysis includes a review of criteria pollutant emissions such as carbon monoxide (CO), nitrogen oxides (NO_x), sulfur oxides (SO_x), volatile organic compounds (VOC) as reactive organic gases (ROG), particulate matter less than 10 micrometers (coarse or PM10), and particulate matter less than 2.5 micrometers (fine or PM2.5). **Appendix A** provides an overview of the existing air quality conditions at the project site, the air quality regulatory framework, and supporting air quality calculations.

Discussion

a) **Less-than-Significant Impact.** The applicable air quality plan for the Project is the *MDAQMD Federal ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Plan),* which was adopted on February 27, 2017 (MDAQMD, 2017). The *Attainment Plan* was adopted to satisfy Federal Clean Air Act (CAA) requirements that the MDAQMD develop a plan to attain the 0.075 parts per million (ppm) 8-hour ozone National Ambient Air Quality Standard (NAAQS). This *Attainment Plan* updated the 2008 *MDAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area*). The portion of the MDAB that includes the Project site is designated as non-attainment for ozone, PM10, and PM2.5 California Ambient Air Quality Standards (CAAQS), and ozone and PM10 NAAQS.

   The Project would not conflict with the control measures in the *Attainment Plan*. The Project would not induce population growth and is consistent with the existing zoning designation in the City's General Plan, which is used in developing emissions inventories and projections for the *Attainment Plan*. Furthermore, the Project would comply with the MDAQMD's Rules and Regulations and would not exceed the MDAQMD's significance thresholds (see impact b) discussion below). The Project would not conflict with or obstruct implementation of the applicable air quality plan. Therefore, the Project would result in a less-than-significant impact.

b) **Less-than-Significant Impact.** Intermittent (short-term construction emissions that occur from activities, such as grading, paving, and building construction) and long-term air quality impacts related to the operation of the Project were evaluated. The analysis focuses on daily and annual emissions from construction and operational (mobile, area, stationary, and fugitive sources) activities. The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 (CAPCOA, 2021) was used to quantify construction-related pollutant emissions.

Temporary Construction Activities

Construction of the Project is estimated to require approximately six months. However, to be conservative, construction emissions were estimated assuming approximately one year of construction to be consistent with the default estimated construction schedule within CalEEMod. Construction activities would consist of site preparation, grading, building construction, paving and architectural coating. Earthwork would require approximately 23,000 cubic yards of export. **Tables AQ-1** and **AQ-2** provide the estimated maximum daily and annual construction emissions, respectively, that would be associated with the Project and compares those emissions to the MDAQMD's significance thresholds for construction exhaust emissions. All construction-related emissions would be below the MDAQMD significance thresholds.

TABLE AQ-1 ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS (POUNDS)

Condition	ROG lbs/day	NOx lbs/day	SO_2 lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO lbs/day
2023 Construction	17.1	59.6	0.2	21.1	11.3	27.4
MDAQMD Threshold of Significance	137	137	137	82	65	548
Potentially Significant?	No	No	No	No	No	No

NOTES:

[1] Values reflect rounding. Values reflect winter construction emissions since they are higher compared to summer emissions (see Appendix A).

SOURCE: CAPCOA, 2021.

TABLE AQ-2 ESTIMATED ANNUAL CONSTRUCTION EMISSIONS (TONS)

Condition	ROG tons/yr	NOx tons/yr	SO_2 tons/yr	PM10 tons/yr	PM2.5 tons/yr	CO tons/yr
2023 Construction	0.40	2.22	0.01	0.30	0.16	2.46
MDAQMD Threshold of Significance	25	25	25	15	12	100
Potentially Significant?	No	No	No	No	No	No

NOTES:

[1] Values reflect rounding.

SOURCE: CAPCOA, 2021.

The Project would be required to comply with MDAQMD Rule 403 (Fugitive Dust) and all other applicable MDAQMD rules. MDAQMD Rule 403.2 contains fugitive dust control requirements for construction/demolition projects. The following measures would be required by the Project unless and until the Applicant or Construction Contractor has applied for and obtained a MDAQMD-approved Alternative PM10 Control Plan:

a) Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance;

b) Take actions sufficient to prevent project-related trackout onto paved surfaces;

c) Cover loaded haul vehicles while operating on Publicly Maintained paved surfaces;

d) Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate Visible Fugitive Dust emissions;

e) Cleanup project-related trackout or spills on Publicly Maintained paved surfaces within twenty-four hours; and

f) Reduce non-essential Earth-Moving Activity under High Wind conditions. For purposes of this Rule, a reduction in Earth-Moving Activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.

Long-Term Operations

CalEEMod was used to estimate emissions that would be associated with motor vehicle use, landscape maintenance, and other minor area sources (paints, solvents, etc.) expected to occur once the Project is operational. Emissions estimates assume an operational year of 2024 (the first full year the Project could conceivably operate) and emissions would decrease on annual basis in subsequent years of operation due to the phase-out of higher polluting vehicles and the implementation of more stringent emission standards.

Estimated daily and annual operational emissions that would be associated with the proposed project are presented in **Tables AQ-3 and AQ-4** and are compared to MDAQMD's thresholds of significance. As indicated in **Tables AQ-3 and AQ-4**, the estimated operational emissions would be below the MDAQMD's significance thresholds and would be less than significant.

TABLE AQ-3 ESTIMATED DAILY OPERATIONAL EMISSIONS (POUNDS)

Condition	ROG lbs/day	NOx lbs/day	SO_2 lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO lbs/day
Winter 2024 Operations	0.40	0.14	<0.1	0.21	0.06	0.85
MDAQMD Threshold of Significance	137	137	137	82	65	548
Potentially Significant?	No	No	No	No	No	No

NOTES:

[1] Values reflect rounding. Values reflect winter operational emissions since they are higher compared to summer emissions (see Appendix A).

SOURCE: CAPCOA, 2021.

TABLE AQ-4 ESTIMATED ANNUAL OPERATIONAL EMISSIONS (TONS)

Condition	ROG tons/yr	NOx tons/yr	SO_2 tons/yr	PM10 tons/yr	PM2.5 tons/yr	CO tons/yr
2024 Operations	0.07	0.03	<0.01	0.04	0.01	0.16
MDAQMD Threshold of Significance	25	25	25	15	12	100
Potentially Significant?	No	No	No	No	No	No

NOTES:

[1] Values reflect rounding.

SOURCE: CAPCOA, 2021.

Conclusions

As indicated in **Tables AQ-1** through **AQ-4**, construction and operational emissions from the Project would be below the applicable significance thresholds. Because the Project's emissions are less than significance thresholds, the emissions during construction and operations would not be expected to result in a cumulatively considerable impact to air quality. Therefore, the Project would result a less-than-significant impact.

c) **Less-than-Significant Impact.** The MDAQMD *CEQA and Federal Conformity Guidelines* (MDAQMD, 2020) define sensitive receptor land uses as residences, schools, daycare centers, playgrounds and medical facilities. The following Project types for sites within the specified distance of existing or planned sensitive receptor land uses must be evaluated using the MDAQMD's health risk significance thresholds:

a. Any industrial project within 1,000 feet;
b. A distribution center (40 or more trucks per day) within 1,000 feet;
c. A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
d. A dry cleaner using perchloroethylene within 500 feet; and
e. A gasoline dispensing facility within 300 feet.

The Project is not one of the types above that require a health risk analysis, nor would it emit toxic air contaminants (TACs) during operations. Construction and operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, the Project would result a less-than-significant impact.

d) **No Impact.** Any project with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact. As a general matter, the types of development that pose potential odor problems include agriculture, food processing, dairies, rendering, refineries, chemical plants, wastewater treatment plants, landfills, composting facilities, and transfer stations. Storage facilities do not pose potential odor issues. Therefore, the Project result in no impact.

References

California Air Pollution Control Officers Association (CAPCOA). 2021. *California Emissions Estimator Model User's Guide Version 2020.4.0.* May 2021.

Mojave Desert Air Quality Management District (MDAQMD). 2017. *MDAQMD Federal ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Plan)*. February 27, 2017.

Mojave Desert Air Quality Management District (MDAQMD). 2020. *CEQA and Federal Conformity Guidelines.* February 2020.

BIOLOGICAL RESOURCES

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
4. BIOLOGICAL RESOURCES — Would the proposed project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Introduction

This section is based on a Biological Resources Assessment (BRA) and Protected Plant Preservation Plan conducted by RCA Associates in February 2021. The BRA and Protected Plant Preservation Plan are **Appendix B** to this Initial Study. This section is also based on an Arborist

Report conducted by Magellan Architects in December 2021 and was revised in March 2023. The Arborist Report is **Appendix C** to this Initial Study.

As part of the environmental process, California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), and the California Natural Diversity Database (CNDDB) data sources were reviewed (RCA Associates, 2021). Habitat assessments were conducted for the desert tortoise, burrowing owl, and Mohave ground squirrel. The biological surveys showed that the Project site supports a heavily disturbed desert scrub community that previously consisted of native desert vegetation. In February 2021, the Project site contained sparse native vegetation that included exceedingly low numbers of creosote bush (*Larrea tridentata)*, silver cholla (*Cylindropuntia enchinocarpa)*, Asian mustant (*Brassica tournefortii), Nevada* joint-fir (*Ephedra nevadensis*) and 13 Joshua trees (*Yucca brevifolia)* (RCA Associates, 2021).

In February 2021, a Protected Plant Preservation Plan was prepared pursuant to Chapter 16.24 of the City of Hesperia Municipal Code by RCA Associates. Based on the results of the field investigations, there were 13 Joshua trees which occurred within the boundaries of the Project site. It was determined that only 1 of the 13 Joshua trees that was located on-site was suitable for transplanting (RCA Associates, 2021). The remaining 12 Joshua trees were determined to be unsuitable for transplanting due to a variety of factors such as size, condition, damage, dying, leaning, disease, clonal, etc. (RCA Associates, 2021). Once the applicant purchased the Project site, a subsequent Arborist Report was conducted in December of 2021 to evaluate the parcels for Joshua trees. The Arborist report determined that there were no live Joshua trees present on-site and that the Project site had been graded due to the tire marks and remaining amounts of vegetation and trash left on-site (Magellan Architects, 2021). It is unclear when the grading of the land occurred and when the 13 Joshua trees were removed (Magellan Architects, 2021). Under existing conditions, the Project site is vacant land and there are no live Joshua trees present on-site.

As of September 22, 2020, The CDFW temporarily listed the western Joshua tree as an endangered species for one year until a final decision was made in 2021. The California Fish and Game Commission held a hearing to determine the status of the western Joshua tree in June 2022. The California Fish and Game Commission determined that a final decision on the status of the Joshua tree would need to be re-evaluated in October of 2022 (CDFW, 2022). In 2023, the California Fish and Game Commission voted unanimously to postpone a decision on whether to permanently protect western Joshua trees under the California Endangered Species Act. The commission agreed to wait to see whether a new bill proposed by Governor Gavin Newsom's administration becomes law. The proposed bill known as the "Western Joshua Tree Conservation Act" would provide the species protections comparable to those it would receive under the Endangered Species Law, but with additional permitting mechanisms to address renewable energy and housing development projects in its range (Center for Biological Diversity, 2023).

Only a few wildlife species were observed during the field investigations. No mammals were observed during the survey (RCA Associates, 2021). Birds observed included common ravens (*Corvus corax*), house finch (*Carpodacus mexicanus*), western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaida macroura*) and rock pigeon (*Columba livia*). Reptiles observed during

the field investigation were limited to only the side-blotched lizard (*Uta stansburiana*). No other reptiles are expected on-site due to the lack of suitable habitat (RCA Associates, 2021). No sensitive habitats (e.g., sensitive species, critical habitats, etc.) have been documented in the immediate area according to the CNDDB and none were observed during the field observations (RCA Associates, 2021). **Tables BIO-1** and **BIO-2** provide data on each special status species that has been documented in the area (RCA Associates, 2021). No riparian vegetation (e.g., cottonwoods, willows, etc.) exist on the site or in the adjacent habitats.

TABLE BIO-1 FEDERAL AND STATE LISTED SPECIES AND STATE SPECIES OF SPECIAL CONCERN

Name	Status	Habitat Requirement	Presence/Absence on Project site
Plants within Hesperia Quadrangle			
Short-joint beavertail cactus (*Opuntia basilaris var. brachyclada)*	Federal: None State: None CNPS: 1B.2	Desert scrub, Joshua tree woodland	The site does not contain suitable habitat, none were observed on the site and are not expected to occur on the site given the high level of disturbance.
Booth's evening primrose (*Eremothera boothi ssp. boothi)*	Federal: None State: Threatened CNPS: 2B.3	Joshua tree woodland, pinyon and juniper woodland	The site does not contain suitable habitat, none were observed on the site and are not expected to occur on the site given the high level of disturbance.
White pygmy-poppy (*Canbya candida)*	Federal: None State: None CNPS: 4.2	Joshua tree woodland, Mojave desert scrub, gravely, sandy habitat	The site does not contain suitable habitat, none were observed on the site and are not expected to occur on the site given the high level of disturbance.

NOTES:
CNPS = California Native Plant Society
Status Abbreviations:
CNPS List 1A: Plants presumed extirpated in California and either rare or extinct somewhere.
CNPS List 1B: Plants rare, threatened, or endangered in California and elsewhere.
CNPS List 2A: Plants presumed extirpated in California, but more common somewhere else.
CNPS List 2B: Plants rare, threatened, or endangered in California, but more common somewhere else.
CNPS List 3: Please about which more information is needed – a review list
CNPS List 4: Plants of limited distribution – a watch list
.1 Seriously threatened in California (over 80% if occurrences threatened/high degree and immediacy of threat).
.2 Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat).
.3 Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat of no current threats known).

SOURCE: RCA Associates, 2021.

TABLE BIO-2 SPECIAL STATUS WILDLIFE AND INSECTS DOCUMENTED IN THE REGION

Name	Status	Habitat Requirement	Presence/Absence on Project site
Wildlife Species within Hesperia Quadrangle			
Yellow warbler (*Setophaga petechia)*	Federal: None State: None CDFW: SSC	Dense riparian vegetation	The site does not support suitable habitat for the species.
Burrowing owl (*Athene cunicularia)*	Federal: None State: None CDFW: SSC	Open grassland areas where the owls utilize abandoned mammal burrows	No suitable habitat present on the site. Not expected to occur on the site due to the highly disturbed area and lack of burrows, none observed during the survey. However, this mobile species occurs throughout

TABLE BIO-2 SPECIAL STATUS WILDLIFE AND INSECTS DOCUMENTED IN THE REGION

Name	Status	Habitat Requirement	Presence/Absence on Project site
Wildlife Species within Hesperia Quadrangle			
			Southern California and could potentially occur in the area in the future.
Cooper's hawk (*Accipiter cooperii)*	Federal: None State: None	Mature forests, open woodland, wood edges, river groves, mixed woods, suburbs	The site does not contain suitable habitat for the Cooper's hawk, none were observed at the site. The mobile species occurs throughout Southern California and can potentially occur in the future.
Pallid bat (*Antrozous pallidus)*	Federal: None State: None CDFW: SSC	Coniferous forests, woodlands, brushy terrain, rocky canyons, open farmland, and deserts	The site has no suitable habitat for the species. The species is not expected to occur on the site or in the area.
Long-eared owl (*Asio otus)*	Federal: None State: None CDFW: SSC	Woodlands, areas with dense trees, open country, meadows, streamside groves in deserts	The site has no suitable habitat for the species. There have been no recent sightings, and therefore is not expected to occur on site or in the area.
Coast horned lizard (*Phrynosoma blainvillii)*	Federal: None State: None CDFW: SSC	Inhabits open areas of sandy soils and low vegetation in valleys, foothills, and semiarid mountains	No suitable habitat, none observed on the site and not expected to occur on the site.
Le Conte's thrasher (*Toxostoma lecontei)*	Federal: None State: None CDFW: SSC	Desert scrub, open washes, desert shrub habitats, Joshua tree scrub, common in saltbush and cholla vegetation	The site has some habitat for the Le Conte's thrasher, but there have been no recent sightings of the species and is therefore not expected to occur on the site or surrounding area.
Gray vireo (*Vireo vicinior)*	Federal: None State: None CDFW: SSC	Frequents chaparral dominated by chamise and manzanita, scrub oak	The site does not support suitable habitat for the species
Mohave tui chub (*Siphateles bicolor mohavensis)*	Federal: Endangered State: Endangered CDFW: Fully Protected	Three populations exist at Soda Springs, China Lake Naval Weapons Station, and Camp Cady Wildlife Area	The site does not contain suitable habitat for the species. A fully protected species, there are only three populations being maintained with the nearest population in Camp Cady, with an introducing population being carried in the Mojave River. This species will not occur on the site.
Mohave ground squirrel (*Xerospermophilus mohavensis)*	Federal: None State: Threatened	Desert scrub	The site does not support suitable habitat for the species and is not expected to occur on the site.

NOTES:

SSC = Species of Special Concern
CDFW = California Department of Fish and Wildlife

SOURCE: RCA Associates, 2021.

Discussion

a) **Less-than-Significant Impact with Mitigation.** As shown in **Table BIO-1**, there are 3 plant species that have been documented in the Hesperia quadrangle (RCA Associates, 2021). These include the Short-joint beavertail cactus, Booth's evening primrose, and White pygmy-poppy. Within the past 20 years, only the short-joint beavertail has been reported in the Hesperia quadrangle, while Booth's evening primrose and white pygmy-poppy have not been observed for over 20 years (RCA Associates, 2021). The Project site does not support suitable habitat for any of the three species, and none were observed on site during the biological surveys (RCA Associates, 2021).

As shown in **Table BIO-2**, the Mohave Tui Chub is listed as a federally and state endangered species that is fully protected. There are only three populations of Mohave Tui Chub, with a fourth being recently introduced to the Mojave River (RCA Associates, 2021). The Project site does not contain suitable habitat for this species since the site is not connected to the Mojave River or any other body of water (RCA Associates, 2021).

As shown in **Table BIO-2,** the Mohave Ground Squirrel is listed as a state protected species. The Project site does occur within the known distribution of the Mohave Ground Squirrel, but no recent observations of Mohave Ground Squirrel have occurred in the area. The Project site does not contain prime habitat for the Mohave Ground Squirrel, and it is very unlikely to support populations of the species based on the following (RCA Associates, 2021):

1. There have been no recent documented observations in the general region.
2. There is no connectivity with habitat that may support the species.

As shown in **Table BIO-2**, there are 7 species that are listed as "Species of Special Concern" within the Hesperia quadrangle. These include the yellow warbler, burrowing owl, pallid bat, long-eared owl, coast horned lizard, Le Conte's thrasher, and gray vireo. The Project site does not contain suitable habitat for the yellow warbler, Le Conte's thrasher, long-eared owls, gray vireos, and pallid bat (RCA Associates, 2021). The area has suitable habitat for coast horned lizards and burrowing owls but given the high disturbance of the site and lack of burrows and vegetation, these two species are not expected to occur on-site (RCA Associates, 2021). There were no signs of burrowing owls (i.e., scat and feathers) found on-site and it is unlikely that burrowing owls would inhabit the Project site in the future given the lack of occupiable burrows (RCA Associates, 2021).

Focused surveys for the Desert tortoise were conducted to assure 100% coverage of the Project site at a pace that allowed for careful observation and thorough coverage of the entire Project site and the zone of influence (ZOI) out to 500 feet where accessible and with as much accuracy as possible. Results from the filed surveys indicate that Desert Tortoise would not inhabit the Project site in the future due to there being very minimal suitable habitat for foraging along with the lack of potential or suitable burrows within

the Project site or the immediate surrounding area (RCA Associates, 2021). No further investigations or surveys are recommended for the Desert Tortoise (RCA Associates, 2023).

The BRA determined that cumulative impacts to biological resources (plants and animals) from Project development would be expected to be negligible (RCA Associates, 2021). This assumption is based on the suitable habitat located in the surrounding areas of the region (RCA Associates, 2021). In addition, future development activities are not expected to have any impact on any State or Federally listed of State special status plant or animal species (RCA Associates, 2021). However, the Project site should be immediately surveyed prior to any construction or grading activities on-site to determine the presence or non-presence of any sensitive species that qualify as candidate, sensitive, or special status. Implementation of **Mitigation Measures BIO-1, BIO-2 and BIO-3** would reduce impacts related to candidate, sensitive, or special status species to a less-than-significant level. Therefore, the Project would result in a less-than-significant impact with mitigation.

Mitigation Measure BIO-1: Vegetation clearing and ground disturbance shall be prohibited during the migratory bird nesting season (February 1 through September 15), unless a migratory bird nesting survey is completed in accordance with the following requirements:

a. A migratory bird nesting survey of the Project's impact footprint, including suitable habitat within a 500-foot radius, shall be conducted by a qualified biologist within three (3) days prior to initiating vegetation clearing or ground disturbance.

b. A copy of the migratory bird nesting survey results shall be provided to the City of Hesperia. If the survey identifies the presence of active nests, then the qualified biologist shall provide the City with a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be subject to review and approval by the City and shall be no less than a 100-foot radius around the nest for non-raptors and no more than a 500-foot radius around the nest for raptors. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing, within which no vegetation clearing or ground disturbance shall commence until the qualified biologist and the City verify that the nests are no longer occupied and juvenile birds can survive independently from the nests.

Mitigation Measure BIO-2: Within 30 days prior to grading, a qualified biologist shall conduct a survey of suitable habitat on site and make a determination regarding the presence or absence of the burrowing owl. The determination shall be documented in a report and shall be submitted, reviewed, and accepted by the City of Hesperia prior to the issuance of a grading permit and subject to the following provisions:

a. In the event that the pre-construction survey identifies no burrowing owls on the property, a grading permit may be issued without restriction.

b. In the event that the pre-construction survey identifies the presence of at least one individual burrowing owl, then prior to the issuance of a grading permit and prior to the commencement of ground-disturbing activities on the property, the qualified biologist shall passively or actively relocate any burrowing owls. Passive relocation, including the required use of one-way doors to exclude owls from the site and the collapsing of burrows, will occur if the biologist determines that the proximity and availability of alternate habitat is suitable for successful passive relocation. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. If proximate alternate habitat is not present as determined by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit.

Mitigation Measure BIO-3: Removal of any living or dead western Joshua tree is prohibited by the CDFW due to the species being listed as "candidate threatened". Any attempt to remove or relocate western Joshua tree will require the application and approval of an Incidental Take Permit (ITP).

b) **No Impact.** There are no riparian communities or other sensitive natural communities on the Project site. Therefore, the Project would result in no impact.

c) **No Impact.** The Project site does not include any state or federally protected wetlands. Therefore, the Project would result in no impact.

d) **No Impact.** There is no habitat for candidate, sensitive, or special status species of fish. The Project site does not connect to any body of water and there are no wetlands on-site. The Project would not interfere with the movement of migratory wildlife species or use of nursery sites. Therefore, the Project would result in no impact.

e) **No Impact.** There are currently no trees on-site so the Project would not conflict with a tree preservation policy or ordinance. Therefore, the Project would result in no impact.

f) **Less-than-Significant Impact.** The Project would not conflict with any habitat conservation plans, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Project would result in a less-than-significant impact.

References

California Department of Fish and Wildlife. 2022. *California Fish and Game Commission Holds Hybrid Meeting,* https://wildlife.ca.gov/News/california-fish-and-game-commission-holds-hybrid-meeting. June 16, 2022.

Center for Biological Diversity. 2023. *New Joshua Tree Bill Spurs California Commission to Delay Decision on Protecting Iconic Plants, Trees Remain Temporarily Protected Pending*

Legislative Action, https://biologicaldiversity.org/w/news/press-releases/new-joshua-tree-bill-spurs-california-commission-to-delay-decision-on-protecting-iconic-plants-2023-02-08/#:~:text=The%20Western%20Joshua%20Tree%20Conservation,housing%20projects%20in%20its%20range. February 8, 2023.

Magellan Architects. 2021. *Arborist Report for Parcels 0410-11-32 and 0410-11-33*. Revised March 4, 2023.

RCA Associates. 2021. *General Biological Resources Assessment, City of Hesperia, California, APN: 0410-011-32 and 0410-011-33.* February 9, 2021.

RCA Associates. 2021. *Protected Plant Preservation Plan, City of Hesperia, California, APN: 0410-011-32 and 0410-011-33.* February 8, 2021.

RCA Associates. 2023. *Electronic Communication between Luis Rosas, RCH Group, and Ryan Hunter, RCA Associates, regarding recommendations for future Desert Tortoise Mitigation or Surveys on-site.* January 13, 2023.

CULTURAL RESOURCES

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
5.	**CULTURAL RESOURCES — Would the proposed project:**				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	☐	☐	☒	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Introduction

This section is based on the Cultural Resources Assessment conducted by BCR Consulting (2022). The Cultural Resources Assessment is **Appendix D** to this Initial Study.

BCR Consulting completed a cultural resources assessment of the Project site. The assessment included a cultural resources records search, intensive-level pedestrian field survey, Native American Heritage Commission (NAHC) Sacred Lands File Search, and a vertebrate paleontological resources overview. The records search results revealed that 9 cultural resource studies have taken place, and one cultural resource has been identified within the 0.5-mile research radius of the project site. None of the previous studies have assessed the Project site and no cultural resources have been identified within its boundaries (BCR Consulting, 2022). No cultural resources of any kind (including historic-period or prehistoric archaeological resources, or historic-period architectural resources) were identified during the field survey. Therefore, no significant impact related to historical resources is anticipated and no further investigations are

recommended (BCR Consulting, 2022). The geologic units underlying the Project are mapped as older alluvium from the late Pleistocene to early Holocene period (BCR Consulting, 2022).

Discussion

a) **Less-than-Significant Impact.** There are no historic properties under §106 of the National Historic Preservation Act (NHPA) or historical properties under CEQA that would be affected by the Project. Therefore, the Project would result in a less-than-significant impact.

b) **Less-than-Significant Impact with Mitigation.** As mentioned above, no cultural resources of any kind were identified on the Project site during the records search and field survey and no further investigations are recommended (BCR Consulting, 2022). However, there always exists the potential to encounter unreported subsurface historical, cultural, or archaeological resources. In the unlikely event that historical, cultural, or archeological resources are inadvertently discovered, **Mitigation Measures CUL-1, CUL-2 and CUL-3** would reduce potentially significant impacts to a less-than-significant level. Therefore, the Project would result in a less-than-significant impact with mitigation.

c) **Less-than-Significant Impact with Mitigation.** In the unlikely event that human remains (those interred outside of a formal cemetery) are inadvertently discovered, **Mitigation Measure CUL-3** would reduce potentially significant impacts to a less-than-significant level. Therefore, the Project would result in a less-than-significant impact with mitigation.

> **Mitigation Measure CUL-1:** In the event that cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the Project outside of the buffered area may continue during this assessment period. Additionally, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as detailed within **Mitigation Measure TCR-1**, regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.
>
> **Mitigation Measure CUL-2:** If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within **Mitigation Measure TCR-1.** The archaeologist shall monitor the remainder of the Project and implement that Plan accordingly.
>
> **Mitigation Measure CUL-3:** If human remains or funerary objects are encountered during any activities associated with the Project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the

County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the Project.

References

BCR Consulting, LLC. 2022. *Cultural Resources Assessment, Assessor Parcel Numbers 0410-11-32 and -33 Hesperia, San Bernardino County, California.* Revised August 9, 2022.

ENERGY

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
6. ENERGY — Would the proposed project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Introduction

Energy resources required for the Project would include electricity and petroleum fuels. These energy resources would be required for the Project buildings, lighting, and vehicles supporting the Project. Electricity service is provided to the Project site by Southern California Edison (SCE). Energy resources would also be consumed by onsite equipment and vehicles required for construction of the Project.

Setting

California Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.

The 2019 California Energy Code was adopted by the CEC on May 9, 2018 and will apply to projects constructed after January 1, 2020. Nonresidential buildings are anticipated to reduce energy consumption by 30 percent compared to the 2016 standards primarily through prescriptive requirements for high-efficacy lighting. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to

local climatologic, geologic, or topographic conditions, provided that these standards exceed those in the California Energy Code.

California Green Building Standards Code (Title 24, Part 11)

The California Green Building Standards Code (CalGreen) is part 11 of Title 24, California Code of Regulations. CalGreen is the first-in-the-nation mandatory green building standards code, developed in an effort to meet the goals of California's landmark initiative Assembly Bill 32, which established a comprehensive program of cost-effective reductions of GHG emissions to 1990 levels by 2020. CalGreen includes a waste diversion mandate, which requires that at least 65 percent of construction materials generated during new construction or demolition projects are diverted from landfills.

Discussion

a) **Less-than-Significant Impact.** The Project would consume energy resources during temporary construction activities and long-term operations.

Temporary Construction Activities

Construction activities are a temporary and one-time direct source of energy consumption. Construction activities would consume petroleum fuels (primarily diesel and gasoline) through the operation of heavy off-road equipment, trucks, and worker automobiles. Electricity could be used for lighting and other equipment such as air compressors, however the amount consumed would be minimal.

Construction of the Project would utilize fuel efficient equipment and trucks consistent with state regulations and would be consistent with state regulations intended to reduce the inefficient, wasteful, or unnecessary consumption of energy, such as anti-idling and emissions regulations. Furthermore, construction contractors are economically incentivized to employ energy efficient techniques and practices to reduce fuel use to lower overall construction costs.

Construction activities would comply with the California's Green Building Standards Code (CalGreen) waste diversion mandate, which requires that at least 65 percent of construction materials generated during new construction or demolition projects are diverted from landfills.

Construction fuel usage was estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 (CAPCOA, 2021). Detailed modeling assumptions and results are provided in **Appendix A**. Project construction was estimated to require approximately 45,000 gallons of diesel and approximately 7,200 gallons of gasoline.

In statutory and regulatory requirements, the consumption of energy resources during Project construction would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, Project construction would result in a less-than-significant impact.

Long-Term Operations

Long-term energy consumption associated with the Project operations would include electricity and petroleum fuel consumption. Electricity would be consumed for lighting and other supporting equipment for the building. Petroleum fuels would primarily be consumed by vehicles supporting Project operations. Operational energy consumption was estimated using the CalEEMod Version 2020.4.0 (CAPCOA, 2021). Detailed modeling assumptions and results are provided in **Appendix A**.

The Project was estimated to require approximately 84,000 kilowatt hours (kWh) per year. The Project would be required to meet the current Title 24 Building Energy Efficiency Standards and CalGreen (i.e., high efficiency lighting, automatic daylighting controls, demand response lighting control, etc.), which focus on reducing energy consumption, reducing environmental impacts, and encouraging sustainable development. Motor vehicles associated with the Project were estimated to consume approximately 3,750 gallons of gasoline per year.

While the Project would consume energy resources during operation, the consumption of such resources would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, Project operation would result in a less-than-significant impact.

b) **Less-than-Significant Impact.** SB 1389 requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety. The *2021 Integrated Energy Policy Report* (CEC, 2022) is the most recent update. The State's energy system includes energy extraction, transport, conversion (such as combusting natural gas in power plants to generate electricity or producing gasoline and diesel from crude oil in refineries), and consumption for services (such as electricity for lighting, natural gas use in homes and buildings for space and water heating, pumping water to communities and crops, and gasoline and diesel to fuel cars and trucks), as well as electricity from out-of-State plants serving California.

Because the CEC's *2021 Integrated Energy Policy Report* is intended to reduce GHG emissions by transitioning the State's energy portfolio to more renewable energy sources, it can also be viewed as a plan for renewable energy and energy efficiency on the Statewide level. The Project would be required to meet the current Title 24 Building Energy Efficiency Standards and CalGreen, which would reduce energy consumption and maximize energy efficiency. Therefore, the Project would not conflict with a state plan for energy efficiency. Therefore, the Project would result in a less-than-significant impact.

References

California Air Pollution Control Officers Association (CAPCOA). 2021. *California Emissions Estimator Model User's Guide Version 2020.4.0.* May 2021.

California Energy Commission (CEC). 2021. *Final 2021 Integrated Energy Policy Report.* April 2022.

GEOLOGY AND SOILS

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
7. GEOLOGY AND SOILS — Would the proposed project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Introduction

A Preliminary Geotechnical Investigation Report (Geotechnical Report) was conducted for the Project site by SM Engineering. The Geotechnical Report found that general subsurface soils consist of existing layers of alluvial Silty Sand and Sand (SM) (SM Engineering, 2022). The Geotechnical Report provides engineering recommendations for development of the Project site.

Setting

Regional Faults

According to the City of Hesperia General Plan (2010), the greater part of Hesperia lies within the Mojave Desert Province, an arid region of overlapping alluvial fans, desert plains, dry

lakebeds, and scattered mountain ranges. Hesperia is underlain by the informally named Victorville Fan, which is composed of sediments ranging in age from early Pleistocene to Holocene (approximately 1 million years to less than 10,000 years old), shed primarily from the San Gabriel Mountains. Their composition reflects that of the rocks eroded by the various streams that enter the valley from the south (City of Hesperia, 2010). Faults in the Mojave Desert Province have a predominant northwesterly trend; however, some faults aligned with the Transverse Ranges are also present. The east-west trending Garlock fault defines the northern boundary of the province, whereas the northwest-trending San Andreas fault roughly defines its western boundary. Hesperia is near the San Andreas fault and several other seismically active earthquakes sources, including the North Frontal, Cleghorn, Cucamonga, Helendale, and San Jacinto faults (City of Hesperia, 2010). All of these have the potential to generate moderate to large earthquakes that will shake Hesperia. The North Frontal fault, given its location relative to Hesperia, has the potential to cause the most severe shaking in the city; loss estimation modeling indicates that a maximum magnitude 7.2 earthquake on this fault would be a worst-case scenario for the city (City of Hesperia, 2010).

Alquist-Priolo Act

The Alquist-Priolo Act is intended to provide the citizens with increased safety and to minimize the loss of life during and immediately following earthquakes by facilitating seismic retrofitting to strengthen buildings against ground shaking. The Project site is not located within an Alquist-Priolo Zone (California State Geoportal, 2022).

California Building Code

The 2019 edition of the California Building Code (CBC) is based on the 2018 International Building Code (IBC) published by the International Code Council. The code is updated triennially, and the 2019 edition of the CBC, which was published by the California Building Standards Commission, took effect starting January 1, 2020. The CBC, which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress facilities, and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California.

Seismic design provisions of the CBC generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. Structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current CBC recommendations does not constitute any kind of guarantee that substantial structural damage

would not occur in the event of a maximum magnitude earthquake. However, it is reasonable to expect that a structure designed in-accordance with the seismic requirements of the CBC should not collapse in a major earthquake. Chapter 18, §1803.2 of the CBC requires geotechnical investigations for all nonresidential structures.

Discussion

a.i, a.ii) **Less-than-Significant Impact.** As discussed above, The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. Therefore, it is very unlikely that the Project site would experience fault rupture from known mapped earthquake faults. Local faults have the potential to generate moderate to large earthquakes that would affect the Project site. The North Frontal fault has the potential to cause the most severe shaking in the city; loss estimation modeling indicates that a maximum magnitude 7.2 earthquake on this fault would be a worst-case scenario for the city (City of Hesperia, 2010). The Geotechnical Report provides recommendations for construction of building pad and foundation areas, pavement and flatwork areas, cut and fill slope construction, compaction, grading, foundations, concrete slabs, cement, trenching, and slope maintenance (SM Engineering, 2022). The Project site would be developed using the recommendations provided by the Geotechnical Report, the City Development Code and the latest adopted version of the CBC. Although conformance to CBC recommendations does not guarantee that significant structural damage would not occur onsite in the event of a maximum magnitude earthquake, it can be expected that a well-designed and constructed modern structure would not directly or indirectly expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Furthermore, there is no evidence that development of the Project would increase the frequency or effects of seismic activity in the area. Therefore, the Project would result in a less-than-significant impact.

aiii, a.iv) **Less-than-Significant Impact.** According to the Geotechnical Report, the Project site is not located in a liquefaction potential zone (SM Engineering, 2022) and based on the apparent groundwater levels that were observed on-site and from nearby wells, the liquefaction potential for the Project site is considered to be “Low” (SM Engineering, 2022).

The Project site is located in a flat area. SM Engineering reviewed geologic maps and literature which did not indicate the presence of landslide at the Project site or nearby areas (SM Engineering, 2022). The Project site is not expected to be pruned to landslide potential (SM Engineering, 2022). Therefore, the Project would result in a less-than-significant impact.

b) **Less-than-Significant Impact.** The Geotechnical Report provides recommendations for slope protection and maintenance to avoid the possibility of topsoil erosion or loss of topsoil (SM Engineering, 2022). Development of the Project would comply with the recommendations of the Geotechnical Report, the City Development Code, and the latest adopted version of the CBC to ensure potential impacts to soil erosion or the loss of

topsoil would be less-than-significant. Therefore, the project would result in a less-than-significant impact.

c) **Less-than-Significant Impact.** The Geotechnical Report did not identify soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse (SM Engineering, 2022). Development of the Project would comply with the recommendations of the Geotechnical Report, the City Development Code, and the latest adopted version of the CBC to ensure potential impacts to landslide, lateral spreading, subsidence, liquefaction or collapse would be less-than-significant. Therefore, the project would result in a less-than-significant impact.

d) **Less-than-Significant Impact.** Preliminary laboratory test results indicate that the soils collected on-site are not expansive according to the appropriate criteria and are considered to have "Very Low" expansion potential (SM Engineering, 2022). The Geotechnical Report determined that testing for expansive soil conditions should be conducted again during construction to further reduce potential impacts from expansive soils (SM Engineering, 2022). Therefore, the Project would result in a less-than-significant impact.

e) **Less-than-Significant Impact.** The Project would not include the use of septic tanks or alternative wastewater disposal systems. The Project would connect to the City's existing public sewer system via a connection on the northeast corner of the Project site during the construction phase of development. Therefore, the Project would result in a less-than-significant impact.

f) **Less-than-Significant Impact with Mitigation.** The geologic units underlying the project site are mapped as older alluvium from the late Pleistocene to early Holocene period and are considered to be highly paleontologically sensitive (BCR Consulting, 2022). The Western Science Center does not have localities within the Project area or within a 1-mile radius (BCR Consulting, 2022). In the event that paleontological resources are inadvertently discovered, **Mitigation Measure GEO-1** would reduce potentially significant impacts to a less-than-significant level. Therefore, the Project would result in a less-than-significant impact with mitigation.

> **Mitigation Measure GEO-1:** In the event a paleontological resources or other geologically sensitive resources (such as fossils or fossil formations) are identified during any phase of Project-related work, regardless of depth of work or location, work shall be halted within 30 feet of the find and a qualified paleontologist shall be notified immediately so that an assessment of its potential significance can be undertaken. If determined to be significant, the fossil shall be collected from the field. The paleontologist may also make recommendations regarding additional mitigation measures, such as paleontological monitoring. The paleontologist shall notify the appropriate representative at the City of Hesperia Planning Department who shall coordinate with the paleontologist as to any necessary investigation of the find. If scientifically significant paleontological resources are collected, a report of findings shall be prepared to

document the collection. This measure shall be implemented to the satisfaction of the City of Hesperia Planning Department.

References

City of Hesperia General Plan. 2010. *Safety Element.*

SM Engineering. 2022. *Preliminary Geotechnical Investigation Report for the proposed Self Storage buildings, located at the Lemon Street, Hesperia, CA 92345, APNs 0410-011-32 & -33*. March 14, 2022.

BCR Consulting, LLC. 2022. *Cultural Resources Assessment, Assessor Parcel Numbers 0410-11-32 and -33 Hesperia, San Bernardino County, California.* Revised August 9, 2022.

GREENHOUSE GAS EMISSIONS

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
8. GREENHOUSE GAS EMISSIONS — Would the proposed project:				
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?	☐	☐	☒	☐

Introduction

The City of Hesperia has not adopted greenhouse gas (GHG) significance thresholds; therefore this analysis uses the significance threshold and methods described in San Bernardino County's Greenhouse Gas Emissions Development Review Processes (San Bernardino County, 2021b). **Appendix A** provides a background on GHG emissions, GHG emissions regulatory framework and supporting GHG emissions calculations.

Discussion

a) **Less-than-Significant Impact.** The City of Hesperia adopted its Climate Action Plan (CAP) in 2010 (City of Hesperia, 2010). However, the City's CAP is based on reductions consistent with the state's 2020 GHG reduction goals under Assembly Bill 32 and does not apply to development post 2020. The San Bernardino County adopted its Greenhouse Gas Reduction Plan (GHGRP) in September 2011 (San Bernardino County, 2011), which provides guidance on how to analyze GHG emissions and determine significance during CEQA review of proposed development projects within the County. San Bernardino County adopted a GHGRP Update in September 2021 (San Bernardino County, 2021a), which serves as a comprehensive roadmap to outline strategies that the County will

implement to continue achieving its GHG emissions reductions into the year 2030 and beyond, thereby ensuring sustainable and healthy growth.

The County includes a GHG Development Review Process (San Bernardino County, 2021b) that specifies a two-step approach in quantifying GHG emissions. First, a screening threshold of 3,000 metric tons of (carbon dioxide equivalents) (CO_2e) per year is used to determine if additional analysis is required. Projects that do not exceed the screening threshold of 3,000 metric tons of CO_2e per year are considered consistent with the County's GHGRP and GHGRP Update and are determined to have a less than significant individual and cumulative impact for GHG emissions. Projects that exceed the screening threshold of 3,000 metric tons of CO_2e per year are required to achieve a minimum 100 points per the Screening Tables or are required to achieve the equivalent level of GHG emissions efficiency as a 100-point project per the Screening Tables. Consistent with CEQA guidelines, such projects are considered consistent with the County's GHGRP and GHGRP Update and are determined to have a less than significant individual and cumulative impact for GHG emissions. Since the City of Hesperia has not adopted an updated CAP consistent with the state's 2030 GHG reduction goals or adopted a GHG threshold of significance for CEQA purposes, the County's screening threshold and development review process is used for analyzing the Project's significance.

CalEEMod (CAPCOA, 2021) was used to quantify GHG emissions associated with Project construction activities, as well as long-term operational emissions produced by motor vehicles, landscape maintenance, natural gas combustion for space and water heating, electricity use, water/wastewater conveyance and solid waste.

Construction of the Project was estimated to generate approximately 525 metric tons of CO_2e in 2023. Per guidance from the South Coast Air Quality Management District (SCAQMD), construction emissions are amortized over a 30-year period to account for the contribution of construction emissions over the lifetime of a proposed project. Amortizing the emissions from construction of the Project over a 30-year period would result in an annual contribution of approximately 17.5 metric tons of CO_2e per year.

Operational emissions estimates assume an operational year of 2024 (the first full year the Project could conceivably operate) and emissions would decrease on annual basis in subsequent years of operation due to the phase-out of higher polluting vehicles and the implementation of more stringent emission standards. Estimated annual GHG emissions from the Project are presented in **Table GHG-1**.

As shown above in **Table GHG-1**, the Project would generate approximately 76 metric tons of CO_2e per year, below the County's screening threshold of 3,000 metric tons of CO_2e per year. Per the County's Greenhouse Gas Emissions Development Review Processes (San Bernardino County, 2021b), projects that do not exceed the screening threshold of 3,000 metric tons of CO_2e per year are considered consistent with the County's GHGRP and GHGRP Update and are determined to have a less than significant

individual and cumulative impact for GHG emissions. Therefore, the Project would result in a less-than-significant impact.

TABLE GHG-1 ESTIMATED ANNUAL OPERATIONAL GHG EMISSIONS (METRIC TONS)

Source	Metric Tons of CO_2e Per Year[1]
Amortized Construction	17.5
Area	<0.01
Energy	15.8
Mobile	33.3
Waste	3.5
Water	6.3
Total Operational GHG Emissions	**76.4**
County Screening Threshold	3,000
Potentially Significant?	No

NOTES:

[1] Operational GHG emissions assume an operational year of 2024.

SOURCE: CAPCOA, 2021.

b) **Less-than-Significant Impact.** The Project was reviewed relative to the City's 2010 CAP and would not conflict with the climate action strategies within the CAP. As noted in Impact a) above, the City's 2010 CAP is based on reductions consistent with the state's 2020 GHG reduction goals under Assembly Bill 32 and does not apply to development post 2020.

The state plan for reducing GHG emissions applicable to the Project is CARB's 2017 Scoping Plan (adopted December 14, 2017). The 2017 Scoping Plan provides a framework for achieving the 2030 GHG emissions reduction target outlined in Senate Bill (SB) 32 (40 percent below 1990 levels by 2030). The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies, such as SB 100, which requires electricity providers to increase procurement from eligible renewable energy resources to 60 percent by 2030 and 100 percent by 2045.

Statewide regulations such as GHG emissions standards for vehicles, Low Carbon Fuel Standards for fuels, and the Renewable Portfolio Standard for electricity are being implemented at the Statewide level, and compliance at the project level is not addressed. No project individually could have a major impact (either positively or negatively) on the global concentration of GHG emissions and it is assumed that SB 32 will be successful in reducing GHG emissions 40 percent below 1990 levels by 2030.

San Bernardino County adopted a GHGRP Update in September 2021 (San Bernardino County, 2021a), which serves as a comprehensive roadmap to outline strategies that the County will implement to continue achieving its GHG emissions reductions into the year

2030 and beyond, thereby ensuring sustainable and healthy growth consistent with the state GHG emission reduction targets for 2030 and beyond.

As noted in Impact a) above, the Project would generate approximately 76 metric tons of CO_2e per year, below the County's screening threshold of 3,000 metric tons of CO_2e per year. Per the County's Greenhouse Gas Emissions Development Review Processes (San Bernardino County, 2021b), projects that do not exceed the screening threshold of 3,000 metric tons of CO_2e per year are considered consistent with the County's GHGRP and GHGRP Update and are determined to have a less than significant individual and cumulative impact for GHG emissions. Therefore, the Project would result in a less-than-significant impact.

References

California Air Pollution Control Officers Association (CAPCOA). 2021. *California Emissions Estimator Model User's Guide Version 2020.4.0.* May 2021.

City of Hesperia. 2010. *Climate Action Plan.* June 20, 2010.

San Bernardino County. 2011. *Greenhouse Gas Emissions Reduction Plan*, September 2011.

San Bernardino County. 2021a. *Greenhouse Gas Emissions Reduction Plan Update*, June 2021.

San Bernardino County. 2021b. *Greenhouse Gas Emissions, Development Review Processes, County of San Bernardino, California*, Revised September 2021.

HAZARDS AND HAZARDOUS MATERIALS

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
9. HAZARDS AND HAZARDOUS MATERIALS — Would the proposed project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within 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 result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Introduction

The California Department of Toxic Substances Control (DTSC) defines a hazardous material as: "a substance or combination of substances that, because of its quantity, concentration or physical, chemical, or infectious characteristics, may either: 1) cause, or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or 2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, disposed of, or otherwise managed." Hazardous materials are generally classified based on the presence of one or more of the following four properties: toxicity, ignitability, corrosivity and reactivity.

Regulations governing the use, management, handling, transportation and disposal of hazardous materials and waste are administered by federal, state and local governmental agencies. Federal regulations governing hazardous materials and waste include the Resource Conservation, and Recovery Act of 1976 (RCRA); the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Amendments and Re-authorization Act of

1986 (SARA). The California DTSC maintains a hazardous waste and substances site list, also known as the "Cortese List." The Project site is not listed on the Cortese List.

Discussion

a) **Less-than-Significant Impact.** During construction of the Project, the use of hazardous substances would be limited in nature (e.g., fuels, lubricants, solvents, etc.) and subject to standard handling and storage requirements. The Project would comply with all regulations regarding the routine transport, use, or disposal of hazardous materials. During construction, it is highly unlikely that a significant hazard through the routine transport, use or disposal of hazardous materials at a level that would present a hazard to the environment or to human or animal life would occur. Once operational, the Project would not use or store hazardous materials. Therefore, the Project would result in a less-than-significant impact.

b) **Less-than-Significant Impact.** Any accidental releases during Project construction would most likely be minor spillages of motor vehicle fuels and oils. The Project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP), which would include Best Management Practices (BMPs) to be implemented during construction to avoid spills, immediately respond to any spills, and minimize the effects of such spills. Therefore, it is highly unlikely that a release of hazardous materials at a level that would present a hazard to the environment or to human or animal life would occur. Once operational, the Project would not use or store hazardous materials. Therefore, the Project would result in a less-than-significant impact.

c) **Less-than-Significant Impact.** Encore High School for the Arts is located approximately 500 feet west of the Project site. As discussed above, Project construction would comply with all applicable regulations for the use and transport of hazardous materials. Once operational, the Project would not use or store hazardous materials. Therefore, the Project would result in less-than-significant impact.

d) **No Impact.** The DTSC and State Water Resources Control Board compile and update lists of hazardous material sites pursuant to Government Code Section 65962.5. The Project site is not included on the databases maintained by the DTSC (Envirostor) (DTSC, 2022) or the State Water Resources Control Board (Geotracker) (SWRCB, 2022). Therefore, the Project would result in no impact.

e) **No Impact.** The Project site is not located within an airport land use plan and is not within two miles of a public airport. The nearest airport is Hesperia Airport, located approximately 4.5 miles south of the Project site. Therefore, the Project would result in no impact.

f) **No Impact.** The Project would not interfere with emergency response plans or evacuation plans. The Project would not impede or require diversion of rescue vehicles or evacuation traffic in the event of a life-threatening emergency. An access gate for

emergency vehicle access would be located on the northeast corner of the Project site and would be accessible from Lemon Street. Therefore, the Project would result in no impact.

g) **Less-than-Significant Impact.** The Project site is not located in a state responsibility area (SRA) or a very high fire hazard severity zone (VHFHSZ) (Calfire, 2022). There are no elements of the Project that would exacerbate wildland fire risk in the Project area. Therefore, the Project would result in a less-than-significant impact.

References

Calfire. 2022. *FHSZ Viewer,* https://egis.fire.ca.gov/FHSZ/, accessed August 10, 2022.

Department of Toxic Substances Control (DTSC). 2022. *DTSC's Envirostor Database,* https://www.envirostor.dtsc.ca.gov/public/, accessed August 10, 2022.

State Water Resources Control Board (SWRCB). 2022. *Geotracker,* https://geotracker.waterboards.ca.gov/,accessed August 10, 2022.

HYDROLOGY AND WATER QUALITY

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
10. HYDROLOGY AND WATER QUALITY – Would the proposed project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i) result in substantial erosion of siltation on- or off- site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Discussion

A Water Quality Management Plan (WQMP) was prepared for the Project by Omega Engineering Consultants in April 2022 and revised in January 2023. The WQMP is intended to comply with the requirements of the County of San Bernardino and the Phase II Small MS4 General Permit for the Mojave River Watershed. The WQMP identifies major proposed Best Management Practices (BMPs) and other anticipated water quality features that impact site planning. These BMPs are incorporated into the final site design. The WQMP helps to determine the applicable development category, pollutants of concern, watershed description, and long-term maintenance responsibilities for the Project. A Drainage Study was prepared for the Project by Omega Engineering Consultants in February 2023. The Drainage Study was prepared in accordance with the current City of Hesperia regulations and procedures to determine future runoff from implementation of the Project.

The Project site would include two gravel filled infiltration trenches would be constructed for stormwater retention and treatment in the northeastern area of the Project site. The infiltration trenches consist of an upper trench (approximately 3,900 sq.ft.) and a lower trench (approximately 12,000 sq. ft.). Stormwater runoff would flow into the upper trench. Once full, the upper trench would overflow via surface flow to the lower trench and into two 8" perforated drains that would route water into an infiltration facility. When the infiltration facility is full, overflow would occur via a ribbon gutter that routes stormwater to the gutter system on Lemon Street. The Drainage Study determined that the Project's proposed stormwater system has been designed to safely convey the 100-year storm and would not create new adverse conditions to downstream conveyances and waterways (Omega Engineering Consultants, 2023).

An Infiltration Test Report to establish design infiltration rate was prepared for the Project by SM Engineering on March 14, 2022. The Infiltration Test Report reported that groundwater was not encountered in any of the exploratory borings (SM Engineering, 2022). The closest groundwater information was from a State well located 1.82 miles northeast of the Project site which had a water depth of 204 feet below ground level (SM Engineering, 2022).

Discussion

a) **Less-than-Significant Impact.** During construction activities, stormwater runoff from disturbed soils is a common source of pollutants (mainly sediment) to receiving waters. Earthwork activities can render soils and sediments more susceptible to erosion from stormwater runoff and result in the migration of soil and sediment in stormwater runoff to storm drains and downstream water bodies. Excessive and improperly managed grading

or vegetation removal can lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In addition, construction would likely involve the use of various materials typically associated with construction activities such as paint, solvents, oil and grease, petroleum hydrocarbons, concrete and associated concrete wash-out areas. If improperly handled, these materials could mobilize and transport pollutants offsite by stormwater runoff (nonpoint source pollution) and degrade receiving water quality.

Construction activities would be required to comply with National Pollutant Discharge Elimination System (NPDES) regulations and obtain coverage under the Phase II Small MS4 General Permit in the Mojave River Watershed. Because the Project exceeds one acre in size, construction activities would be required to obtain coverage under the State Construction General Permit (CGP)[1] Under the requirements of the CGP, the permit applicant or their contractor(s) would implement stormwater controls, referred to as construction BMPs, as set forth in a detailed Stormwater Pollution Prevention Plan (SWPPP). SWPPPs are a required component of the CGP and must be prepared by a California-certified Qualified SWPPP Developer (QSD) and implemented by a California-certified Qualified SWPPP Practitioner (QSP). SWPPPs must describe the specific erosion control and stormwater quality BMPs needed to minimize pollutants in stormwater runoff and detail their placement and proper installation. The BMPs are designed to prevent pollutants from contacting stormwater and to keep all products of erosion (i.e., sediment) and stormwater pollutants from migrating off-site into storm drains and receiving waters. Typical BMPs implemented at construction sites include placement of sediment barriers around storm drains, the use of fiber rolls or gravel barriers to detain small amounts of sediment from disturbed areas, and temporary or permanent stockpile covers to prevent rainfall from contacting the stockpiled material. In addition to erosion control BMPs, SWPPPs also include BMPs for preventing the discharge of other pollutants such as paint, solvents, concrete, and petroleum products to downstream waters. BMPs for these pollutants also include routine leak inspections of equipment, maintaining labelling and inspecting integrity of containers, and ensuring that construction materials are disposed of in accordance with manufacture's recommended disposal practices and applicable hazardous waste regulations.

Under the provisions of the CGP, the QSD is responsible for assessing the risk level of a site based on both sediment transport and receiving water risk and developing and implementing the SWPPP. Projects can be characterized as Risk Level 1, 2, or 3, and these risk levels determine the minimum BMPs and monitoring that must be implemented during construction. Under the direction of the QSD, the QSP is required to conduct routine inspections of all BMPs, conduct surface water sampling, when necessary, and report site conditions to the State Water Resources Control Board (SWRCB) using the Stormwater Multi-Application Reporting and Tracking System (SMARTS). Compliance

[1] NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities – Order no. 2009-0009-DWQ, NPDES No. CAS 000002100.

with the CGP is required by law and has proven effective in protecting water quality at construction sites.

Furthermore, the Project would also comply with the mandated City-approved Water Quality Management Plan (WQMP) to minimize water pollutants of concern and document implementation of all required BMPs. Compliance with the requirements of NPDES regulations, the Phase II Small MS4 General Permit in the Mojave River Watershed, the City-approved WQMP and the implementation of all associated BMPs would prevent the discharge of pollutants to surface waters or groundwater and minimize or eliminate potential degradation of surface water or groundwater quality during construction of the Project.

The type and concentration of substances in urban stormwater can vary considerably, both during the course of a storm event and from event to event at any given area (based on the intensity of rainfall), as well as from site to site within a given urban area (based on land use characteristics) (USEPA, 1993). Following construction, Project operations would not result in increases of water quality constituent concentrations (such as bacteria and microorganisms, metals, and total suspended solids) transported by stormwater above baseline concentrations in a manner that would have discernible impacts on or directly degrade water quality on-site or off-site. Therefore, the project would result in a less-than-significant impact.

b) **Less-Than-Significant Impact.** As discussed above, groundwater was not encountered in any of the exploratory borings (SM Engineering, 2022). The Project would be served by the municipal water system and would not include the installation of groundwater wells or long-term direct groundwater extraction. The Project would retain stormwater on-site such that post-Project stormwater runoff and drainage would be improved compared to existing conditions. Furthermore, the Project's WQMP provides BMPs that would minimize any potential groundwater contamination. If shallow groundwater were encountered during utility trenching or foundation excavation activities, temporary dewatering would be necessary to create a dry work area. Dewatering would be localized to the excavation site or trench and would likely only require the removal of low volumes of shallow groundwater from excavation trenches which would be infiltrated on-site into underlying soils. Because of its short-term nature, construction dewatering would not adversely affect local groundwater levels or available supply. Therefore, the Project would result in a less-than-significant impact.

c.i) **Less-Than-Significant Impact.** As discussed above, during construction of the proposed Project, the applicant would be required to comply with the NPDES regulations and apply for coverage under the CGP because ground disturbance at the Project site would exceed one acre. Under the CGP, the Project applicant would be required to prepare a SWPPP. The SWPPP must include site-specific erosion and sedimentation control practices and would limit the amount of runoff that may be directed offsite during construction. Compliance with the requirements of the CGP, SWPPP, and the

implementation of associated BMPs would prevent erosion and siltation on- and off-site during construction. Therefore, the Project would result in a less-than-significant impact.

c.ii) **Less-Than-Significant Impact.** The Project would not result in substantially altered on-site drainage patterns. The stormwater management system proposed for Project would be sized to sufficiently capture and infiltrate all stormwater runoff generated on-site. Furthermore, the stormwater management system has been designed with sizing and capacity to safely convey and retain on-site storm flows associated with 100-year storm. Therefore, the Project would result in a less-than-significant impact.

c.iii) **Less-Than-Significant Impact.** As discussed above, the Project includes preparation and implementation of a City-approved Drainage Study and WQMP. Final design of the Project's proposed stormwater system would be sized with sufficient conveyance and retention capacity for peak discharges associated with the 100-year design storm, consistent with all applicable civil engineering standards and City regulatory standards. The Project would not exceed the capacity of existing or planned stormwater drainage systems in the City. Furthermore, stormwater capture, on-site retention, and infiltration would not result in new sources of pollutants that could be transported via storm runoff. Therefore, the Project would result in a less-than-significant impact.

c.iv) **Less-Than-Significant Impact.** The Project site is not located within a Special Flood Hazard Area and is not zoned as an area of Flood Risk in FEMA's National Flood Hazard Layer (NFHL) Viewer (FEMA, 2022). The Project site is listed as an unshaded zone that corresponds to areas outside of the 100-year flood or areas protected for the 100-year flood by levees in the City of Hesperia General Plan (2010) Safety Element. Therefore, the Project would result in a less-than-significant impact.

d) **Less-Than-Significant Impact.** A seiche is caused by oscillation of the surface of a large enclosed or semi-enclosed body of water due to an earthquake or large wind event. The Project site is not located near a large enclosed or semi-enclosed body of water or within a tsunami hazard inundation zone. As described above, the Project site is located within a zone that corresponds to areas outside of the 100-year flood. The Project would not result in an increase of flood risk or in release of pollutants due to inundation of the Project due to flood waters. Therefore, the Project would result in a less-than-significant impact.

e) **Less-Than-Significant Impact.** The Project would not cause water quality degradation or groundwater impacts. The Project would comply with the requirements of the CGP under the NPDES Permit program, including implementation of BMPs and other requirements of a SWPPP, as well as the stormwater management requirements of the Small MS4 General Permit in the Mojave River Watershed and the City-approved WQMP all of which are designed to ensure stormwater discharges associated with construction and long-term occupancy of the Project site would comply with regulatory requirements in the City. Furthermore, the Project would not result in ongoing groundwater withdrawals or substantially reduce groundwater recharge in the City and

would not conflict with or obstruct implementation of a sustainable groundwater management plan. Therefore, the Project would result in a less-than-significant impact.

References

City of Hesperia General Plan. 2010. *Safety Element.*

Federal Emergency Management Agency. 2022. *FEMA's National Flood Hazard Layer (NFHL) Viewer.* https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd, accessed August 10, 2022.

SM Engineering. 2022. *Infiltration Test Report to Establish Design Infiltration Rate for the proposed self-storage buildings, located at the Lemon Street, Hesperia, CA 92345, APNs 0410-011-32 & -33.* March 14, 2022.

Omega Engineering Consultants. 2023. *Drainage Study for Hesperia Self-Storage Lemon St (Vacant Lot), Hesperia, CA 92345.* February 8, 2023.

Omega Engineering Consultants. 2023. *Mojave River Watershed, Water Quality Management Plan for Hesperia Self-Storage, APNs #0410-011-32 & -33.* April 13, 2022, Revised January 31, 2023.

USEPA. 1993. *Natural Wetlands and Urban Stormwater: Potential Impacts and Management.* February 1993.

LAND USE AND LAND USE PLANNING

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
11.	**LAND USE AND LAND USE PLANNING — Would the proposed project:**				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Discussion

a) **No Impact.** The Project involves the expansion of an existing conventional self-storage facility in an area of the City that is dominated by industrial land uses and would be developed with the intent of providing additional leasable self-storage units, RV parking stalls, and sale of items needed for storage uses. The Project would not divide an established community. Therefore, the Project would result in no impact.

b) **Less-than-Significant Impact.** The property is zoned as General Industrial (GI). The Project would require a Conditional Use Permit to be consistent with zoning policies and

to allow for the use of self-storage and RV parking. Once operational the Project would not conflict with current zoning and land use designations. Therefore, the Project would result in a less-than-significant impact.

MINERAL RESOURCES

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
12. MINERAL RESOURCES — Would the proposed project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Introduction

According to the City of Hesperia General Plan (2010) Conservation Element, mineral resources in the City have been identified by the Department of Conservation Division of Mines and Geology as potentially containing concrete aggregate resources consistent with the majority of the Barstow and Victorville areas. These resources are not considered to be significant due to the vast availability of similar deposits in the region. Further exploration would be necessary to identify the area as having significant resources determined to have economic value. Information indicates that Mojave River and Horsethief Canyon have inferred resources present based on similarities to proven deposits. Further exploration could result in upgrading the classification to an economically valuable mineral resource. However, the area is identified as containing mostly sand. Additional mineral resources have not been identified within the planning area.

Discussion

a) **No Impact.** The California Department of Conservation Mines Online tool does not identify any documented mines on the Project site. The Project site is not within close vicinity of the Mojave River or Horsethief Canyon. Development of the Project would not result in the loss of availability of a known mineral resource that would be of value to the region or the state. Therefore, the Project would result in no impact.

b) **No Impact.** It is very unlikely that the Project site contains a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, the Project would result in no impact.

References

City of Hesperia General Plan. 2010. *Conservation Element.*

Department of Conservation, Division of Mine Reclamation, Mines Online. http://maps.conservation.ca.gov/mol/index.html, accessed August 10, 2022.

NOISE

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
13. NOISE — Would the proposed project result in:				
a) 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) Generation of 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, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Introduction

Sound Descriptors

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound pressure level has become the most common descriptor used to characterize the "loudness" of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Decibels are measured using different scales, and it has been found that A-weighting of sound levels best reflects the human ear's reduced sensitivity to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. All references to decibels (dB) in this report will be A-weighted unless noted otherwise.

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are the equivalent A–weighted sound level over a given time period (Leq)[2]; average day–night 24-hour average sound level (Ldn)[3] with a nighttime increase of 10 dB to account for sensitivity to noise during the nighttime; and community noise

[2] The Equivalent Sound Level (Leq) is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time–varying sound energy in the measurement period.

[3] Ldn is the day–night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to night between 10:00 p.m. and 7:00 a.m.

equivalent level (CNEL)[4], also a 24-hour average that includes both an evening and a nighttime sensitivity weighting.

City of Hesperia General Plan (2010) Noise Element

The Noise Element of the General Plan aims to reduce major noise sources common in the urban and suburban environment of the City. The City has established noise sensitivity standards for new development with the goal of reducing undesirable noise impacts. The applicable type of land use category that applies to the project is the Industrial land use. Under this classification, a maximum outdoor noise level up to 75 dB, CNEL is considered normally acceptable and a maximum outdoor noise level of 80 dB, CNEL is considered conditionally acceptable.

City of Hesperia Municipal Code

The City of Hesperia Municipal Code §16.20.125(E) exempts noise from temporary construction, repair, or demolition activities between the hours of 7 a.m. to 7 p.m. on Monday through Saturday, no construction is allowed on Sundays and federal holidays.

§16.20.125 of the City of Hesperia Municipal Code establishes the noise level standards for stationary noise sources and establishes noise level limits for affected land uses. For non-noise sensitive industrial uses, the maximum exterior noise level shall not exceed 70 dB, Leq at any time. The Municipal Code operational noise level standards are summarized in **Table NOI-1**.

§16.20.130 of the City of Hesperia Municipal Code states that "No ground vibration shall be allowed which can be felt without the aid of instruments at or beyond the lot line; nor will any vibration be permitted which produces a particle velocity greater than or equal to 0.2 inches per second measured at or beyond the lot line." §16.20.130(C) exempts vibration from temporary construction, repair, or demolition activities between the hours of 7 a.m. to 7 p.m. on Monday through Saturday, no construction is allowed on Sundays and federal holidays.

TABLE NOI-1 OPERATIONAL NOISE STANDARDS

Affected Land Use (Receiving Noise)	Maximum Noise Level	Time Period
A-1, A-2, R-1, R-3 and RR Zone Districts	55 dB	10:00 p.m. to 7:00 a.m.
A-1, A-2, R-1, R-3 and RR Zone Districts	60 dB	7:00 a.m. to 10:00 p.m.
C-1, C-2, C-3, C-4, C-R, AP, and P-I Zone Districts	65 dB	Anytime
I-1 and I-2 Zone Districts	70 dB	Anytime

NOTES:
Due to wind noise, the maximum permissible noise level may be adjusted so that it is no greater than five dB(A) above the ambient noise level.

SOURCE: City of Hesperia Municipal Code, §16.20.125(B).

[4] CNEL is the average A-weighted noise level during a 24-hour day, obtained by addition of 5 decibels in the evening from 7:00 to 10:00 p.m., and an addition of a 10–decibel penalty in the night between 10:00 p.m. and 7:00 a.m.

Sensitive Receptors

The City of Hesperia General Plan (2010) Noise Element identifies noise-sensitive receptors are single- and multi-family residential, schools, parks, libraries, hospitals, and churches. According to the City of Hesperia Public Viewer System GIS tool (City of Hesperia, 2022) and the City of Hesperia General Plan Land Use Map, the entire surrounding area is zoned for General Industrial land use, including the rural residences to the south of the Project site and Encore High School for the Arts (located approximately 500 feet west of the Project site) (see **Figure 2**). Therefore, these land uses fall under the category of I-2 Zone Districts, per §16.16.315 of the City of Hesperia Municipal Code.

Discussion

a) **Less-than-Significant Impact.** Noise would be generated during Project operations primarily by motor vehicles. Noise would also be temporarily generated by on-site equipment and vehicles required for construction of the Project.

Construction Noise Impacts

Construction would result in a temporary increase in ambient noise levels in the vicinity of the Project. The construction noise levels of primary concern are often associated with the site preparation phase (USEPA, 1973). Construction activities for the Project could include site grading, clearing and excavation work. Construction activities would require the use of numerous pieces of noise-generating equipment, such as excavating machinery (e.g., loaders, excavators, etc.) and other construction equipment (e.g., scrapers, dozers, compactors, trucks, etc.). The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment and the prevailing wind direction.

The City of Hesperia Municipal Code §16.20.125(E) exempts noise from temporary construction, repair, or demolition activities between the hours of 7 a.m. to 7 p.m. on Monday through Saturday, no construction is allowed on Sundays and federal holidays. All construction Project construction would be required to comply with the City of Hesperia established construction noise hours. Therefore, the Project would result in a less-than-significant impact.

Operational Noise Impacts

Based on the location of the Project site and the surrounding land uses (vacant land and a few existing industrial land uses), noise levels are expected to be generally quiet in the Project vicinity and would be expected to be well below 70 dB, CNEL. Therefore, it is expected that the site is noise appropriate for the expansion of the existing storage facility. Storage facilities are normally quiet places that typically do not generate high noise levels and development of the Project would not substantially increase ambient noise compared to existing conditions. The Project includes a 6-foot-tall masonry sound wall along the southern and western boundaries of the Project site. This sound wall would significantly reduce operational noise from the Project that reaches the adjacent rural

residences and the high school. Due to the installation of the sound wall, it is expected that maximum sound levels would be well below 70 dB, Leq at any time at any of the adjacent land uses that are zoned for industrial uses (see **Table NOI-1**). Therefore, the Project would result in a less-than-significant impact.

b) **Less-than-Significant Impact.** Vibrational effects from typical construction activities are only a concern within 25 feet of existing structures (Caltrans, 2002). There are no off-site structures within 25 feet of the Project site. As discussed above, the existing Guard Dog of Hesperia storage facility exists directly east of the Project site. However, there would be no major construction equipment used within 25 feet of the facility's existing storage buildings that would result in adverse effects on people or structures. Therefore, the Project would result in a less-than-significant impact.

c) **No Impact.** The Project site is not located within an airport land use plan and is not within two miles of a public airport. The nearest airport is Hesperia Airport, located approximately 4.5 miles south of the Project site. Therefore, the Project would result in no impact.

References

Caltrans, 2002. *Transportation Related Earthborne Vibrations*. February 20, 2002.

City of Hesperia General Plan. 2010. *Noise Element.*

City of Hesperia. 2022. *Geoviewer, https://hesperia.geoviewer.io/,* accessed August 10, 2022.

The United States Environmental Protection Agency (USEPA). 1973. *Legal Compilations: Statutes and Legislative History, Executive Orders, Regulations, Guidelines and Reports.*

POPULATION AND HOUSING

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
14. POPULATION AND HOUSING — Would the proposed project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a) **No Impact.** The Project is an expansion of an existing self-storage facility. Development of the Project would not directly or indirectly induce population growth in the area. The Project would not involve the construction of new housing. Therefore, the Project would result in no impact.

b) **No Impact.** The Project would not displace existing people or housing units that would involve the construction of replacement housing elsewhere. Therefore, the Project would result in no impact.

PUBLIC SERVICES

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
15. PUBLIC SERVICES — Would the proposed project:				
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Introduction

Police Services

The City of Hesperia contracts with the San Bernardino County Sheriff's Department for police services. The Hesperia Police Department is located 15840 Smoketree Street, approximately 1.75 miles southwest of the Project site (City of Hesperia, 2010).

Fire Protection

The City of Hesperia and the Sphere of Influence are served by the San Bernardino County Fire Department. The nearest fire station is Station 33, approximately 0.5 miles east of the Project site on Lemon Street (City of Hesperia, 2010).

Discussion

a.i) **Less-than-Significant Impact.** The Project would include a proposed emergency gate, a fire lane, a fire hydrant, connections to fire service, and proposed fire service backflow. The Project would not increase calls for fire and emergency protection systems that would warrant changes to fire protection service ratios and/or response times. Therefore, the Project would result in a less-than-significant impact.

a.ii) **Less-than-Significant Impact.** The Project would not be expected to result in an increase in calls for police protection or result in any changes in crime that would warrant changes to police protection service ratios and/or response times. Therefore, the Project would result a less-than-significant impact.

a.iii-v) **No Impact.** The Project would not warrant a need for new schools, parks, or other public facilities. Therefore, the Project would result in no impact.

References

City of Hesperia General Plan. 2010. *Land Use Element.*

RECREATION

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
16. RECREATION — Would the proposed project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

a) **No Impact.** There are no recreational facilities in the vicinity of the Project site. The Project would not substantially increase the use of existing recreational facilities such that physical deterioration of the facilities would occur or be accelerated. Therefore, the Project would result in no impact.

b) **No Impact.** The Project would not include recreational facilities and would not require new or expanded recreational facilities. Therefore, the Project would result in no impact.

TRANSPORTATION

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
17. TRANSPORTATION — Would the proposed project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Introduction

The City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) was approved and effective as of July 2020. These guidelines provide guidance for CEQA Assessments of VMT impacts. According to these guidelines, projects that will not require a VMT analysis can be screened by using the daily vehicle trips generated by the Project or the Project's land use type. The Project can be screened if Project generated trips would be less than 110 daily vehicle trips. The Institute of Transportation Engineers (ITE) Trip Generation Manual was used to estimated Project daily trips.

Discussion

a) **Less-than-Significant Impact.** The Project would result in vehicle trips during construction. Vehicles associated with construction of the Project would use regional and local roadways to access the site, primarily Lemon Street and East Avenue. Vehicles trips would consist of required construction material or equipment deliveries and construction worker trips. During operations, vehicles would access the Project site via Lemon Street or by using the proposed access gates that are accessible from the existing Guard Dog Storage of Hesperia facility. In relation to the existing conditions, the Project would not cause substantial changes to the pedestrian or bicycle traffic in the area and would not significantly impact or require changes to the design of any existing or planned bicycle or pedestrian facilities. Project construction and operations would not conflict with any program, plan, or policy addressing the circulation system in the City. Therefore, the Project would result in a less-than-significant impact.

b) **Less-than-Significant Impact.** Vehicle miles traveled (VMT) refers to the amount and distance of vehicle travel attributable to a project. VMT generally represents the number of vehicle trips generated by a project multiplied by the average trip length for those trips. For CEQA transportation impact assessment, VMT is calculated using the origin-destination VMT method, which accounts for the full distance of vehicle trips to and from the Project site.

Screening criteria can be used to quickly identify whether sufficient evidence exists to presume a project would have a less-than-significant VMT impact without conducting a detailed study.

The Project is estimated to generate approximately 33 average daily vehicle trips (based on the mini warehouse trip rate of 17.960 average daily trips per 100 storage units/RV parking spaces) (ITE, 2017) which is below the City of Hesperia VMT threshold of 110 daily trips. As the 110 average daily trips threshold would not be exceeded, the Project's VMT impacts can be presumed to be less than significant. Therefore, the Project would result in a less-than-significant impact.

c) **Less-than-Significant Impact.** The Project would not involve any new hazardous design or feature. The Project would not include any sharp curves or dangerous intersection. The Project site design would conform to City design standards and is not expected to create any significant impacts to pedestrians, bicyclists, or traffic operations. RVs are compatible with the existing transportation infrastructure in the City. Therefore, the Project would result in a less-than-significant impact.

d) **Less-than-Significant Impact.** The Project would not substantially increase hazards to vehicle safety due to increased traffic, which could result in inadequate emergency access. The Project would include a sliding access gate for emergency access that would be located on the northeast corner of the Project site. The emergency access gate would be accessed from Lemon Street. All lane widths within the Project would meet the minimum width that can accommodate an emergency vehicle. In addition, the addition of traffic from Project traffic would not result in any significant changes to emergency vehicle response times in the area. Therefore, the Project would result in a less-than-significant impact.

References

City of Hesperia. 2022. *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS).* July 2022.

Institute of Transportation Engineers. 2017. *Trip Generation Manual, 10th Edition, 2017.*

TRIBAL CULTURAL RESOURCES

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
18. TRIBAL CULTURAL RESOURCES — **Would the proposed project** cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☒	☐	☐

Introduction

Tribal Cultural Resources (TCR's) is a newly defined class of resources under Assembly Bill 52 (AB 52). TCR's include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a Tribe. To qualify as a TCR, the resource must either: 1) be listed on, or be eligible for, listing on the California Register of Historical Resources (CRHR) or other local historic register; or 2) constitute a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a TCR (PRC §21074). AB 52 also states that tribal representatives are considered experts appropriate for providing substantial evidence regarding the locations, types, and significance of TCRs within their traditional and cultural affiliated geographic area, and therefore, the identification and analysis of TCRs should involve government-to-government tribal consultation between the CEQA lead agency and interested tribal groups and/or tribal persons. (PRC §21080.3.1(a)).

The City of Hesperia commenced the AB 52 process by sending out consultation invitation letters to tribes previously requesting notification, pursuant to Public Resources Code §21080.3.1. The Yuhaaviatam of San Manuel Nation (YSMN) responded to the notification and requested the Cultural Resources Report prepared for the Project and other Project plans. After review of the Project, the YSMN did not have concerns with the Project's implementation. The YSMN did suggest Mitigation Measures for Tribal Cultural Resources that have been included as Mitigation Measures in this section.

Discussion

a) **Less-than-Significant Impact.** No cultural resources either listed or eligible for listing by the State or County were identified on the Project site as a result of the records search. Therefore, the Project would result in a less-than-significant impact.

b) **Less-than-Significant Impact with Mitigation. Mitigation Measures CUL-1, CUL-2 and CUL-3** under the Cultural Resources section and **Mitigation Measure TCR-1 and TCR-2** are proposed to address the potential to encounter unreported subsurface historical, cultural, or archaeological resources (possibly including human remains) during construction activities. Therefore, the Project would result in a less-than-significant impact.

> **Mitigation Measure TCR-1:** The Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as detailed in **Mitigation Measure CUL-1**, of any pre-contact and/or historic-era cultural resources discovered during Project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the Project, should YSMN elect to place a monitor on-site.
>
> **Mitigation Measure TCR-2:** Any and all archaeological/cultural documents created as part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to YSMN. The Lead Agency and/or applicant shall, in good faith, consult with YSMN throughout the life of the Project.

References

BCR Consulting, LLC. 2022. *Cultural Resources Assessment, Assessor Parcel Numbers 0410-11-32 and -33 Hesperia, San Bernardino County, California.* Revised August 9, 2022.

UTILITIES AND SERVICE SYSTEMS

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
19. UTILITIES AND SERVICE SYSTEMS — Would the proposed project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
c) Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Introduction

Hesperia Water District

Hesperia's water supply is provided by the Hesperia Water District. The water district is administered by the City's Development Services Department and is a subsidiary of the City of Hesperia. It is organized pursuant to Section 30000 et seq. of the California Water Code. The District has two powers allowed by law—water and sewer utility service. The District maintains the closed conduits of the storm drain system. The District operates as a totally self-sustaining utility business enterprise, which means that virtually all of its income is generated from Water and Sewer Service Charges and facilities connection fees. The water supply is obtained entirely from groundwater located in the Alto Sub-Basin of the Mojave River Watershed and groundwater aquifer. The City's municipal water system extracts all of its water supply from the underground aquifers through 18 active groundwater wells located throughout the City. Water is conveyed from the wells to the consumers via a distribution system with pipe sizes ranging between 4 and 24 inches in diameter. The ongoing waterline replacement program has removed most of the smaller waterlines and replaced them with 8" or larger lines. In December 2009, the City maintained 14 storage reservoirs within the distribution system with a total capacity of 64.5 million gallons (City of Hesperia, 2010).

Stormwater

The City's storm drains, and flood control systems are administered by Hesperia's Development Services Department. The San Bernardino County Department of Public Works Flood Control District is responsible for providing flood control and related services throughout the County, including the incorporated areas within cities. The San Bernardino Flood Control District has planned a system of facilities including dams, conservation basins, channels, and storm drains. The purpose of these facilities is to intercept and convey flood flows through and away from the developed areas of the City and County. The principal functions are flood protection on major streams, water conservation, and storm drain construction (City of Hesperia, 2010).

Wastewater

Sewer collection lines, which are discharged to Victor Valley Wastewater Reclamation Authority's (VVWRA) regional treatment facility, are maintained, and operated by the Hesperia Water District. The Sewer Division of the Hesperia Water District ensures the delivery and continuous unobstructed flow of sewage to the regional plant located north of the city near Oro Grande. The quality of the effluent must meet the requirements of the VVWRA, a joint-exercise-of-powers agency comprised of Hesperia and other local area entities providing sewer service. Over the years, VVWRA has completed treatment plant upgrades and several capacity increases. The regional treatment plant is currently capable of treating a portion of the flow to a tertiary level and the remaining flow to a secondary level for percolation. A majority of the highly treated wastewater is discharged into the Mojave River Basin and a small amount is currently used to irrigate landscaping at the treatment plant (City of Hesperia, 2010).

Natural Gas

Natural gas is administered by the Southwest Gas Corporation (City of Hesperia, 2010).

Electricity

Electrical power is provided by Southern California Edison (SCE). Economic development rates are available to qualified industrial users (City of Hesperia, 2010).

Solid Waste

Advance Disposal is contracted to collect solid waste within the City. Advance Disposal also operates a Materials Recovery Facility (MRF) which has a capacity of 600 tons per day.

Discussion

a) **Less-than-Significant Impact.** There are no existing water or wastewater treatment plants, electric power plants, telecommunications facilities, natural gas facilities, or stormwater drainage infrastructure on-site. The Project would not require the relocation or construction of any of the aforementioned facilities. Connection to existing services would be consistent with City and purveyor requirements. The Project improvements needed to connect to existing services are expected from this type of development and the applicant would pay all applicable impact fees, water and sewer connection fees, and service fees required by the City and purveyors. Therefore, the Project would result in a less-than-significant impact.

b) **Less-than-Significant Impact.** As mentioned above, Hesperia's water supply is provided by the Hesperia Water District. The water supply is obtained entirely from groundwater located in the Alto Sub-Basin of the Mojave River Watershed and groundwater aquifer. The City's municipal water system extracts all of its water supply from the underground aquifers through 18 active groundwater wells located throughout the City. Project water demand would be minor would not adversely affect the City's water supply. Therefore, the Project would result in a less-than-significant impact.

c) **Less-than-Significant Impact.** Project-generated wastewater would be conveyed by the municipal sewer system and would be typical for light industrial uses and would not require additional capacity beyond the wastewater treatment already provided in the City. The Project would be developed and operated in compliance with the City regulations and standards of the Regional Water Quality Board (RWQCB), to ensure wastewater treatment requirements are achieved. Therefore, the Project would result in a less-than-significant impact.

d) **Less-than-Significant Impact.** Construction and operation of the Project is not expected to generate a significant amount of solid waste that would be in excess of local infrastructure. Any generation of solid waste would be typical for light industrial uses. Therefore, the Project would result in a less-than-significant impact.

e) **Less-than-Significant Impact.** Construction and operation would comply with all federal, state, and local statutes and regulations related to solid waste. Therefore, the Project would result in a less-than-significant impact.

References

City of Hesperia General Plan. 2010. *Land Use Element.*

WILDFIRE

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
20. WILDFIRE — If located in or near state responsibility areas or lands classified as very high hazard severity zones, **would the proposed project:**				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Introduction

Areas where the state has financial responsibility for wildland fire protection are known as state responsibility areas (SRA). The Department of Forestry and Fire Protection (CAL FIRE) is responsible for fire prevention and suppression in SRA. Areas where local governments have financial responsibility for wildland fire protection are known as local responsibility areas (LRA). The Project site is not located in a SRA or a very high fire hazard severity zone (VHFHSZ). The nearest fire station is County Station 33 located approximately 0.5 miles east of the Project site.

Discussion

a) **Less-than-Significant Impact.** The Project would not involve the closure or alteration of any existing evacuation route that would be important in the event of a wildfire. The Project would not impede or require diversion of rescue vehicles or evacuation traffic in the event of a wildfire. Therefore, the Project would result in no impact.

b) **Less-than-Significant Impact.** The Project is located on graded, cleared land. Due to the location of the Project site, any wildfire risk due to slope, prevailing winds, and other factors would not be exclusive to the Project site. There are no elements of the Project that would exacerbate wildland fire risk in the Project area due to slope, prevailing winds and other factors. Therefore, the Project would result in a less-than-significant impact.

c) **Less-than-Significant Impact.** There are no elements of the Project that would exacerbate wildland fire risk in the Project area. The Project would include infrastructure related to fire protection such as a fire lane, a fire hydrant, connections to fire service, and proposed fire service backflow. Therefore, the Project would result in a less-than-significant impact.

d) **Less-than-Significant Impact.** There are no elements of the Project that would expose future employees to flooding or landslides by runoff flow, post-fire instability, or drainage changes. Therefore, the Project would result in a less-than-significant impact.

References

Calfire. 2022. *FHSZ Viewer,* https://egis.fire.ca.gov/FHSZ/, accessed August 10, 2022.

MANDATORY FINDINGS OF SIGNIFICANCE

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
21. MANDATORY FINDINGS OF SIGNIFICANCE — Would the proposed project:				
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

a) **Less-than-Significant Impact with Mitigation.** The Project would not substantially degrade the quality of the environment, reduce fish or wildlife populations, or eliminate important examples of major periods of California history or pre-history. Implementation of **Mitigation Measures BIO-1, BIO-2 and BIO-3, Mitigation Measures CUL-1, CUL-2 and CUL-3**, **Mitigation Measure GEO-1 and Mitigation Measures TCR-1 and TCR-2**, would further reduce any impacts to cultural resources, wildlife population, and historical resources Therefore, the Project would result in a less-than-significant impact with mitigation.

b) **Less-than-Significant Impact.** The Project would not have a cumulatively considerable impact on any of the environmental factors evaluated. Therefore, the Project would result in a less-than-significant impact.

c) **Less-than-Significant Impact.** The Project would not result in impacts that would result in substantial adverse effects on human beings, either directly or indirectly. Therefore, the Project would result in a less-than-significant impact.

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APPENDIX A

AIR QUALITY, GREENHOUSE GAS EMISSIONS, & ENERGY SUPPORTING INFORMATION

1.0 AIR QUALITY SETTING

Regional Meteorology and Climate

The project site is in the City of Hesperia (San Bernardino County) within the Mojave Desert Air Basin (MDAB). The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains which dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevada in the north by the Tehachapi Pass (3,800 feet elevation). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 feet). The MDAB is bordered in the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet). A lesser channel lies between the San Bernardino Mountains and the Little San Bernardino Mountains (the Morongo Valley). The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley) whose primary channel is the San Gorgonio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains.

Regional Meteorology

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, stability, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and Pacific Ocean), determine the effect of air pollutant emissions on local air quality.

During the summer the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time the reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. The MDAB averages between 3-7 inches of precipitation per year (from 16 to 30 days with at least 0.01 inches of precipitation). The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, to indicate at least three months have maximum average temperatures over 100°F. The region is characterized by extreme fluctuations of daily temperatures, strong seasonal winds, and clear skies. January is the coldest month, with a mean low temperature of 37°F. July is the hottest month, with a mean high temperature of 108°F.

During the winter (defined as December through February), the average wind speed is 6.8 miles per hour (3.1 meters per second) with winds from the north (approximately 75 percent of the period), while during the summer (defined as March through November), the average wind speed is 8.3 miles per hour (3.7 meters per second) with winds from the south (approximately 85 percent of the period). During the daytime (defined as 8 am through 8 pm), the average wind speed is 9.1 miles per hour (4.1 meters per second), while during the nighttime (defined as 8 pm through 8 am), the average wind

speed of 6.8 miles per hour (3.0 meters per second). Therefore, winds speeds tend to be higher during the summer months and during the daytime.

Criteria Air Pollutants

The United States Environmental Protection Agency (USEPA) has established the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA) for six common air pollutants known as "criteria pollutants".[1] These air pollutants consist of CO, nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM10 and PM2.5), SO_2, and lead (Pb). An ambient air quality standard establishes the concentration above which the pollutant is known to cause adverse health effects to sensitive groups within the population such as children and the elderly. The goal is for localized project effects not to cause or contribute to an exceedance of the standards. Ambient air quality standards are classified as either "primary" or "secondary" standards. Primary standards define levels of air quality, including an adequate margin of safety, necessary to protect the public health. Secondary ambient air quality standards define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

The California Air Resources Board (CARB) manages air quality, regulates mobile emissions sources, and oversees the activities of county and regional Air Pollution Control Districts and Air Quality Management Districts. CARB regulates local air quality indirectly by establishing State ambient air quality standards and vehicle emissions and fuel standards; and by conducting research, planning and coordinating activities. California has adopted ambient standards (known as California Ambient Air Quality Standards or CAAQS) that are more stringent than the federal standards for some criteria air pollutants. These ambient air standards are shown in **Table 1**.

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[1] U.S. Environmental Protection Agency, *Six Common Air Pollutants*, https://www.epa.gov/criteria-air-pollutants

Table 1: State and National Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 Hour 8 Hour	0.09 ppm 0.07 ppm	– 0.070 ppm	High concentrations can directly affect lungs, causing irritation. Long–term exposure may cause damage to lung tissue.	Formed when reactive organic gases and nitrogen oxides react in the presence of sunlight. Major sources include on–road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide (CO)	1 Hour 8 Hour	20 ppm 9.0 ppm	35 ppm 9.0 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline–powered motor vehicles.
Nitrogen Dioxide (NO_2)	1 Hour Annual	0.18 ppm 0.03 ppm	0.10 ppm 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish–brown.	Motor vehicles, petroleum–refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide (SO_2)	1 Hour 3 Hour 24 Hour Annual	0.25 ppm – 0.04 ppm –	0.075 ppm 0.5 ppm 0.14 ppm 0.030 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM10)	24 Hour Annual	50 µg/m³ 20 µg/m³	150 µg/m³ –	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume–producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind–raised dust and ocean sprays).
Fine Particulate Matter (PM2.5)	24 Hour Annual	– 12 µg/m³	35.0 µg/m³ 12.0 µg/m³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including nitrogen oxides, sulfur oxides, and organics.
Lead (Pb)	Month Rolling 3 Month	1.5 µg/m³ –	– 0.15 µg/m³	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present sources: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.

SOURCE: California Air Resource Board, *Ambient Air Quality Standards*, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, May 4, 2016.

NOTE: (ppm = parts per million; µg/m3 = micrograms per cubic meter)

Local Air Quality

The MDAB attainment status of the CAAQS and NAAQS are shown in **Table 2**.

Table 2: MDAQMD Attainment Status

Pollutant	Averaging Time	California Standards		Federal Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Non-attainment	-	Non-attainment*
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)	
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	Non-attainment	150 µg/m^3	Non-attainment***
	Annual Arithmetic Mean	20 µg/m^3		-	
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No State Standard		35 µg/m^3	Unclassified/ Attainment
	Annual Arithmetic Mean	12 µg/m^3	Non-attainment*	12 µg/m^3	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Unclassified/ Attainment
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppb (57 µg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Unclassified/ Attainment
	1 Hour	0.18 ppm (330 µg/m^3)		100 ppm (196 µg/m^3)	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	-	Attainment	0.030 ppm (80 µg/m^3)	Unclassified/ Attainment
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	
	3 Hour	-		0.5 ppm (1300 µg/m^3)	
	1 Hour	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3)	
Lead (Pb)	30 Day Average	1.5 µg/m^3	Attainment	-	Unclassified/ Attainment
	Calendar Quarter	-		1.5 µg/m^3	
	Rolling 3-Month Average	-		0.15 µg/m^3	
Visibility Reducing Particles	8 Hour	Extinction Coefficient of 0.24 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent	Unclassified	No Federal Standards	
Sulfates	24 Hour	25 µg/m^3	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Non-attainment**		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	Unclassified		

*Southwest corner of desert portion of San Bernardino County only

**Searles Valley (northwest corner of San Bernardino County) only

***San Bernardino County portion only

Source: MDAQMD, http://mdaqmd.ca.gov/home/showdocument?id=1267

California Air Resources Board

The CARB has oversight over air quality in the state of California, and has established the California Clean Air Act (CCAA). The CCAA was signed into law in 1988 and, for the first time, clearly spelled out in statute California's air quality goals, planning mechanisms, regulatory strategies, and standards of progress. The CCAA provides the State with a comprehensive framework for air quality planning regulation. Prior to passage of the Act, federal law contained the only comprehensive planning framework. As part of its authority within the state of California, and as allowed under the Federal CAA, the ARB has established the California Ambient Air Quality Standards (CAAQS). The CAAQS are at least as stringent as the NAAQS. Both the NAAQS and CAAQS are shown in **Table 1**.

The CARB is responsible for the development of the State Implementation Plan (SIP), which provides a framework for attaining and maintaining the NAAQS within the state of California. In turn, development of individual inputs to the SIP is the responsibility of local air pollution control agencies. Regulation of individual stationary sources has been delegated to local air pollution control agencies.

The CARB is responsible for developing programs designed to reduce emissions from non-stationary sources, including motor vehicles and off-road equipment. The CARB and the California Office of Environmental Health Hazard Assessment (OEHHA) are also responsible for developing regulations governing TAC. TAC include air pollutants that can cause serious illnesses or increased mortality, even in low concentrations. The CARB and OEHHA identify specific air pollutants as TAC, develop health thresholds for exposure to TAC, and develop guidelines for conducting health risk assessments for sources of TAC emissions.

Mojave Desert Air Quality Management District

The proposed project would be located in the jurisdiction of the MDAQMD. The MDAQMD is responsible for regulating stationary sources of air emissions in the project site. Stationary sources that have the potential to emit air pollutants into the ambient air are subject to the Rules and Regulations adopted by the MDAQMD.[2] The following MDAQMD rules are applicable to the project.

Rule 401 – Visible Emissions

Rule 401 states that a person shall not discharge into the atmosphere, from any single source of emissions whatsoever, any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines, or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Subsection A [of the Rules].

Rule 402 – Nuisance

Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403 – Fugitive Dust

Rule 403 requires control of fugitive dust emissions during activities such as construction that have the potential to generate dust. The provisions of Rule 403 include the following:

(a) A person shall not cause or allow the emissions of fugitive dust from any transport, handling, construction or storage activity so that the presence of such dust remains visible in the atmosphere

[2] Mojave Desert Air Quality Management District, *Rule Book*, http://mdaqmd.ca.gov/rules/rule-book

beyond the property line of the emission source. (This does not apply to emissions emanating from unpaved roadways open to public travel or farm roads. This exclusion shall not apply to industrial or commercial facilities).

(b) A person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land and solid waste disposal operations.

(c) A person shall not cause or allow particulate matter to exceed 100 micrograms per cubic meter when determined as the difference between upwind and downwind samples collected on high volume samplers at the property line for a minimum of five hours.

(d) A person shall take every reasonable precaution to prevent visible particulate matter from being deposited upon public roadways as a direct result of their operations. Reasonable precautions shall include, but are not limited to, the removal of particulate matter from equipment prior to movement on paved streets or the prompt removal of any material from paved streets onto which such material has been deposited.

(e) Subsections (a) and (c) shall not be applicable when the wind speed instantaneously exceeds 40 kilometers (25 miles) per hour, or when the average wind speed is greater than 24 kilometers (15 miles) per hour. The average wind speed determination shall be on a 15 minute average at the nearest official air-monitoring station or by wind instrument located at the site being checked.

(f) The provisions of this rule shall not apply to agricultural operations.

Rule 404 – Particulate Matter Concentration

Rule 404 restricts emissions of particulate matter from any source based on the concentrations specified in Table 404(a).

Rule 405 – Solid Particulate Matter Weight

Rule 405 restricts emissions of particulate matter from any source based on the concentrations specified in Table 405(a).

Rule 406 – Specific Contaminants

Rule 406 restricts emissions of sulfur compounds to 500 ppm or less, and restricts emissions of halogens, which are not generally emitted from construction projects.

Rule 407 – Liquid and Gaseous Air Contaminants

Rule 407 restricts emissions of carbon monoxide to 2,000 ppm or less.

Rule 408 – Circumvention

Rule 408 restricts the building, erection, installation, or use of any equipment, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission that would otherwise constitute a violation of Chapter 3 (commencing with Section 41700) of Part 4, of Division 26 of the Health and Safety Code or of the MDAQMD Rules.

Rule 409 – Combustion Contaminants

Rule 409 restricts discharge into the atmosphere from the burning of fuel, combustion contaminants exceeding 0.23 gram per cubic meter (0.1 grain per cubic foot) of gas calculated to 12 percent of CO2 at standard conditions averaged over a minimum of 25 consecutive minutes.

Rule 431 – Sulfur Content of Fuels

Rule 431 restricts the use of any gaseous fuel containing sulfur compounds in excess of 800 ppm calculated as hydrogen sulfide at standard conditions, or any liquid or solid fuel having sulfur content in excess of 0.5 percent by weight.

Rule 432 – Gasoline Specifications

Rule 432 restricts the sale or supply for use within the District of a fuel for motor vehicles as defined by the Vehicle Code of the State of California, gasoline having a degree of unsaturation greater than that indicated by a Bromine Number of 30 as determined by ASTM Method D1159-66.

Rule 442 – Usage of Solvents

Rule 442 restricts the emission of VOC from any solvent material to 1,190 pounds per month, and requires proper storage and handling of VOC-containing solvents.

Rule 461 – Gasoline Transfer and Dispensing

Rule 461 limits the emissions of VOCs and toxic compounds from the transfer and dispensing of gasoline. Rule 461 contains various requirements for Retail Gas Stations such as CARB Certified Vapor Recovery Systems and various other CARB certified equipment requirements.

County of San Bernardino 2007 General Plan

The County of San Bernardino 2007 General Plan contains various goals and policies for air quality in Section V- Conservation Element.[3] The following are applicable to the project:

CO 4.1 Because developments can add to the wind hazard (due to increased dust, the removal of wind breaks, and other factors), the County will require either as mitigation measures in the appropriate environmental analysis required by the County for the development proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site-specific analysis of:

a. Grading restrictions and/or controls on the basis of soil types, topography or season.
b. Landscaping methods, plant varieties, and scheduling to maximize successful revegetation.
c. Dust-control measures during grading, heavy truck travel, and other dust generating activities.

[3] County of San Bernardino, 2007 General Plan, May 2012, http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf

CO 4.6 Provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).

CO 4.10 Support the development of alternative fuel infrastructure that is publicly accessible.

MDAQMD Federal ppb Ozone Attainment Plan

The applicable air quality plan for the Project is the *MDAQMD Federal ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Plan),* which was adopted on February 27, 2017. The *Attainment Plan* was adopted to satisfy Federal CIrequirements that the MDAQMD develop a plan to attain the 0.075 part per million (ppm) 8-hour ozone NAAQS. This *Attainment Plan* updated the 2008 *MDAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area*). The portion of the MDAB that includes the Project site is designated as non-attainment for ozone, PM10, and PM2.5 CAAQS, and ozone and PM10 NAAQS.

Significance Criteria

According to the MDAQMD, any project is significant if it triggers or exceeds the following evaluation criteria:

- Generates total emissions (direct and indirect) in excess of the thresholds in **Table 3**;

Table 3: MDAQMD Air Quality Significance Thresholds

Pollutants	Annual (tons)	Daily (pounds)
Carbon Monoxide (CO)	100	548
Nitrogen Oxides (NOx)	25	137
Volatile Organic Compounds (VOC)	25	137
Sulfur Oxides (SOx)	25	137
Coarse Particulate Matter (PM10)	15	82
Fine Particulate Matter (PM2.5)	12	65
Hydrogen Sulfides (H_2S)	10	54
Lead (Pb)	0.6	3

SOURCE: Mojave Desert Air Quality Management District, *CEQA and Federal Conformity Guidelines*, 2020.

- Generates a violation of any ambient air quality standard when added to the local background;
- Does not conform to the applicable attainment or maintenance plan(s). Project is deemed to not exceed this threshold, and hence not be significant, if it is consistent with the existing land use plan. Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to not exceed this threshold.
- Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1. Residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated through a health risk assessment:

- Any industrial project within 1000 feet;
- A distribution center (40 or more trucks per day) within 1000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1000 feet;
- A dry cleaner using perchloroethylene within 500 feet
- A gasoline dispensing facility within 300 feet

A significant project must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation measures.

2.0 GREENHOUSE GAS EMISSIONS SETTING

Environmental Setting

"Global warming" and "global climate change" are the terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal, with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth's atmosphere are thought to be the main cause of human-induced climate change. GHG naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHG occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Gases that trap heat in the atmosphere are referred to as GHG because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHG has been implicated as the driving force for global climate change. The primary GHG are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), ozone, and water vapor.

While the presence of the primary GHG in the atmosphere are naturally occurring, CO_2, CH_4, and N_2O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHG include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes.

CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent GHG than CO_2, with GWP of 25 and 310 times that of CO_2, respectively.

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWP than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO_2e.

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO_2 emissions (and thus substantial increases in atmospheric concentrations of CO_2). In pre-industrial times (c. 1860), concentrations of atmospheric CO_2 were approximately 280 parts per million (ppm). By June of 2019, atmospheric CO_2 concentrations had increased to 414 ppm, 48 percent percent above pre-industrial concentrations.[4] There is international scientific consensus that human-caused increases in GHG have contributed and will continue to contribute to global warming.

There is international scientific consensus that human-caused increases in GHG have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.[5]

Regulatory Setting

California Green Building Standards Code

California Code of Regulations Title 24, Part 6 and Part 11 (California Green Building Standards Code)[6], which relate to energy and green building and commonly referred to as CALGreen, is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CALGreen contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. CALGreen provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. CALGreen also requires building commissioning, which is a process for verifying that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency. The following provides examples of CALGreen requirements:

- **Designated parking.** Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles.
- **Recycling by Occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling.
- **Construction waste.** A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and-75 percent for new homes and 80-percent for

[4] Earth System Research Laboratory, *Recent Monthly Mean CO_2 at Mauna Lora*, www.esrl.noaa.gov/gmd/ccgg/trends/
[5] California Environmental Protection Agency, *2006 Final Climate Action Team Report to the Governor and Legislature*, March 2006, http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF
[6] California Code of Regulations Title 24, Part 11, http://www.bsc.ca.gov/Home/CALGreen.aspx

commercial projects. All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled.

- **Wastewater reduction.** Each building shall reduce the generation of wastewater by installation of water-conserving fixtures or using nonpotable water systems.
- **Water use savings.** 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40-percent reductions.
- **Water meters.** Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day.
- **Irrigation efficiency.** Moisture-sensing irrigation systems for larger landscaped areas.
- **Materials pollution control.** Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.
- **Building commissioning.** Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies.

Executive Order S-3-05

Governor Schwarzenegger established Executive Order S-3-05 in 2005, in recognition of California's vulnerability to the effects of climate change. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHG would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The executive order directed the Secretary of the 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 California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of CalEPA created the California Climate Action Team, made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through state incentive and regulatory programs.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB 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 CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations to achieve reductions in GHG to meet the 1990 emissions cap by 2020.

Climate Change Scoping Plan

AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHG to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by CARB in 2008 and must be updated every five years. The initial AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG that cause climate change. The initial Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation fee regulation to fund the program. In August 2011, the initial Scoping Plan was approved by CARB.

The 2013 Scoping Plan Update builds upon the initial Scoping Plan with new strategies and recommendations. The 2013 Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The 2013 Update defines CARB climate change priorities for the next five years and sets the groundwork to reach California's long-term climate goals set forth in Executive Orders S-3-05 and B-16-2012. The 2013 Update highlights California progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. In the 2013 Update, nine key focus areas were identified (energy, transportation, agriculture, water, waste management, and natural and working lands), along with short-lived climate pollutants, green buildings, and the cap-and-trade program. On May 22, 2014, the First Update to the Climate Change Scoping Plan was approved by the Board, along with the finalized environmental documents.

Executive Order No. B-30-15

On April 29, 2015, Executive Order No. B-30-15 was issued to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Executive Order No. B-30-15 sets a new, interim, 2030 reduction goal intended to provide a smooth transition to the existing ultimate 2050 reduction goal set by Executive Order No. S-3-05 (signed by Governor Schwarzenegger in June 2005). It is designed so State agencies do not fall behind the pace of reductions necessary to reach the existing 2050 reduction goal. Executive Order No. B-30-15 orders “All State agencies with jurisdiction over

sources of GHG emissions shall implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 targets." The Executive Order also states that "CARB shall update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent." The CARB is currently moving forward with a second update to the Climate Change Scoping Plan to reflect the 2030 reduction target. The updated Scoping Plan will provide a framework for achieving the 2030 target. In September of 2016, the AB 32 was extended to achieve reductions in GHG of 40 percent below 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

Greenhouse Gas Regional Emission Estimates

In 2016, the United States emitted about 6,511 million metric tons of CO_2. Total U.S. emissions have increased by 2.4 percent from 1990 to 2016, and emissions decreased from 2015 to 2016 by 1.9 percent (126.8 million metric tons of CO_2). The decrease in total GHG emissions between 2015 and 2016 was driven in large part by a decrease in CO_2 emissions from fossil fuel combustion. The decrease in CO_2 emissions from fossil fuel combustion was a result of multiple factors, including substitution from coal to natural gas and other non-fossil energy sources in the electric power sector; and warmer winter conditions in 2016 resulting in a decreased demand for heating fuel in the residential and commercial sectors. Of the five major sectors nationwide — residential and commercial, industrial, agriculture, transportation, and electricity— electricity accounts for the highest fraction of GHG emissions (approximately 28 percent), closely followed by transportation (approximately 28 percent) and by industry (approximately 22 percent).[7]

In 2016, California emitted approximately 429.4 million tons of CO_2e. This represents approximately 6.6 percent of total U.S. emissions. This large number is due primarily to the sheer size of California compared to other states. California's gross emissions of GHGs decreased by 9.26 percent from 466.3 million metric tons of CO_2e in 2000, with a maximum of 492.7 million metric tons in 2004.[8] In 2016, the composition of GHG emissions in California (expressed as CO_2e) were as follows:

- CO_2 accounted for 83 percent;
- CH_4 accounted for 9 percent;
- N_2O accounted for 3 percent; and
- Fluorinated gases (hydrofluorocarbons (HFCs), perfluorinated compounds (PFCs), and sulfur hexafluoride (SF_6)) accounted for 5 percent.

Of these gases, the transportation is the source of approximately 41 percent of the State's GHG emissions, followed by industrial sources at 23 percent and electricity generation (both in-State and out-of-State) at 16 percent. Agriculture is the source of approximately 8 percent, residential activity is the source of about 7 percent, and commercial activities make up 5 percent.[9]

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[7] United States Environmental Protections Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, April 2018, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2016

[8] California Air Resources Board, *Emissions Trends Report 2000-2016*, July 11, 2018, https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2016/ghg_inventory_trends_00-16.pdf

[9] California Air Resources Board, *Emissions Trends Report 2000-2016*, July 11, 2018, https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2016/ghg_inventory_trends_00-16.pdf

City of Hesperia Climate Action Plan

The City of Hesperia adopted its Climate Action Plan (CAP) in 2010.[10] However, the City's CAP is based on reductions consistent with the state's 2020 GHG reduction goals under Assembly Bill 32 and does not apply to development post 2020.

San Bernardino County Greenhouse Gas Reduction Plan/ Thresholds of Significance

San Bernardino County adopted its Greenhouse Gas Reduction Plan (GHGRP) in September 2011[11], which provides guidance on how to analyze GHG emissions and determine significance during CEQA review of proposed development projects within the County. San Bernardino County adopted a GHGRP Update in September 2021[12], which serves as a comprehensive roadmap to outline strategies that the County will implement to continue achieving its GHG emissions reductions into the year 2030 and beyond, thereby ensuring sustainable and healthy growth.

The County includes a GHG Development Review Process[13] that specifies a two-step approach in quantifying GHG emissions. First, a screening threshold of 3,000 metric tons of (carbon dioxide equivalents) (CO_2e) per year is used to determine if additional analysis is required. Projects that do not exceed the screening threshold of 3,000 metric tons of CO_2e per year are considered consistent with the County's GHGRP and GHGRP Update and are determined to have a less than significant individual and cumulative impact for GHG emissions. Projects that exceed the screening threshold of 3,000 metric tons of CO_2e per year are required to achieve a minimum 100 points per the Screening Tables or are required to achieve the equivalent level of GHG emissions efficiency as a 100-point project per the Screening Tables. Consistent with CEQA guidelines, such projects are considered consistent with the County's GHGRP and GHGRP Update and are determined to have a less than significant individual and cumulative impact for GHG emissions. Since the City of Hesperia has not adopted an updated CAP consistent with the state's 2030 GHG reduction goals or adopted a GHG threshold of significance for CEQA purposes, the County's screening threshold and development review process is used for analyzing the Project's significance.

[10] City of Hesperia. 2010. *Climate Action Plan.* June 20, 2010.

[11] San Bernardino County. 2011. *Greenhouse Gas Emissions Reduction Plan*, September 2011.

[12] San Bernardino County. 2021. *Greenhouse Gas Emissions Reduction Plan Update*, June 2021.

[13] San Bernardino County. 2021. *Greenhouse Gas Emissions, Development Review Processes, County of San Bernardino, California*, Revised September 2021.

California Emissions Estimator Model (CalEEMod) Version 2020.4.0

Output Files

Proposed Project

Annual Emissions (28pages)

Summer Emissions (24 pages)

Winter Emissions (24 pages)

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

Guard Dog Storage Expansion

San Bernardino-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	7.34	1000sqft	0.17	7,340.00	0
Parking Lot	4.39	Acre	4.39	191,228.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 4.56 acre net site. .17-acre of buildings (7,340 SF) -- the rest assumed to be paved.

Construction Phase - Approximately one year of construction

Grading - +/- 23,000 SF Export

Vehicle Trips - 33 ADT - see Transportation Section of ISMND

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	23,000.00
tblVehicleTrips	ST_TR	1.74	4.50
tblVehicleTrips	SU_TR	1.74	4.50
tblVehicleTrips	WD_TR	1.74	4.50

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2439	2.2021	2.4308	5.6700e-003	0.2083	0.0936	0.3019	0.0743	0.0879	0.1622	0.0000	511.0048	511.0048	0.0810	0.0248	520.4105
2024	0.1544	0.0154	0.0263	5.0000e-005	1.3100e-003	7.5000e-004	2.0700e-003	3.5000e-004	7.4000e-004	1.0900e-003	0.0000	4.1281	4.1281	4.2000e-004	3.0000e-005	4.1469
Maximum	**0.2439**	**2.2021**	**2.4308**	**5.6700e-003**	**0.2083**	**0.0936**	**0.3019**	**0.0743**	**0.0879**	**0.1622**	**0.0000**	**511.0048**	**511.0048**	**0.0810**	**0.0248**	**520.4105**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2439	2.2021	2.4308	5.6700e-003	0.2083	0.0936	0.3019	0.0743	0.0879	0.1622	0.0000	511.0045	511.0045	0.0810	0.0248	520.4102
2024	0.1544	0.0154	0.0263	5.0000e-005	1.3100e-003	7.5000e-004	2.0700e-003	3.5000e-004	7.4000e-004	1.0900e-003	0.0000	4.1281	4.1281	4.2000e-004	3.0000e-005	4.1469
Maximum	**0.2439**	**2.2021**	**2.4308**	**5.6700e-003**	**0.2083**	**0.0936**	**0.3019**	**0.0743**	**0.0879**	**0.1622**	**0.0000**	**511.0045**	**511.0045**	**0.0810**	**0.0248**	**520.4102**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-2-2023**	**4-1-2023**	0.7816	0.7816
2	**4-2-2023**	**7-1-2023**	0.5729	0.5729
3	**7-2-2023**	**10-1-2023**	0.5792	0.5792
4	**10-2-2023**	**1-1-2024**	0.5137	0.5137
5	**1-2-2024**	**4-1-2024**	0.1570	0.1570
		Highest	0.7816	0.7816

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0562	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.2000e-004
Energy	8.0000e-005	7.2000e-004	6.1000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	15.6770	15.6770	1.2700e-003	1.7000e-004	15.7585
Mobile	0.0160	0.0244	0.1594	3.5000e-004	0.0364	2.8000e-004	0.0366	9.7100e-003	2.6000e-004	9.9800e-003	0.0000	32.7912	32.7912	1.9300e-003	1.6700e-003	33.3384
Waste						0.0000	0.0000		0.0000	0.0000	1.4006	0.0000	1.4006	0.0828	0.0000	3.4700
Water						0.0000	0.0000		0.0000	0.0000	0.5385	3.9196	4.4581	0.0556	1.3500e-003	6.2502
Total	**0.0722**	**0.0251**	**0.1602**	**3.5000e-004**	**0.0364**	**3.3000e-004**	**0.0367**	**9.7100e-003**	**3.1000e-004**	**0.0100**	**1.9391**	**52.3880**	**54.3272**	**0.1416**	**3.1900e-003**	**58.8174**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0562	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.2000e-004
Energy	8.0000e-005	7.2000e-004	6.1000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	15.6770	15.6770	1.2700e-003	1.7000e-004	15.7585
Mobile	0.0160	0.0244	0.1594	3.5000e-004	0.0364	2.8000e-004	0.0366	9.7100e-003	2.6000e-004	9.9800e-003	0.0000	32.7912	32.7912	1.9300e-003	1.6700e-003	33.3384
Waste						0.0000	0.0000		0.0000	0.0000	1.4006	0.0000	1.4006	0.0828	0.0000	3.4700
Water						0.0000	0.0000		0.0000	0.0000	0.5385	3.9196	4.4581	0.0556	1.3500e-003	6.2502
Total	**0.0722**	**0.0251**	**0.1602**	**3.5000e-004**	**0.0364**	**3.3000e-004**	**0.0367**	**9.7100e-003**	**3.1000e-004**	**0.0100**	**1.9391**	**52.3880**	**54.3272**	**0.1416**	**3.1900e-003**	**58.8174**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/7/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 4.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,010; Non-Residential Outdoor: 3,670; Striped Parking Area: 11,474 (Architectural Coating – sqft)

OffRoad Equipment

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

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	2,875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	83.00	33.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
Total	**6.6500e-003**	**0.0688**	**0.0456**	**1.0000e-004**	**0.0491**	**3.1700e-003**	**0.0523**	**0.0253**	**2.9100e-003**	**0.0282**	**0.0000**	**8.3627**	**8.3627**	**2.7000e-003**	**0.0000**	**8.4303**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	9.0000e-005	1.1400e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2852	0.2852	1.0000e-005	1.0000e-005	0.2879
Total	**1.3000e-004**	**9.0000e-005**	**1.1400e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2852**	**0.2852**	**1.0000e-005**	**1.0000e-005**	**0.2879**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
Total	**6.6500e-003**	**0.0688**	**0.0456**	**1.0000e-004**	**0.0491**	**3.1700e-003**	**0.0523**	**0.0253**	**2.9100e-003**	**0.0282**	**0.0000**	**8.3627**	**8.3627**	**2.7000e-003**	**0.0000**	**8.4303**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	9.0000e-005	1.1400e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2852	0.2852	1.0000e-005	1.0000e-005	0.2879
Total	**1.3000e-004**	**9.0000e-005**	**1.1400e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2852**	**0.2852**	**1.0000e-005**	**1.0000e-005**	**0.2879**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	0.0139	0.0000	0.0139	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4243	10.4243	3.3700e-003	0.0000	10.5085
Total	**6.8400e-003**	**0.0717**	**0.0590**	**1.2000e-004**	**0.0300**	**3.1000e-003**	**0.0331**	**0.0139**	**2.8500e-003**	**0.0168**	**0.0000**	**10.4243**	**10.4243**	**3.3700e-003**	**0.0000**	**10.5085**

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

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3500e-003	0.1672	0.0485	8.1000e-004	0.0248	1.6600e-003	0.0264	6.8000e-003	1.5900e-003	8.3900e-003	0.0000	79.8826	79.8826	3.4000e-003	0.0127	83.7409
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.2000e-004	1.5200e-003	0.0000	4.8000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3803	0.3803	1.0000e-005	1.0000e-005	0.3839
Total	**3.5200e-003**	**0.1673**	**0.0500**	**8.1000e-004**	**0.0252**	**1.6600e-003**	**0.0269**	**6.9300e-003**	**1.5900e-003**	**8.5200e-003**	**0.0000**	**80.2629**	**80.2629**	**3.4100e-003**	**0.0127**	**84.1248**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	0.0139	0.0000	0.0139	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4242	10.4242	3.3700e-003	0.0000	10.5085
Total	**6.8400e-003**	**0.0717**	**0.0590**	**1.2000e-004**	**0.0300**	**3.1000e-003**	**0.0331**	**0.0139**	**2.8500e-003**	**0.0168**	**0.0000**	**10.4242**	**10.4242**	**3.3700e-003**	**0.0000**	**10.5085**

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

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3500e-003	0.1672	0.0485	8.1000e-004	0.0248	1.6600e-003	0.0264	6.8000e-003	1.5900e-003	8.3900e-003	0.0000	79.8826	79.8826	3.4000e-003	0.0127	83.7409
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.2000e-004	1.5200e-003	0.0000	4.8000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3803	0.3803	1.0000e-005	1.0000e-005	0.3839
Total	**3.5200e-003**	**0.1673**	**0.0500**	**8.1000e-004**	**0.0252**	**1.6600e-003**	**0.0269**	**6.9300e-003**	**1.5900e-003**	**8.5200e-003**	**0.0000**	**80.2629**	**80.2629**	**3.4100e-003**	**0.0127**	**84.1248**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1809	1.6543	1.8681	3.1000e-003		0.0805	0.0805		0.0757	0.0757	0.0000	266.5755	266.5755	0.0634	0.0000	268.1608
Total	**0.1809**	**1.6543**	**1.8681**	**3.1000e-003**		**0.0805**	**0.0805**		**0.0757**	**0.0757**	**0.0000**	**266.5755**	**266.5755**	**0.0634**	**0.0000**	**268.1608**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3700e-003	0.1453	0.0575	7.2000e-004	0.0253	1.0600e-003	0.0264	7.3100e-003	1.0100e-003	8.3200e-003	0.0000	69.5949	69.5949	1.8100e-003	0.0103	72.7038
Worker	0.0278	0.0195	0.2415	6.5000e-004	0.0769	4.0000e-004	0.0773	0.0204	3.7000e-004	0.0208	0.0000	60.5002	60.5002	1.8800e-003	1.7700e-003	61.0754
Total	**0.0322**	**0.1648**	**0.2991**	**1.3700e-003**	**0.1022**	**1.4600e-003**	**0.1037**	**0.0277**	**1.3800e-003**	**0.0291**	**0.0000**	**130.0950**	**130.0950**	**3.6900e-003**	**0.0121**	**133.7792**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1809	1.6543	1.8681	3.1000e-003		0.0805	0.0805		0.0757	0.0757	0.0000	266.5751	266.5751	0.0634	0.0000	268.1605
Total	**0.1809**	**1.6543**	**1.8681**	**3.1000e-003**		**0.0805**	**0.0805**		**0.0757**	**0.0757**	**0.0000**	**266.5751**	**266.5751**	**0.0634**	**0.0000**	**268.1605**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3700e-003	0.1453	0.0575	7.2000e-004	0.0253	1.0600e-003	0.0264	7.3100e-003	1.0100e-003	8.3200e-003	0.0000	69.5949	69.5949	1.8100e-003	0.0103	72.7038
Worker	0.0278	0.0195	0.2415	6.5000e-004	0.0769	4.0000e-004	0.0773	0.0204	3.7000e-004	0.0208	0.0000	60.5002	60.5002	1.8800e-003	1.7700e-003	61.0754
Total	**0.0322**	**0.1648**	**0.2991**	**1.3700e-003**	**0.1022**	**1.4600e-003**	**0.1037**	**0.0277**	**1.3800e-003**	**0.0291**	**0.0000**	**130.0950**	**130.0950**	**3.6900e-003**	**0.0121**	**133.7792**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.8000e-003	0.0747	0.1036	1.6000e-004		3.7000e-003	3.7000e-003		3.4200e-003	3.4200e-003	0.0000	13.9218	13.9218	4.3700e-003	0.0000	14.0312
Paving	5.4300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0132**	**0.0747**	**0.1036**	**1.6000e-004**		**3.7000e-003**	**3.7000e-003**		**3.4200e-003**	**3.4200e-003**	**0.0000**	**13.9218**	**13.9218**	**4.3700e-003**	**0.0000**	**14.0312**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.5000e-004	4.3000e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.0775	1.0775	3.0000e-005	3.0000e-005	1.0878
Total	**5.0000e-004**	**3.5000e-004**	**4.3000e-003**	**1.0000e-005**	**1.3700e-003**	**1.0000e-005**	**1.3800e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.0775**	**1.0775**	**3.0000e-005**	**3.0000e-005**	**1.0878**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.8000e-003	0.0747	0.1036	1.6000e-004		3.7000e-003	3.7000e-003		3.4200e-003	3.4200e-003	0.0000	13.9218	13.9218	4.3700e-003	0.0000	14.0311
Paving	5.4300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0132**	**0.0747**	**0.1036**	**1.6000e-004**		**3.7000e-003**	**3.7000e-003**		**3.4200e-003**	**3.4200e-003**	**0.0000**	**13.9218**	**13.9218**	**4.3700e-003**	**0.0000**	**14.0311**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.5000e-004	4.3000e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.0775	1.0775	3.0000e-005	3.0000e-005	1.0878
Total	**5.0000e-004**	**3.5000e-004**	**4.3000e-003**	**1.0000e-005**	**1.3700e-003**	**1.0000e-005**	**1.3800e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.0775**	**1.0775**	**3.0000e-005**	**3.0000e-005**	**1.0878**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-004	4.1400e-003	6.1100e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8190	0.8190	2.6000e-004	0.0000	0.8255
Paving	3.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.6000e-004**	**4.1400e-003**	**6.1100e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.8190**	**0.8190**	**2.6000e-004**	**0.0000**	**0.8255**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0620	0.0620	0.0000	0.0000	0.0626
Total	**3.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0620**	**0.0620**	**0.0000**	**0.0000**	**0.0626**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-004	4.1400e-003	6.1100e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8190	0.8190	2.6000e-004	0.0000	0.8255
Paving	3.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.6000e-004**	**4.1400e-003**	**6.1100e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.8190**	**0.8190**	**2.6000e-004**	**0.0000**	**0.8255**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0620	0.0620	0.0000	0.0000	0.0626
Total	**3.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0620**	**0.0620**	**0.0000**	**0.0000**	**0.0626**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1515					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	**0.1532**	**0.0110**	**0.0163**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3012**

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

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.8000e-004	3.6200e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9491	0.9491	3.0000e-005	3.0000e-005	0.9577
Total	**4.1000e-004**	**2.8000e-004**	**3.6200e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9491**	**0.9491**	**3.0000e-005**	**3.0000e-005**	**0.9577**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1515					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	**0.1532**	**0.0110**	**0.0163**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3012**

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

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.8000e-004	3.6200e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9491	0.9491	3.0000e-005	3.0000e-005	0.9577
Total	**4.1000e-004**	**2.8000e-004**	**3.6200e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9491**	**0.9491**	**3.0000e-005**	**3.0000e-005**	**0.9577**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0160	0.0244	0.1594	3.5000e-004	0.0364	2.8000e-004	0.0366	9.7100e-003	2.6000e-004	9.9800e-003	0.0000	32.7912	32.7912	1.9300e-003	1.6700e-003	33.3384
Unmitigated	0.0160	0.0244	0.1594	3.5000e-004	0.0364	2.8000e-004	0.0366	9.7100e-003	2.6000e-004	9.9800e-003	0.0000	32.7912	32.7912	1.9300e-003	1.6700e-003	33.3384

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	33.03	33.03	33.03	96,431	96,431
Total	33.03	33.03	33.03	96,431	96,431

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.540566	0.056059	0.172680	0.136494	0.026304	0.007104	0.011680	0.017449	0.000554	0.000251	0.025076	0.000954	0.004830
Unrefrigerated Warehouse-No Rail	0.540566	0.056059	0.172680	0.136494	0.026304	0.007104	0.011680	0.017449	0.000554	0.000251	0.025076	0.000954	0.004830

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14.8897	14.8897	1.2600e-003	1.5000e-004	14.9665
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14.8897	14.8897	1.2600e-003	1.5000e-004	14.9665
NaturalGas Mitigated	8.0000e-005	7.2000e-004	6.1000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7873	0.7873	2.0000e-005	1.0000e-005	0.7920
NaturalGas Unmitigated	8.0000e-005	7.2000e-004	6.1000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7873	0.7873	2.0000e-005	1.0000e-005	0.7920

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	14753.4	8.0000e-005	7.2000e-004	6.1000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7873	0.7873	2.0000e-005	1.0000e-005	0.7920
Total		**8.0000e-005**	**7.2000e-004**	**6.1000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.7873**	**0.7873**	**2.0000e-005**	**1.0000e-005**	**0.7920**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	14753.4	8.0000e-005	7.2000e-004	6.1000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7873	0.7873	2.0000e-005	1.0000e-005	0.7920
Total		**8.0000e-005**	**7.2000e-004**	**6.1000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.7873**	**0.7873**	**2.0000e-005**	**1.0000e-005**	**0.7920**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	66929.9	11.8697	1.0000e-003	1.2000e-004	11.9310
Unrefrigerated Warehouse-No Rail	17028.8	3.0200	2.5000e-004	3.0000e-005	3.0356
Total		**14.8897**	**1.2500e-003**	**1.5000e-004**	**14.9665**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	66929.9	11.8697	1.0000e-003	1.2000e-004	11.9310
Unrefrigerated Warehouse-No Rail	17028.8	3.0200	2.5000e-004	3.0000e-005	3.0356
Total		**14.8897**	**1.2500e-003**	**1.5000e-004**	**14.9665**

6.0 Area Detail

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0562	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.2000e-004
Unmitigated	0.0562	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.2000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0152					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0410					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.2000e-004
Total	**0.0562**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.0000**	**2.2000e-004**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0152					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0410					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.2000e-004
Total	**0.0562**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.0000**	**2.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.4581	0.0556	1.3500e-003	6.2502
Unmitigated	4.4581	0.0556	1.3500e-003	6.2502

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.69738 / 0	4.4581	0.0556	1.3500e-003	6.2502
Total		**4.4581**	**0.0556**	**1.3500e-003**	**6.2502**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.69738 / 0	4.4581	0.0556	1.3500e-003	6.2502
Total		**4.4581**	**0.0556**	**1.3500e-003**	**6.2502**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.4006	0.0828	0.0000	3.4700
Unmitigated	1.4006	0.0828	0.0000	3.4700

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	6.9	1.4006	0.0828	0.0000	3.4700
Total		**1.4006**	**0.0828**	**0.0000**	**3.4700**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	6.9	1.4006	0.0828	0.0000	3.4700
Total		**1.4006**	**0.0828**	**0.0000**	**3.4700**

9.0 Operational Offroad

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Annual

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

Guard Dog Storage Expansion

San Bernardino-Mojave Desert County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	7.34	1000sqft	0.17	7,340.00	0
Parking Lot	4.39	Acre	4.39	191,228.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 4.56 acre net site. .17-acre of buildings (7,340 SF) -- the rest assumed to be paved.

Construction Phase - Approximately one year of construction

Grading - +/- 23,000 SF Export

Vehicle Trips - 33 ADT - see Transportation Section of ISMND

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	23,000.00
tblVehicleTrips	ST_TR	1.74	4.50
tblVehicleTrips	SU_TR	1.74	4.50
tblVehicleTrips	WD_TR	1.74	4.50

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7193	57.4890	27.2230	0.2326	19.8049	1.2668	21.0717	10.1417	1.1654	11.3071	0.0000	24,985.9969	24,985.9969	1.8709	3.4900	26,072.7871
2024	17.0699	8.3062	12.7597	0.0204	0.1643	0.3995	0.5638	0.0436	0.3692	0.4128	0.0000	1,953.5482	1,953.5482	0.5711	3.5700e-003	1,968.8912
Maximum	**17.0699**	**57.4890**	**27.2230**	**0.2326**	**19.8049**	**1.2668**	**21.0717**	**10.1417**	**1.1654**	**11.3071**	**0.0000**	**24,985.9969**	**24,985.9969**	**1.8709**	**3.4900**	**26,072.7871**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7193	57.4890	27.2230	0.2326	19.8049	1.2668	21.0717	10.1417	1.1654	11.3071	0.0000	24,985.9969	24,985.9969	1.8709	3.4900	26,072.7871
2024	17.0699	8.3062	12.7597	0.0204	0.1643	0.3995	0.5638	0.0436	0.3692	0.4128	0.0000	1,953.5482	1,953.5482	0.5711	3.5700e-003	1,968.8912
Maximum	**17.0699**	**57.4890**	**27.2230**	**0.2326**	**19.8049**	**1.2668**	**21.0717**	**10.1417**	**1.1654**	**11.3071**	**0.0000**	**24,985.9969**	**24,985.9969**	**1.8709**	**3.4900**	**26,072.7871**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

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

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3080	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Energy	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
Mobile	0.1024	0.1239	0.9360	2.0400e-003	0.2036	1.5500e-003	0.2052	0.0543	1.4500e-003	0.0558		211.0993	211.0993	0.0113	9.7600e-003	214.2895
Total	**0.4108**	**0.1278**	**0.9406**	**2.0600e-003**	**0.2036**	**1.8500e-003**	**0.2055**	**0.0543**	**1.7500e-003**	**0.0561**		**215.8572**	**215.8572**	**0.0114**	**9.8500e-003**	**219.0759**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3080	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Energy	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
Mobile	0.1024	0.1239	0.9360	2.0400e-003	0.2036	1.5500e-003	0.2052	0.0543	1.4500e-003	0.0558		211.0993	211.0993	0.0113	9.7600e-003	214.2895
Total	**0.4108**	**0.1278**	**0.9406**	**2.0600e-003**	**0.2036**	**1.8500e-003**	**0.2055**	**0.0543**	**1.7500e-003**	**0.0561**		**215.8572**	**215.8572**	**0.0114**	**9.8500e-003**	**219.0759**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/7/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 4.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,010; Non-Residential Outdoor: 3,670; Striped Parking Area: 11,474 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	2,875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	83.00	33.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0598	0.0335	0.5199	1.3300e-003	0.1479	7.5000e-004	0.1486	0.0392	6.9000e-004	0.0399		136.0560	136.0560	3.7700e-003	3.4600e-003	137.1817
Total	**0.0598**	**0.0335**	**0.5199**	**1.3300e-003**	**0.1479**	**7.5000e-004**	**0.1486**	**0.0392**	**6.9000e-004**	**0.0399**		**136.0560**	**136.0560**	**3.7700e-003**	**3.4600e-003**	**137.1817**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0598	0.0335	0.5199	1.3300e-003	0.1479	7.5000e-004	0.1486	0.0392	6.9000e-004	0.0399		136.0560	136.0560	3.7700e-003	3.4600e-003	137.1817
Total	**0.0598**	**0.0335**	**0.5199**	**1.3300e-003**	**0.1479**	**7.5000e-004**	**0.1486**	**0.0392**	**6.9000e-004**	**0.0399**		**136.0560**	**136.0560**	**3.7700e-003**	**3.4600e-003**	**137.1817**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.4866	0.0000	7.4866	3.4859	0.0000	3.4859			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.4866**	**0.7749**	**8.2615**	**3.4859**	**0.7129**	**4.1988**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8659	39.5252	12.0390	0.2019	6.2934	0.4157	6.7091	1.7257	0.3977	2.1234		21,999.9259	21,999.9259	0.9387	3.4871	23,062.5508
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0499	0.0279	0.4333	1.1100e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		113.3800	113.3800	3.1400e-003	2.8800e-003	114.3181
Total	**0.9157**	**39.5531**	**12.4723**	**0.2030**	**6.4166**	**0.4163**	**6.8329**	**1.7584**	**0.3983**	**2.1567**		**22,113.3059**	**22,113.3059**	**0.9418**	**3.4900**	**23,176.8689**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.4866	0.0000	7.4866	3.4859	0.0000	3.4859			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.4866**	**0.7749**	**8.2615**	**3.4859**	**0.7129**	**4.1988**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8659	39.5252	12.0390	0.2019	6.2934	0.4157	6.7091	1.7257	0.3977	2.1234		21,999.9259	21,999.9259	0.9387	3.4871	23,062.5508
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0499	0.0279	0.4333	1.1100e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		113.3800	113.3800	3.1400e-003	2.8800e-003	114.3181
Total	**0.9157**	**39.5531**	**12.4723**	**0.2030**	**6.4166**	**0.4163**	**6.8329**	**1.7584**	**0.3983**	**2.1567**		**22,113.3059**	**22,113.3059**	**0.9418**	**3.4900**	**23,176.8689**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0394	1.2003	0.4933	6.2100e-003	0.2236	9.1900e-003	0.2328	0.0644	8.7900e-003	0.0732		666.4422	666.4422	0.0174	0.0984	696.1934
Worker	0.2759	0.1544	2.3975	6.1300e-003	0.6818	3.4700e-003	0.6853	0.1809	3.2000e-003	0.1841		627.3691	627.3691	0.0174	0.0160	632.5600
Total	**0.3153**	**1.3547**	**2.8907**	**0.0123**	**0.9055**	**0.0127**	**0.9181**	**0.2452**	**0.0120**	**0.2572**		**1,293.8113**	**1,293.8113**	**0.0348**	**0.1143**	**1,328.7534**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0394	1.2003	0.4933	6.2100e-003	0.2236	9.1900e-003	0.2328	0.0644	8.7900e-003	0.0732		666.4422	666.4422	0.0174	0.0984	696.1934
Worker	0.2759	0.1544	2.3975	6.1300e-003	0.6818	3.4700e-003	0.6853	0.1809	3.2000e-003	0.1841		627.3691	627.3691	0.0174	0.0160	632.5600
Total	**0.3153**	**1.3547**	**2.8907**	**0.0123**	**0.9055**	**0.0127**	**0.9181**	**0.2452**	**0.0120**	**0.2572**		**1,293.8113**	**1,293.8113**	**0.0348**	**0.1143**	**1,328.7534**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.6390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5571**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**		**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0665	0.0372	0.5777	1.4800e-003	0.1643	8.4000e-004	0.1651	0.0436	7.7000e-004	0.0444		151.1733	151.1733	4.1900e-003	3.8500e-003	152.4241
Total	**0.0665**	**0.0372**	**0.5777**	**1.4800e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.7000e-004**	**0.0444**		**151.1733**	**151.1733**	**4.1900e-003**	**3.8500e-003**	**152.4241**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.6390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5571**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**	**0.0000**	**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0665	0.0372	0.5777	1.4800e-003	0.1643	8.4000e-004	0.1651	0.0436	7.7000e-004	0.0444		151.1733	151.1733	4.1900e-003	3.8500e-003	152.4241
Total	**0.0665**	**0.0372**	**0.5777**	**1.4800e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.7000e-004**	**0.0444**		**151.1733**	**151.1733**	**4.1900e-003**	**3.8500e-003**	**152.4241**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.6390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5204**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0617	0.0331	0.5388	1.4300e-003	0.1643	8.0000e-004	0.1651	0.0436	7.4000e-004	0.0443		147.9277	147.9277	3.8000e-003	3.5700e-003	149.0874
Total	**0.0617**	**0.0331**	**0.5388**	**1.4300e-003**	**0.1643**	**8.0000e-004**	**0.1651**	**0.0436**	**7.4000e-004**	**0.0443**		**147.9277**	**147.9277**	**3.8000e-003**	**3.5700e-003**	**149.0874**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.6390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5204**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0617	0.0331	0.5388	1.4300e-003	0.1643	8.0000e-004	0.1651	0.0436	7.4000e-004	0.0443		147.9277	147.9277	3.8000e-003	3.5700e-003	149.0874
Total	**0.0617**	**0.0331**	**0.5388**	**1.4300e-003**	**0.1643**	**8.0000e-004**	**0.1651**	**0.0436**	**7.4000e-004**	**0.0443**		**147.9277**	**147.9277**	**3.8000e-003**	**3.5700e-003**	**149.0874**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.8366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**17.0174**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0525	0.0282	0.4579	1.2200e-003	0.1397	6.8000e-004	0.1403	0.0370	6.3000e-004	0.0377		125.7385	125.7385	3.2300e-003	3.0400e-003	126.7243
Total	**0.0525**	**0.0282**	**0.4579**	**1.2200e-003**	**0.1397**	**6.8000e-004**	**0.1403**	**0.0370**	**6.3000e-004**	**0.0377**		**125.7385**	**125.7385**	**3.2300e-003**	**3.0400e-003**	**126.7243**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.8366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**17.0174**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0525	0.0282	0.4579	1.2200e-003	0.1397	6.8000e-004	0.1403	0.0370	6.3000e-004	0.0377		125.7385	125.7385	3.2300e-003	3.0400e-003	126.7243
Total	**0.0525**	**0.0282**	**0.4579**	**1.2200e-003**	**0.1397**	**6.8000e-004**	**0.1403**	**0.0370**	**6.3000e-004**	**0.0377**		**125.7385**	**125.7385**	**3.2300e-003**	**3.0400e-003**	**126.7243**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1024	0.1239	0.9360	2.0400e-003	0.2036	1.5500e-003	0.2052	0.0543	1.4500e-003	0.0558		211.0993	211.0993	0.0113	9.7600e-003	214.2895
Unmitigated	0.1024	0.1239	0.9360	2.0400e-003	0.2036	1.5500e-003	0.2052	0.0543	1.4500e-003	0.0558		211.0993	211.0993	0.0113	9.7600e-003	214.2895

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	33.03	33.03	33.03	96,431	96,431
Total	33.03	33.03	33.03	96,431	96,431

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.540566	0.056059	0.172680	0.136494	0.026304	0.007104	0.011680	0.017449	0.000554	0.000251	0.025076	0.000954	0.004830
Unrefrigerated Warehouse-No Rail	0.540566	0.056059	0.172680	0.136494	0.026304	0.007104	0.011680	0.017449	0.000554	0.000251	0.025076	0.000954	0.004830

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
NaturalGas Unmitigated	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	40.4203	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
Total		**4.4000e-004**	**3.9600e-003**	**3.3300e-003**	**2.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**4.7553**	**4.7553**	**9.0000e-005**	**9.0000e-005**	**4.7836**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.0404203	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
Total		**4.4000e-004**	**3.9600e-003**	**3.3300e-003**	**2.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**4.7553**	**4.7553**	**9.0000e-005**	**9.0000e-005**	**4.7836**

6.0 Area Detail

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3080	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Unmitigated	0.3080	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0830					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2248					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Total	**0.3080**	**1.0000e-005**	**1.2000e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5700e-003**	**2.5700e-003**	**1.0000e-005**		**2.7300e-003**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0830					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2248					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Total	**0.3080**	**1.0000e-005**	**1.2000e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5700e-003**	**2.5700e-003**	**1.0000e-005**		**2.7300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Summer

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

Guard Dog Storage Expansion

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	7.34	1000sqft	0.17	7,340.00	0
Parking Lot	4.39	Acre	4.39	191,228.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 4.56 acre net site. .17-acre of buildings (7,340 SF) -- the rest assumed to be paved.

Construction Phase - Approximately one year of construction

Grading - +/- 23,000 SF Export

Vehicle Trips - 33 ADT - see Transportation Section of ISMND

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	23,000.00
tblVehicleTrips	ST_TR	1.74	4.50
tblVehicleTrips	SU_TR	1.74	4.50
tblVehicleTrips	WD_TR	1.74	4.50

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7157	59.6315	27.3697	0.2328	19.8049	1.2668	21.0717	10.1417	1.1654	11.3071	0.0000	25,008.5874	25,008.5874	1.8677	3.4953	26,096.8909
2024	17.0668	8.3079	12.6726	0.0202	0.1643	0.3995	0.5638	0.0436	0.3692	0.4128	0.0000	1,939.7390	1,939.7390	0.5712	3.6900e-003	1,955.1195
Maximum	**17.0668**	**59.6315**	**27.3697**	**0.2328**	**19.8049**	**1.2668**	**21.0717**	**10.1417**	**1.1654**	**11.3071**	**0.0000**	**25,008.5874**	**25,008.5874**	**1.8677**	**3.4953**	**26,096.8909**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7157	59.6315	27.3697	0.2328	19.8049	1.2668	21.0717	10.1417	1.1654	11.3071	0.0000	25,008.5874	25,008.5874	1.8677	3.4953	26,096.8909
2024	17.0668	8.3079	12.6726	0.0202	0.1643	0.3995	0.5638	0.0436	0.3692	0.4128	0.0000	1,939.7390	1,939.7390	0.5712	3.6900e-003	1,955.1195
Maximum	**17.0668**	**59.6315**	**27.3697**	**0.2328**	**19.8049**	**1.2668**	**21.0717**	**10.1417**	**1.1654**	**11.3071**	**0.0000**	**25,008.5874**	**25,008.5874**	**1.8677**	**3.4953**	**26,096.8909**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

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

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3080	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Energy	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
Mobile	0.0885	0.1316	0.8416	1.8900e-003	0.2036	1.5500e-003	0.2052	0.0543	1.4500e-003	0.0558		195.9407	195.9407	0.0116	0.0100	199.2126
Total	**0.3969**	**0.1355**	**0.8461**	**1.9100e-003**	**0.2036**	**1.8500e-003**	**0.2055**	**0.0543**	**1.7500e-003**	**0.0561**		**200.6986**	**200.6986**	**0.0117**	**0.0101**	**203.9989**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3080	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Energy	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
Mobile	0.0885	0.1316	0.8416	1.8900e-003	0.2036	1.5500e-003	0.2052	0.0543	1.4500e-003	0.0558		195.9407	195.9407	0.0116	0.0100	199.2126
Total	**0.3969**	**0.1355**	**0.8461**	**1.9100e-003**	**0.2036**	**1.8500e-003**	**0.2055**	**0.0543**	**1.7500e-003**	**0.0561**		**200.6986**	**200.6986**	**0.0117**	**0.0101**	**203.9989**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/7/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 4.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,010; Non-Residential Outdoor: 3,670; Striped Parking Area: 11,474 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	2,875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	83.00	33.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0563	0.0352	0.4352	1.2100e-003	0.1479	7.5000e-004	0.1486	0.0392	6.9000e-004	0.0399		123.3286	123.3286	3.8600e-003	3.5800e-003	124.4908
Total	**0.0563**	**0.0352**	**0.4352**	**1.2100e-003**	**0.1479**	**7.5000e-004**	**0.1486**	**0.0392**	**6.9000e-004**	**0.0399**		**123.3286**	**123.3286**	**3.8600e-003**	**3.5800e-003**	**124.4908**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0563	0.0352	0.4352	1.2100e-003	0.1479	7.5000e-004	0.1486	0.0392	6.9000e-004	0.0399		123.3286	123.3286	3.8600e-003	3.5800e-003	124.4908
Total	**0.0563**	**0.0352**	**0.4352**	**1.2100e-003**	**0.1479**	**7.5000e-004**	**0.1486**	**0.0392**	**6.9000e-004**	**0.0399**		**123.3286**	**123.3286**	**3.8600e-003**	**3.5800e-003**	**124.4908**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.4866	0.0000	7.4866	3.4859	0.0000	3.4859			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.4866**	**0.7749**	**8.2615**	**3.4859**	**0.7129**	**4.1988**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8006	41.6663	12.2564	0.2022	6.2934	0.4164	6.7097	1.7257	0.3984	2.1241		22,033.1226	22,033.1226	0.9354	3.4924	23,097.2304
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0469	0.0294	0.3627	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		102.7738	102.7738	3.2200e-003	2.9800e-003	103.7424
Total	**0.8475**	**41.6957**	**12.6190**	**0.2032**	**6.4166**	**0.4170**	**6.8336**	**1.7584**	**0.3990**	**2.1573**		**22,135.8964**	**22,135.8964**	**0.9386**	**3.4953**	**23,200.9728**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.4866	0.0000	7.4866	3.4859	0.0000	3.4859			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.4866**	**0.7749**	**8.2615**	**3.4859**	**0.7129**	**4.1988**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8006	41.6663	12.2564	0.2022	6.2934	0.4164	6.7097	1.7257	0.3984	2.1241		22,033.1226	22,033.1226	0.9354	3.4924	23,097.2304
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0469	0.0294	0.3627	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		102.7738	102.7738	3.2200e-003	2.9800e-003	103.7424
Total	**0.8475**	**41.6957**	**12.6190**	**0.2032**	**6.4166**	**0.4170**	**6.8336**	**1.7584**	**0.3990**	**2.1573**		**22,135.8964**	**22,135.8964**	**0.9386**	**3.4953**	**23,200.9728**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0367	1.2675	0.5082	6.2300e-003	0.2236	9.2200e-003	0.2329	0.0644	8.8200e-003	0.0732		667.9780	667.9780	0.0173	0.0987	697.8132
Worker	0.2595	0.1624	2.0067	5.5600e-003	0.6818	3.4700e-003	0.6853	0.1809	3.2000e-003	0.1841		568.6819	568.6819	0.0178	0.0165	574.0410
Total	**0.2963**	**1.4299**	**2.5149**	**0.0118**	**0.9055**	**0.0127**	**0.9182**	**0.2452**	**0.0120**	**0.2573**		**1,236.6599**	**1,236.6599**	**0.0351**	**0.1152**	**1,271.8542**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0367	1.2675	0.5082	6.2300e-003	0.2236	9.2200e-003	0.2329	0.0644	8.8200e-003	0.0732		667.9780	667.9780	0.0173	0.0987	697.8132
Worker	0.2595	0.1624	2.0067	5.5600e-003	0.6818	3.4700e-003	0.6853	0.1809	3.2000e-003	0.1841		568.6819	568.6819	0.0178	0.0165	574.0410
Total	**0.2963**	**1.4299**	**2.5149**	**0.0118**	**0.9055**	**0.0127**	**0.9182**	**0.2452**	**0.0120**	**0.2573**		**1,236.6599**	**1,236.6599**	**0.0351**	**0.1152**	**1,271.8542**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.6390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5571**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**		**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0625	0.0391	0.4835	1.3400e-003	0.1643	8.4000e-004	0.1651	0.0436	7.7000e-004	0.0444		137.0318	137.0318	4.2900e-003	3.9700e-003	138.3231
Total	**0.0625**	**0.0391**	**0.4835**	**1.3400e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.7000e-004**	**0.0444**		**137.0318**	**137.0318**	**4.2900e-003**	**3.9700e-003**	**138.3231**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.6390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5571**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**	**0.0000**	**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0625	0.0391	0.4835	1.3400e-003	0.1643	8.4000e-004	0.1651	0.0436	7.7000e-004	0.0444		137.0318	137.0318	4.2900e-003	3.9700e-003	138.3231
Total	**0.0625**	**0.0391**	**0.4835**	**1.3400e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.7000e-004**	**0.0444**		**137.0318**	**137.0318**	**4.2900e-003**	**3.9700e-003**	**138.3231**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.6390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5204**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0582	0.0348	0.4517	1.3000e-003	0.1643	8.0000e-004	0.1651	0.0436	7.4000e-004	0.0443		134.1185	134.1185	3.9000e-003	3.6900e-003	135.3156
Total	**0.0582**	**0.0348**	**0.4517**	**1.3000e-003**	**0.1643**	**8.0000e-004**	**0.1651**	**0.0436**	**7.4000e-004**	**0.0443**		**134.1185**	**134.1185**	**3.9000e-003**	**3.6900e-003**	**135.3156**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.6390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5204**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0582	0.0348	0.4517	1.3000e-003	0.1643	8.0000e-004	0.1651	0.0436	7.4000e-004	0.0443		134.1185	134.1185	3.9000e-003	3.6900e-003	135.3156
Total	**0.0582**	**0.0348**	**0.4517**	**1.3000e-003**	**0.1643**	**8.0000e-004**	**0.1651**	**0.0436**	**7.4000e-004**	**0.0443**		**134.1185**	**134.1185**	**3.9000e-003**	**3.6900e-003**	**135.3156**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.8366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**17.0174**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0494	0.0296	0.3839	1.1100e-003	0.1397	6.8000e-004	0.1403	0.0370	6.3000e-004	0.0377		114.0007	114.0007	3.3200e-003	3.1400e-003	115.0183
Total	**0.0494**	**0.0296**	**0.3839**	**1.1100e-003**	**0.1397**	**6.8000e-004**	**0.1403**	**0.0370**	**6.3000e-004**	**0.0377**		**114.0007**	**114.0007**	**3.3200e-003**	**3.1400e-003**	**115.0183**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.8366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**17.0174**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0494	0.0296	0.3839	1.1100e-003	0.1397	6.8000e-004	0.1403	0.0370	6.3000e-004	0.0377		114.0007	114.0007	3.3200e-003	3.1400e-003	115.0183
Total	**0.0494**	**0.0296**	**0.3839**	**1.1100e-003**	**0.1397**	**6.8000e-004**	**0.1403**	**0.0370**	**6.3000e-004**	**0.0377**		**114.0007**	**114.0007**	**3.3200e-003**	**3.1400e-003**	**115.0183**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0885	0.1316	0.8416	1.8900e-003	0.2036	1.5500e-003	0.2052	0.0543	1.4500e-003	0.0558		195.9407	195.9407	0.0116	0.0100	199.2126
Unmitigated	0.0885	0.1316	0.8416	1.8900e-003	0.2036	1.5500e-003	0.2052	0.0543	1.4500e-003	0.0558		195.9407	195.9407	0.0116	0.0100	199.2126

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	33.03	33.03	33.03	96,431	96,431
Total	33.03	33.03	33.03	96,431	96,431

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.540566	0.056059	0.172680	0.136494	0.026304	0.007104	0.011680	0.017449	0.000554	0.000251	0.025076	0.000954	0.004830
Unrefrigerated Warehouse-No Rail	0.540566	0.056059	0.172680	0.136494	0.026304	0.007104	0.011680	0.017449	0.000554	0.000251	0.025076	0.000954	0.004830

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
NaturalGas Unmitigated	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	40.4203	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
Total		**4.4000e-004**	**3.9600e-003**	**3.3300e-003**	**2.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**4.7553**	**4.7553**	**9.0000e-005**	**9.0000e-005**	**4.7836**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.0404203	4.4000e-004	3.9600e-003	3.3300e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.7553	4.7553	9.0000e-005	9.0000e-005	4.7836
Total		**4.4000e-004**	**3.9600e-003**	**3.3300e-003**	**2.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**4.7553**	**4.7553**	**9.0000e-005**	**9.0000e-005**	**4.7836**

6.0 Area Detail

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3080	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Unmitigated	0.3080	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0830					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2248					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Total	**0.3080**	**1.0000e-005**	**1.2000e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5700e-003**	**2.5700e-003**	**1.0000e-005**		**2.7300e-003**

Guard Dog Storage Expansion - San Bernardino-Mojave Desert County, Winter

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0830					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2248					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5700e-003	2.5700e-003	1.0000e-005		2.7300e-003
Total	**0.3080**	**1.0000e-005**	**1.2000e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5700e-003**	**2.5700e-003**	**1.0000e-005**		**2.7300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

BIOLOGICAL RESOURCES ASSESSMENT & PROTECTED PLANT PRESERVATION PLAN

GENERAL BIOLOGICAL RESOURCES ASSESSMENT

HESPERIA, SAN BERNARDINO COUNTY, CALIFORNIA
Guard Dog of Hesperia Expansion
(Township 4 North, Range 4 West, Section 10)
(APN 0410-011-32, 0410-011-33)

Prepared for:

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RCH Group
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Prepared by:

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Principal Investigators:
Ryan Hunter, Environmental Scientist/Biologist
Lisa Cardoso, Wildlife Biologist

Project: #2021-12

February 9, 2021

TITLE PAGE

Date Report Written:	**February 9, 2021**
Date Field Work Completed: 2021	**February 8,**
Report Title:	**General Biological Resources Assessment**
Assessor's Parcel Number:	**0410-011-32, 0410-011-33**
Principal Investigators:	**Ryan Hunter, Environmental Scientist/Biologist** **Lisa Cardoso, Wildlife Biologist**
Contact Information:	**Randall C. Arnold, Jr.** **RCA Associates, Inc.** **15555 Main Street, #D4-235** **Hesperia, California 92345** **(760) 596-0017** rarnold@rcaassociatesllc.com **www.rcaassociatesllc.com**

Table of Contents

1.0 INTRODUCTION AND SUMMARY 1
2.0 EXISTING CONDITIONS 2
3.0 METHODOLOGIES 3
4.0 LITERATURE SEARCH 4
5.0 RESULTS 7
5.1 General Biological Resources 7
5.2 Federal and State Listed Species 7
5.3 Species of Special Concern 8
5.4 Jurisdictional Waters and Riparian Habitat 8
5.5 Protected Plants 9
6.0 IMPACTS AND MITIGATION MEASURES 10
6.1 General Biological Resources 10
6.2 Federal and State Listed and Species of Special Concern 10
7.0 CONCLUSIONS AND RECOMMENDATIONS 11
8.0 BIBLIOGRAPHY 13
CERTIFICATION 15

Appendix A - Tables and Figures
Appendix B - Regulatory Context

1.0 INTRODUCTION AND SUMMARY

Biological surveys were conducted on a 5-acre parcel located south of Lemon Street, east of C Avenue, and west of E Avenue in the City of Hesperia, California (17147 Lemon St) (APN: 0410-011-32 & 0410-011-33) (Township 4 North, Range 4 West, Section 10, USGS Hesperia, California Quadrangle, 1956) (Figures 1, 2, and 3). The property is located in a business industrial area of Hesperia where the project proponent is proposing to expand his existing storage facility.

The site supports a heavily disturbed desert scrub community that previously consisted of native desert vegetation. The property currently supports sparse native vegetation that includes exceedingly low numbers of creosote bush (*Larrea tridentata*), silver cholla (*Cylindropuntia echinocarpa*), Asian mustard (*Brassica tournefortii*), Nevada joint-fir (*Ephedra nevadensis*), and thirteen Joshua trees (*Yucca brevifolia*) occupy the site.

As part of the environmental process, California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) data sources were reviewed. Following the data review, surveys were performed on the site on February 8, 2021, during which the biological resources on the site and in the surrounding areas were documented by biologists from RCA Associates, Inc. As part of the surveys, the property and adjoining areas were evaluated for the presence of native habitats which may support populations of sensitive wildlife species. The property was also evaluated for the presence of sensitive habitats including wetlands, vernal pools, riparian habitats, and jurisdictional areas.

Habitat assessments were also conducted for the desert tortoise, burrowing owl, and Mohave ground squirrel. Based on data from USFWS, CDFW, and a search of the California Natural Diversity Database (CNDDB, 2021). Scientific nomenclature for this report is based on the following references: Hickman (1993), Munz (1974), Stebbins (2003), Sibley (2016) and Whitaker (1980).

2.0 EXISTING CONDITIONS

The property is approximately 5-acres and is located south of Lemon Street, east of C Avenue, and west of E Avenue in the City of Hesperia, California (Township 4 North, Range 4 West, Section 10, USGS Hesperia, California Quadrangle, 1956). The site is heavily disturbed and has been previously graded of all vegetation with the exception of those in the yucca and cacti families. The property supports a relatively flat topography, with the exception of the northern boundary where it slopes down to Lemon Street. Industrial businesses border property to the south and east as well as north beyond Lemon Street, with vacant land to the west.

The site has been completely graded with the exception of a few plant species such as Joshua tree (*Yucca brevifolia*), silver cholla (*Opuntia echinocarpa*), and the occasional desert scrub plants that were missed during previous clearing activities. Section 5.0 provides a more detailed discussion of the various plant species observed during the surveys.

Only a few wildlife species were observed during the field investigations. No mammals were observed during the survey.

Birds observed included common ravens (*Corvus corax*), house finch (*Carpodacus mexicanus*), western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaida macroura*), and rock pigeon (*Columba livia*). Section 5.0 provides a more detailed discussion of the various species observed during the surveys.

Reptiles observed during the field investigation were limited to only the side-blotched lizard (*Uta stansburiana*). No other reptiles are expected to occur on site due to the lack of suitable habitat. Table 2 provides a compendium of wildlife species.

In addition, no sensitive habitats (e.g., sensitive species, critical habitats, etc.) have been documented in the immediate area according to the CNDDB (2021) and none were observed during the field investigations.

3.0 METHODOLOGIES

General biological surveys were conducted on February 8, 2021, during which biologists from RCA Associates, Inc. initially walked meandering transects throughout the property. During the surveys, data was collected on the plant and animal species present on the site. All plants and animals detected during the surveys were recorded and are provided in Tables 1 & 2 (Appendix A). The property was also evaluated for the presence of habitats which might support sensitive species. Scientific nomenclature for this report is based on the following references: Hickman (1993), Munz (1974), Stebbins (2003), Sibley (2016) and Whitaker (1980). Following completion of the initial reconnaissance survey, habitat assessments were conducted for the desert tortoise, burrowing owl, and Mohave ground squirrel. Weather conditions consisted of wind speeds of 5 to 10 mph, temperatures in the low to mid 60's (°F) (AM), and 0% cloud cover. The applicable methodologies are summarized below.

General Plant and Animal Surveys: Meandering transects were walked on the site and in surrounding areas (i.e., the zone of influence) where accessible at a pace that allowed for careful documentation of the plant and animal species present on the site. All plants observed were identified in the field or sampled and brought back for further identification. Wildlife was identified through visual observations and/or by vocalizations. Habitat assessments were conducted for the desert tortoise, burrowing owl, and Mohave ground squirrel. Tables 1 and 2 (Appendix A) provides a comprehensive compendium of the various plant and animal; species observed during the field investigations.

4.0 LITERATURE SEARCH

As part of the environmental process, a search of the California Natural Diversity Database (CNDDB) search was performed. Based on this review, it was determined that thirteen special status species, ten wildlife and three plant organisms, have been documented within the Hesperia quadrangle of the property, seven wildlife species and three plant species. The following tables provide data on each special status species which has been documented in the area.

Table 4-1: Federal and State Listed Species and State Species of Special Concern.
E = Endangered; T = Threatened; SSC = Species of special concern; CNPS = California Native Plant Society; CNDDB = California Natural Diversity Data Base

NAME	STATUS	HABITAT REQUIREMENTS	PRESENCE/ ABSENCE ON PROPERTY
PLANTS			
Within Hesperia Quadrangle			
Short-joint beavertail (Opuntia basilaris var. brachyclada)	Federal: None State: None CNPS: 1B.2	Desert scrub Joshua tree woodland	The site does not contain suitable habitat, none were observed on the site and are not expected to occur on the site given the high level of disturbance.
Booth's evening-primrose (*Eremothera boothii ssp. boothii*)	Federal: None State: Threatened CNPS: 2B.3	Joshua tree woodland, pinyon and juniper woodland	The site does not contain suitable habitat, none were observed on the site and are not expected to occur on the site given the high level of disturbance.
White pygmy-poppy (*Canbya candida*)	Federal: None State: None CNPS: 4.2	Joshua tree woodland, Mojave desert scrub, gravely, sandy habitat	The site does not contain suitable habitat, none were observed on the site and are not expected to occur on the site given the high level of disturbance.

Notes:

Status abbreviations:

CNPS List 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CNPS List 1B: Plants rare, threatened, or endangered in California and elsewhere
CNPS List 2A: Plants presumed extirpated in California, but more common somewhere else
CNPS List 2B: Plants rare, threatened, or endangered in California, but more common somewhere else
CNPS List 3: Plants about which more information is needed - a review list

CNPS List 4: Plants of limited distribution - a watch list

.1 Seriously threatened in California (over 80% of occurrences threatened/ high degree and immediacy of threat)

.2 Moderately threatened in California (20-80% occurrences threatened/ moderate degree and immediacy of threat)

.3 No very threatened in California (<20% of occurrences threatened/ low degree and immediacy of threat or no current threats known)

Table 4-2: Special status wildlife and insects documented in the region (Source: CNDDB, 2021) or likely to occur in the region

NAME	STATUS	HABITAT REQUIREMENTS	PRESENCE/ ABSENCE ON PROPERTY
Wildlife Species			
Within Hesperia Quadrangle			
Yellow warbler (*Setophaga petechia*)	Federal: None State: None CDFW: SSC	Dense riparian vegetation.	The site does not support suitable habitat for the species.
Burrowing owl (*Athene cunicularia*)	Federal: None State: None CDFW: SSC	Open grassland areas where the owls utilize abandoned mammal burrows.	No suitable habitat present on the site. Not expected to occur on the site due to the highly disturbed area and lack of burrows, none observed during the survey. However, this mobile species occurs throughout Southern California and could potentially occur in the area in the future.
Cooper's hawk (*Accipiter cooperii*)	Federal: None State: None	Mature forests, open woodland, wood edges, river groves, mixed woods, suburbs	The site does not contain suitable habitat for the Cooper's hawk, none were observed on site. The mobile species occurs throughout southern California and can potentially occur in the future.
Pallid bat (*Antrozous pallidus*)	Federal: None State: None CDFW: SSC	Coniferous forests, woodlands, brushy terrain, rocky canyons, open farmland, and deserts	The site has no suitable habitat for the species. The species is not expected to occur on site or in the area.
Long-eared owl (*Asio otus*)	Federal: None State: None CDFW: SSC	Woodlands. areas with dense trees, open country, meadows, streamside groves in deserts	The site has no suitable habitat for the species. There have been no recent sightings, and therefore is not expected to occur on site or in the area.

Coast horned lizard (*Phrynosoma blainvillii*)	Federal: None State: None CDFW: SSC	Inhabits open areas of sandy soils and low vegetation in valleys, foothills, and semiarid mountains	No suitable habitat, none observed on site and not expected to occur on site.
Le Conte's thrasher (*Toxostoma lecontei*)	Federal: None State: None CDFW: SSC	Desert scrub, open washes, desert shrub habitats, Joshua tree scrub, common in saltbush and cholla vegetation	The site has some habitat for the Le Conte's thrasher, but there has been no recent sightings of the species, and is therefore not expected to occur on the site or surrounding area.
Gray vireo (*Vireo vicinior*)	Federal: None State: None CDFW: SSC	Frequents chaparral dominated by chamise and manzanita, scrub oak	Site does not support suitable habitat for the species.
Mohave tui chub (*Siphateles bicolor mohavensis*)	Federal: Endangered State: Endangered CDFW: Fully protected	Three populations exist at Soda Springs, China Lake Naval Weapons Station, and Camp Cady Wildlife Area	The site does not contain suitable habitat for the species. A fully protected species, there are only three populations being maintained with the nearest population in Camp cady, with an introducing population being carried in the Mojave River. This species will not occur on site.
Mohave ground squirrel (*Xerospermophilus mohavensis*)	Federal: None State: Threatened	Desert scrub	The site does not support suitable habitat for the species, and is not expected to occur on the site.

5.0 RESULTS

5.1 General Biological Resources

Given the habitat in the surrounding area, the site had once previously supported a desert scrub community, but has since been cleared of almost all vegetation with the exception of the Joshua trees, silver cholla, and a few missed species. Species present on the site included creosote bush (*Larrea tridentata*), silver cholla (*Cylindropuntia echinocarpa*), Joshua tree (*Yucca brevifolia*), Asian mustard (*Brassica tournefortii*) , and Nevada jointfir (*Ephedra nevadensis*). Table 1 provides a compendium of all plants occurring on the site and/or in the immediate surrounding area.

Birds observed included ravens (*Corvus corax*), house finch (*Carpodacus mexicanus*), rock pigeon (*Columba livia*), western meadowlarks (*Sturnella neglecta*), and mourning doves (*Zenaida macroura*). No mammals or mammal signs were observed, and only one reptile was found on site, the common side-blotched lizard (*Uta stansburiana*). Tables 1 and 2 (Appendix A) provides a compendium of the various plant and animal species identified during the field investigations and those common to the area. No distinct wildlife corridors were identified on the site or in the immediate area.

No sensitive habitats (e.g., wetlands, vernal pools, critical habitats for sensitive species, etc.) were observed on the site during the field investigations.

The following are the listed and special status species that have the ability to occur on the project site. It is not a comprehensive list of all the species in the quad. This information has been taken from the California Natural Diversity Database and is using the most current version.

5.2 Federal and State Listed Species

Mohave Tui Chub: The Mohave Tui Chub is a federally and state endangered species that is fully protected. The site is located within the documented Hesperia quad habitat according to CNDDB (2021). There are only three populations of Mohave tui chub, with a fourth population having been recently introduced to the Mojave river. The site however, does not contain or is connected to the Mojave River, and no Mohave tui chub will occur on site.

Mohave Ground Squirrel: The site does occur within the known distribution of the Mohave Ground Squirrel, but no recent observations of Mohave ground squirrels have occurred in the area. It is the opinion of RCA Associates, Inc. that the habitat is not prime Mohave ground squirrel habitat and is very unlikely to support populations of the species based on the following criteria:

1. No recent documented observations in the general region.
2. No connectivity with habitat which may support the species.

5.3 Species of Special Concern

Sensitive Plants: There are three plant species that have been documented in the Hesperia quad, the short-joint beavertail cactus, Booth's evening-primrose, and white-pygmy-poppy. In recent years, only the short-joint beavertail has been seen within 20 years in the Hesperia quad, while Booth's evening-primrose and white pygmy-poppy have not been observed for over 20 years. The site currently does not support suitable habitat for all three species and none were observed on site during the February 8, 2021. These species are not expected to occur on the site in the foreseeable future based on the length of time they have been observed in the area and lack of suitable habitat, and therefore the project is not expected to impact any sensitive species

Sensitive Wildlife: Within the Hesperia Quad, seven species are listed as Species of Special Concern. These are the yellow warbler, burrowing owl, pallid bat, long-eared owl, coast horned lizard, Le Conte's thrasher, and gray vireo. The property does not contain suitable habitat for the yellow warbler, Le Conte's thrasher, long-eared owls, gray vireo, and pallid bat. The area has suitable habitat for coast horned lizards and burrowing owls, but given the high disturbance of the site and lack of burrows and vegetations, these two species are not expected to occur on site and were not observed on the property. The site also does not contain any suitable burrows for burrowing owls, and no signs of owls (e.i. scat, feathers) were found on the property and are unlikely to inhabit the site in the future given the lack of occupiable burrows.

5.4 Jurisdictional Waters and Riparian Habitat

No riparian vegetation (e.g., cottonwoods, willows, etc.) exist on the site or in the adjacent habitats.

5.5 Protected Plants

As of September 22, 2020, the California Department of Fish and Wildlife temporarily listed the western Joshua tree (*Yucca brevifolia*) as an endangered species for one year until a final decision is made in 2021. There are thirteen standing Joshua Tree observed on site during the February 8, 2021 field investigations. Due to the presence of Joshua Trees, a "Protected Plant Plan" was conducted on the site alongside this survey on February 8, 2021. and any attempt to remove a Joshua tree from its current position may require an Incidental Take Permit (ITP).

6.0 IMPACTS AND MITIGATION MEASURES

6.1 General Biological Resources

Future development of the site will have minimal impact on the general biological resources present on site, because most of the vegetation has already been removed and the remaining few plants will be removed during future construction activities. The site is expected to support very few wildlife species which will be impacted by development activities. Those species with limited mobility (i.e., small mammals and reptiles) will experience increases in mortality during the construction phase. However, more mobile species (i.e., birds, large mammals) will be displaced into adjacent areas and will likely experience minimal impacts. Therefore, loss of about 5-acres of heavily disturbed desert scrub habitat is not expected to have a significant cumulative impact on the overall biological resources in the region given the presence of similar habitat throughout the surrounding area. No sensitive habitats (e.g., wetlands, vernal pools, critical habitats for sensitive species, etc.) were observed on the site during the field investigations.

6.2 Federal and State Listed and Species of Special Concern

No federal or State-listed species were observed on the site during the field investigations including the Mohave ground squirrel and desert tortoise. In addition, there are no documented observations of these species either on the site or in the immediate area. The site is not expected to support populations of the desert tortoise based on the absence of habitat, suitable burrows, or signs.

A pre-construction burrowing owl survey may be required by CDFW to determine if any owls have moved on to the site since February 8, 2021 surveys. As stated in CDFW's *Staff Report on Burrowing Owl Mitigation*, the most effective method of completing a pre-construction survey (take avoidance survey) should be performed within 14 days of ground disturbance, followed by a final pre-construction survey within 24 hours of breaking ground.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Future development activities include completely grading the property and removing the remaining vegetation from the 5-acre parcel; however, cumulative impacts to the general biological resources (plants and animals) on site are expected to be negligible. This assumption is based on the suitable habitat located in the surrounding areas of the region. In addition, future development activities are not expected to have any impact on any State or Federal listed or State special status plant or animal species. As discussed above, the site does not support any desert tortoises. In addition, burrowing owls do not inhabit the site and are not expected to be impacted given the absence of any active burrows. The following mitigation measures are recommended:

1. Pre-construction surveys for burrowing owls, desert tortoise, and nesting birds protected under the Migratory Bird Treaty Act and Section 3503 of the California Fish and Wildlife Code shall be conducted prior to the commencement of Project-related ground disturbance.
    a. Appropriate survey methods and timeframes shall be established, to ensure that chances of detecting the target species are maximized. In the event that listed species, such as the desert tortoise, are encountered, authorization from the USFWS and CDFW must be obtained. If nesting birds are detected, avoidance measures shall be implemented to ensure that nests are not disturbed until after young have fledged.
    b. Pre-construction surveys shall encompass all areas within the potential footprint of disturbance for the project, as well as a reasonable buffer around these areas.
2. A Protected Plant Plan shall be developed and shall identify methods, locations, and criteria for transplanting those trees that would be removed during Project construction.
    a. As required by the San Bernardino County Development Code, Joshua trees proposed for removal shall be transplanted or stockpiled for future transplanting wherever possible.

If any sensitive species are observed on the property during future activities, CDFW and USFWS (as applicable) should be contacted to discuss specific mitigation measures which may be required

for the individual species. CDFW and USFWS are the only agencies which can grant authorization for the "take" of any sensitive species and can approve the implementation of any applicable mitigation measures.

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CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits, presents the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Fieldwork conducted for this assessment was performed by Ryan Hunter and Lisa Cardoso . I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project.

Date: 2/9/2021 Signed: Ryan Hunter

Lisa Cardoso

Field Work Performed By: Ryan Hunter
Environmental Scientist/Biologist

Field Work Performed By: Lisa Cardoso
Wildlife Biologist

Appendix A

Tables and Figures



FIGURE 1: REGIONAL EXHIBIT

RCA ASSOCIATES, INC.
SOURCE: GOOGLE EARTH

RCA
ASSOCIATES, INC.



FIGURE 2: VICINITY EXHIBIT

RCA ASSOCIATES, INC.
SOURCE: GOOGLE EARTH

RCA ASSOCIATES, INC.



CENTER OF SITE LOOKING EAST



CENTER OF SITE LOOKING NORTH

FIGURE 3
PHOTOGRAPHS OF SITE



CENTER OF SITE LOOKING SOUTH



CENTER OF SITE LOOKING WEST

FIGURE 3, cont.
PHOTOGRAPHS OF SITE

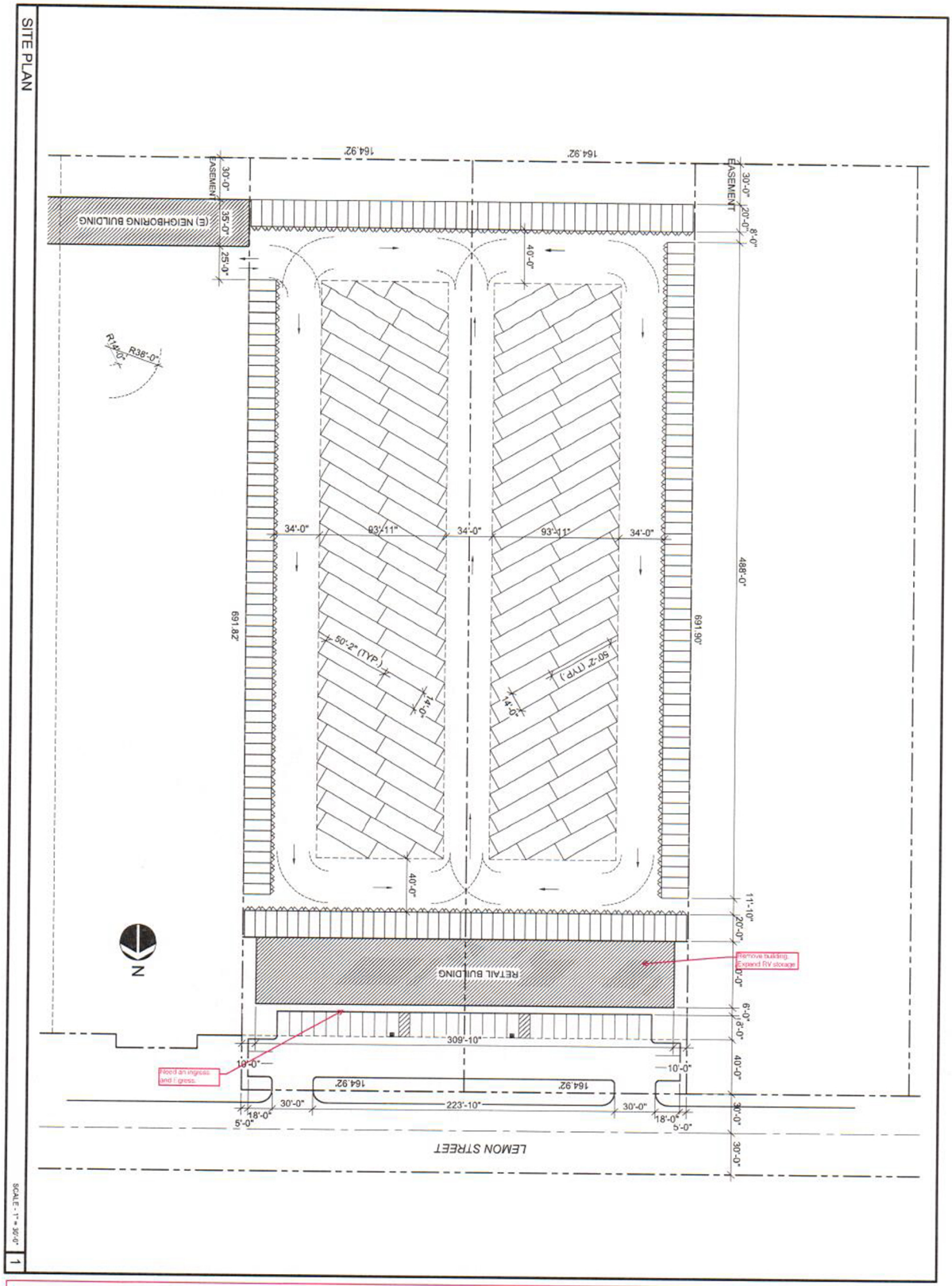


FIGURE 4
SITEPLAN

Table 1 - Plants observed on the site and known to occur in the immediate surrounding area.

Common Name	Scientific Name	Location
Asian mustard	*Brassica tournefortii*	On Site
Joshua Tree	*Yucca brevifolia*	"
Mugwort	*Artemisia douglasiana*	"
Creosote bush	*Larrea tridentata*	"
Silver cholla	*Cylindropuntia echinocarpa*	"
Nevada jointfir	*Ephedra nevadensis*	"

Note: The above list is not intended to be a comprehensive list of every plant which may occur on the site or in the zone of influence.

Table 2 - Wildlife observed on the site during the field investigations.

Common Name	Scientific Name	Location
Common raven	*Corvus corax*	On-site and in the surrounding area.
House finch	*Carpodacus mexicanus*	"
Mourning dove	*Zenaida macroura*	"
Rock pigeon	*Columba livia*	"
Western meadowlark	*Sturnella neglecta*	"
Common side-blotched lizard	*Uta stansburiana*	"

Note: The above Table is not a comprehensive list of every animal species which may occur in the area, but is a list of those common species which were identified on the site or which have been observed in the region by biologists from RCA Associates, Inc.

Appendix B

Regulatory Context

REGULATORY CONTEXT

The following provides a summary of federal and state regulatory jurisdiction over biological and wetland resources. Although most of these regulations do not directly apply to the site, given the general lack of sensitive resources, they provide important background information.

Federal Endangered Species Act

The USFWS has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (ESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the ESA. ESA defines "take" as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Federal regulation 50CFR17.3 defines the term "harass" as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering (50CFR17.3). Furthermore, federal regulation 50CFR17.3 defines "harm" as an act that either kills or injures a listed species. By definition, "harm" includes habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavior patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering (50CFR217.12).

Section10(a) of the ESA establishes a process for obtaining an incidental take permit that authorizes non federal entities to incidentally take federally listed wildlife or fish. Incidental take is defined by ESA as take that is "incidental to, and not the purpose of, the carrying out of another wise lawful activity." Preparation of a habitat conservation plan, generally referred to as an HCP, is required for all Section 10(a) permit applications. The USFWS and National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) have joint authority under the ESA for administering the incidental take program. NOAA Fisheries Service has jurisdiction over anadromous fish species and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the ESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the ESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required

to minimize impacts to all listed species resulting from their actions, including issuance or permits or funding. Section 7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat (ESA requires that the USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered). This consultation results in a Biological Opinion prepared by the USFWS stating whether implementation of the HCP will result in jeopardy to any HCP Covered Species or will adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, section 9 of the ESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other "take" that violates State law. Protection for plants not living on federal lands is provided by the California Endangered Species Act.

California Endangered Species Act

CDFW has jurisdiction over species listed as threatened or endangered under Section 2080 of the California Fish and Wildlife Code. Section 2080 prohibits the take of a species listed by CDFW as threatened or endangered. The state definition of take is similar to the federal definition, except that Section 2080 does not prohibit indirect harm to listed species by way of habitat modification. To qualify as take under the state ESA, an action must have direct, demonstrable detrimental effect on individuals of the species. Impacts on habitat that may ultimately result in effects on individuals are not considered take under the state ESA but can be considered take under the federal ESA.

Proponents of a project affecting a state-listed species must consult with CDFW and enter into a management agreement and take permit under Section 2081. The state ESA consultation process is similar to the federal process. California ESA does not require preparation of a state biological assessment; the federal biological assessment and the CEQA analysis or any other relevant information can provide the basis for consultation. California ESA requires that CDFW coordinate consultation for joint federally listed and state-listed species to the extent possible; generally, the state opinion for the listed species is brief and references provisions under the federal opinion.

Clean Water Act, Section 404

The COE and the U.S. Environmental Protection Agency regulate the placement of dredged or fill material into "Waters of the United States" under Section 404 of the Clean Water Act. Waters of the United States include lakes, rivers, streams, and their tributaries, and wetlands. Wetlands are defined for regulatory purposes as "areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] 328.3, 40 CFR 230.3).

The COE may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits (NWP's) are general permits issued to cover particular fill activities. All NWP's have general conditions that must be met for the permits to apply to a particular project, as well as specific conditions that apply to each NWP.

Clean Water Act, Section 401

Section 401 of the Clean Water Act requires water quality certification and authorization of placement of dredged or fill material in wetlands and Other Waters of the United States. In accordance with Section 401 of the Clean Water Act, criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. As such, proponents of any new project which may impair water quality as a result of the project are required to create a post construction stormwater management plan to insure offsite water quality is not degraded. The resulting requirements are used as criteria in granting National Pollution Discharge Elimination System (NPDES) permits or waivers, which are obtained through the Central Valley Regional Water Quality Control Board (RWQCB). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

California Fish and Wildlife Code, Sections 1600-1616

Under the California Fish and Wildlife Code, Sections 1600-1616 CDFW regulates projects that divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake. Proponents of such projects must notify CDFW and enter into a streambed alteration agreement with them.

Section 1602 of the California Fish and Wildlife Code requires a state or local government agency, public utility, or private entity to notify CDFW before it begins a construction project that will: (1) divert, obstruct, or change the natural flow or the bed, bank, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. Once the notification is filed and determined to be complete, CDFW issues a streambed alteration agreement that contains conditions for construction and operations of the proposed project.

California Fish and Wildlife Code, Section 3503.5

Under the California Fish and Wildlife Code, Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes (hawks, eagles, and falcons) or Strigiformes (owls). Take would include the disturbance of an active nest resulting in the abandonment or loss of young.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term "take" is defined as "to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires." Most bird species native to North America are covered by this act.

Sensitive Natural Communities

The California Office of Planning and Research and the Office of Permit Assistance (1986) define project effects that substantially diminish habitat for fish, wildlife, or plants, or that disrupt or divide the physical arrangement of an established community as significant impacts under CEQA.

This definition applies to certain natural communities because of their scarcity and ecological values and because the remaining occurrences are vulnerable to elimination. For this study, the term "sensitive natural community" includes those communities that, if eliminated or substantially degraded, would sustain a significant adverse impact as defined under CEQA. Sensitive natural communities are important ecologically because their degradation and destruction could threaten populations of dependent plant and wildlife species and significantly reduce the regional distribution and viability of the community. If the number and extent of sensitive natural communities continue to diminish, the status of rare, threatened, or endangered species could become more precarious, and populations of common species (i.e., not special status species) could become less viable. Loss of sensitive natural communities also can eliminate or reduce important ecosystem functions, such as water filtration by wetlands and bank stabilization by riparian woodlands for example.

Protected Plants

The California Desert Native Plant Act was passed in 1981 to protect non-listed California desert native plants from unlawful harvesting on both public and privately-owned lands. Harvest, transport, sale, or possession of specific native desert plants is prohibited unless a person has a valid permit. The following plants are under the protection of the California Desert Native Plants Act:

- Dalea spinosa (smoketree)
- All species of the genus Prosopis (mesquites)
- All species of the family Agavaceae (century plants, nolinas, yuccas)
- All species of Cactus
- Creosote Rings, ten feet in diameter or greater
- All Joshua Trees

The project would be required to comply with the County of San Bernardino Desert Native Plant Protection Ordinance. The removal of any trees listed under Section 88.01.060 would be required to comply with Section 88.01.050, which requires the project applicant to apply for a Tree or Plant Removal Permit prior to removal from the project site.

PROTECTED PLANT PRESERVATION PLAN

CITY OF HESPERIA, CALIFORNIA
APN: 0410-011-32 and 0410-011-33

Prepared for:

Luis Rosas

RCH Group
11060 White Rock Road, Suite 150-A
Rancho Cordova, CA 95670

Prepared by:

RCA Associates, Inc.
15555 Main Street, #D4-235
Hesperia, CA 92345
(760) 956-9212

Biologists:
Ryan Hunter
Lisa Cardoso

Project No: RCA#2021-13 JT

February 8, 2021

TITLE PAGE

Date Report Prepared:	**February 8, 2021**
Field Work Completed:	**February 8, 2021**
Report Title:	**Protected Plant Preservation Plan**
Project Location:	**Hesperia, California** **APN: 0410-011-32 and 0410-011-33**
Prepared for:	**Luis Rosas** **RCH Group** **11060 White Rock Road, Suite 150-A** **Rancho Cordova, CA 95670**
Principal Investigators:	**Ryan Hunter, Environmental Scientist, Biologist** **Lisa Cardoso, Wildlife Biologist**
Contact Information:	**Randall C. Arnold, Jr.** **RCA Associates, Inc.** **15555 Main Street, #D4-235** **Hesperia, CA 92345** **(760) 956-9212** **rarnold@rcaassociatesllc.com** **www.rcaassociatesllc.com**

Table of Contents

Section		Page
1.0	Summary	1
2.0	Introduction and Project Description	2
3.0	Methodologies	3
4.0	Results	4
5.0	Conclusions	6
6.0	References	8
7.0	Certification	9

Appendix A – Figures

Appendix B – City of Hesperia Municipal Code: Chapter 16.24
City of Hesperia Protected Plant Plan

1.0 SUMMARY

At the request of the project proponent, RCA Associates, Inc. surveyed a 5-acre property located south of Lemon Street, east of C Avenue, and west of E Avenue in the City of Hesperia, California (APN: 0410-011-32 & 0410-011-33) (Figures 1 and 2). The property site is located in Section 10, Township 4 North, Range 4 West (USGS Hesperia, CA 7.5-minute quadrangle).

The purpose of the survey was to evaluate the Joshua trees present on site and determine which trees were suitable for relocation and which trees could be discarded prior to site clearing activities. This report provides the results of the Joshua tree survey performed on February 8, 2021. Following completion of the survey, RCA Associates, Inc. prepared this Protected Plant Preservation Plan to assist the project proponent with future relocation of any Joshua trees. Information on the Joshua trees which will need to be relocated-transplanted in the future if deemed transplantable is provided in Section 4.0. The City of Hesperia Municipal Code has a chapter (Chapter 16.24) stating the purpose of the Protected Plant Plan, the importance of preserving the Joshua Tree as an important native desert vegetation, and the consequences of removing a tree without authorization. The requirements of the Ordinance (Chapter 16.24) and the City of Hesperia's Protected Plant Plan are provided in Appendix B.

Based on the results of the field investigations there are 13 Joshua trees which occur within the boundaries of the property (Figures 1, 2 and 3). Based on the evaluation and analysis of each tree it was determined that 1 of the 13 Joshua trees (7.7%) are suitable for transplanting. These trees are marked in red in Table 4-1. The remaining 12 Joshua trees (92.3%) were determined to be unsuitable for transplanting due to a variety of factors such as size, condition, damage, dying, excessive leaning, possibly disease, clonal, etc.

2.0 INTRODUCTION AND PROJECT LOCATION

The area surveyed is located south of Lemon Street, east of C Avenue, and west of E Avenue in the City of Hesperia, California. The property has been previously graded and is heavily disturbed. The site had previously supported a desert scrub community, given the few stranded plants observed on site. The few plants observed on the site include ephedra (*Ephedra nevadensis*), creosote bush (*Larrea tridentata*), silver cholla (*Cylindropuntia echinocarpa*), Asian mustard (*Brassica tournefortii*), and mugwort (*Artemisia douglasiana*). The property is surrounded all around by business and industrial structures.

Joshua trees occur throughout the Mojave Desert in Southern California and are typically found at an elevation of 400 to 1,800 meters (~1,200 to ~5,400 feet). Joshua trees within the western portion of the Mojave Desert typically receive more annual precipitation during "normal" years; consequently, cloning occurs more often resulting in numerous trunks sprouting from the same root system (Rowland, 1978). Joshua tree habitats provide habitat for a variety of wildlife species including desert wood rats (*Neotoma* sp.) and night lizards (*Xantusia* sp.) both of which utilize the base of the trees. A variety of birds also utilize Joshua trees for nesting such as hawks, common ravens, and cactus wrens. CDFW consider Joshua tree woodlands as areas that support relatively high species diversity and as such are considered to be a sensitive desert community. Joshua trees are also considered a significant resource under the California Environmental Quality Act (CEQA) and are included in the Desert Plant Protection Act, Food and Agricultural Code (80001 – 80006).

3.0 METHODOLOGIES

Pedestrian surveys were walked throughout the site and biologists from RCA Associates, Inc. evaluated each Joshua tree to determine which trees were suitable for relocation/transplanting based on a general health assessment. Each Joshua tree received a metal numbered tag which was affixed on the north side of each tree for orientation purposes during future transplanting. Surveyor flagging was also placed around those trees suitable for transplanting to facilitate future identification. The precise location of each tree was recorded using a Garmin GPS unit and a Bushnell Yardage Pro rangefinder was utilized to determine the extent of the property boundaries. Those Joshua trees which occur on the property site are presented in Table 4-1 and the locations are provided in Figure 2.

The factors utilized to determine which Joshua trees were suitable for transplanting include the following factors:

1. Trees from about 1 foot in height up to approximately 12 feet,
2. No visible signs of damage to the tree such as absence of bark due to rodent or other animals,
3. Minimal number of branches (No more than 2 or 3 branches),
4. No excessive leaning of the tree,
5. No yellow or brown fronds,
6. Proximity to other Joshua trees (i.e., clonal), and
7. No exposed roots at the base of the tree.

4.0 RESULTS

There are 13 Joshua trees on the property and the GPS locations of the Joshua trees are provided in Table 4-1. A total of 1 Joshua tree (7.7%) are suitable for relocation/transplanting based on the seven factors listed in Section 3.0 (Table 4-1). The Joshua trees suitable for transplanting should be relocated/transplanted on-site, which is the preferable option, or to an off-site area approved by the City of Hesperia. Those Joshua trees that are not suitable for relocation/transplanting due to size, health of the tree, presence of damage, excessive branches, excessive leaning, clonal, and exposed roots should be disposed of as per City requirements.

Table 4-1: Joshua tree census. (Note: The GPS locations of the Joshua trees are provided below and those trees which are suitable for transplanting on-site as part of project landscaping are highlighted in red.)

Total Number of Joshua Trees On Site	Joshua Trees to be Transplanted	Number of Clonal Trees	Number of Non-Clonal Trees
13	1	3	10

Tag	Height (ft)	Location	Condition	Panicles Branches	Clonal	Transplantable
1996	12	N 34°26.579 W 117°17.401	Good- Multiple Branches	9P 4B		No
1997	18	N 34°26.569 W 117°17.425	Good- Tall	11P 2B		No
1998	16	N 34°26.544 W 117°17.420	Good- Tall	7P 3B		No
1999	13	N 34°26.563 W 117°17.426	Good- Multiple Branches	9P 2B		No
2000	10	N 34°26.538 W 117°17.418	Good	0P 1B	X	No
2701	5	N 34°26.536 W 117°17.418	Good	0P 0B	X	No

Tag	Height (ft)	Location	Condition	Panicles Branches	Clonal	Transplantable
2702	2	N 34°26.528 W 117°17.437	Good- Leaning	9P 4B		No
2703	5	N 34°26.528 W 117°17.443	Good	0P 0B		Yes
2704	14	N 34°26.515 W 117°17.455	Good- Tall	0P 1B		No
2705	17	N 34°26.511 W 117°17.462	Good- Tall	8P 2B		No
2706	5	N 34°26.513 W 117°17.437	Good	0P 0B	X	No
2707	13	N 34°26.512 W 117°17.428	Good- Multiple Branches	0P 4B		No
2708	22	N 34°26.510 W 117°17.411	Good- Leaning	28P 3B		No

(Note: The Tag numbers correspond to the numbers placed on the Joshua trees.)

5.0 CONCLUSIONS

There are 13 Joshua trees located on the property and only 1 of the trees is suitable for relocation/transplanting. This conclusion was based on: (1) trees which were one foot or greater in height and less than twelve feet tall (approximate); (2) in good health; (3), two branches or less; (4) density of trees (i.e., no clonal trees); no exposed roots; and (6) trees that are not leaning over excessively. As indicated in Table 4-1, the majority of the Joshua trees which were not suitable for relocation are relatively large ranging from about 15 to 35 feet in height.

As of September 22, 2020, the California Department of Fish and Wildlife temporarily listed the western Joshua tree (*Yucca brevifolia*) as an endangered species for one year until a final decision is made in 2021. Therefore, any attempt to remove the Joshua tree from its current position will require an Incidental Take Permit (ITP).

The City of Hesperia's Municipal Code (Chapter 16.24) requires preservation of Joshua trees given their importance in the desert community. A qualified City-approved biologist or arborist should be retained to conduct any future relocation/transplanting activities and should follow the protocol of the City's Municipal Code and Protected Native Vegetation Plan provided by the City's Planning Division. The following criteria will be utilized by the contractor when conducting any future transplanting activities.

A. The Joshua trees will be retained in place or replanted somewhere on the site where they can remain in perpetuity or will be transplanted to an off-site area approved by the City where they can remain in perpetuity. Joshua trees which are deemed not suitable for transplanting will be cut-up and discarded as per City requirements.

B. Earthen berms will be created around each tree by the biologist prior to excavation and the trees will be watered approximately one week before transplanting. Watering the trees prior to excavation will help make excavation easier, ensure the root ball will hold together, and minimize stress to the tree.

C. Each tree will be moved to a pre-selected location which has already been excavated and will be placed and oriented in the same direction as their original direction. The hole will be backfilled with native soil, and the transplanted tree will be immediately watered. As noted in Section 3.0, a numbered metal tag was placed on the north side of the trees and the trees were also flagged with surveyor's flagging. The biologist will develop a watering regimen to ensure the survival of the transplanted trees. The watering regimen will be based upon the needs of the trees and the local precipitation.

6.0 REFERENCES

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7.0 CERTIFICATION

I hereby certify the statements furnished above and in the attached exhibits, present the data and information required for this Joshua tree survey and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this survey was performed by Lisa Cardoso and Ryan Hunter.

Date: February 8, 2021 Signed: Lisa Cardoso
Ryan Hunter

Field Work Performed by:

Ryan Hunter
Environmental Scientist/Biologist

Lisa Cardoso
Wildlife Biologist

APPENDIX A

Figures



FIGURE 1: REGIONAL EXHIBIT

RCA ASSOCIATES, INC.
SOURCE: GOOGLE EARTH

RCA
ASSOCIATES, INC.



FIGURE 2: VICINITY EXHIBIT

RCA ASSOCIATES, INC.
SOURCE: GOOGLE EARTH

RCA ASSOCIATES, INC.

RCA ASSOCIATES, INC

South of Lemon Street, East of C Avenue, and West of E Avenue in Hesperia, CA

5-acres



RCA ASSOCIATES, INC.
SOURCE: GOOGLE EARTH

#2021-13 JT

FIGURE 3: LOCATION OF JOSHUA TREES

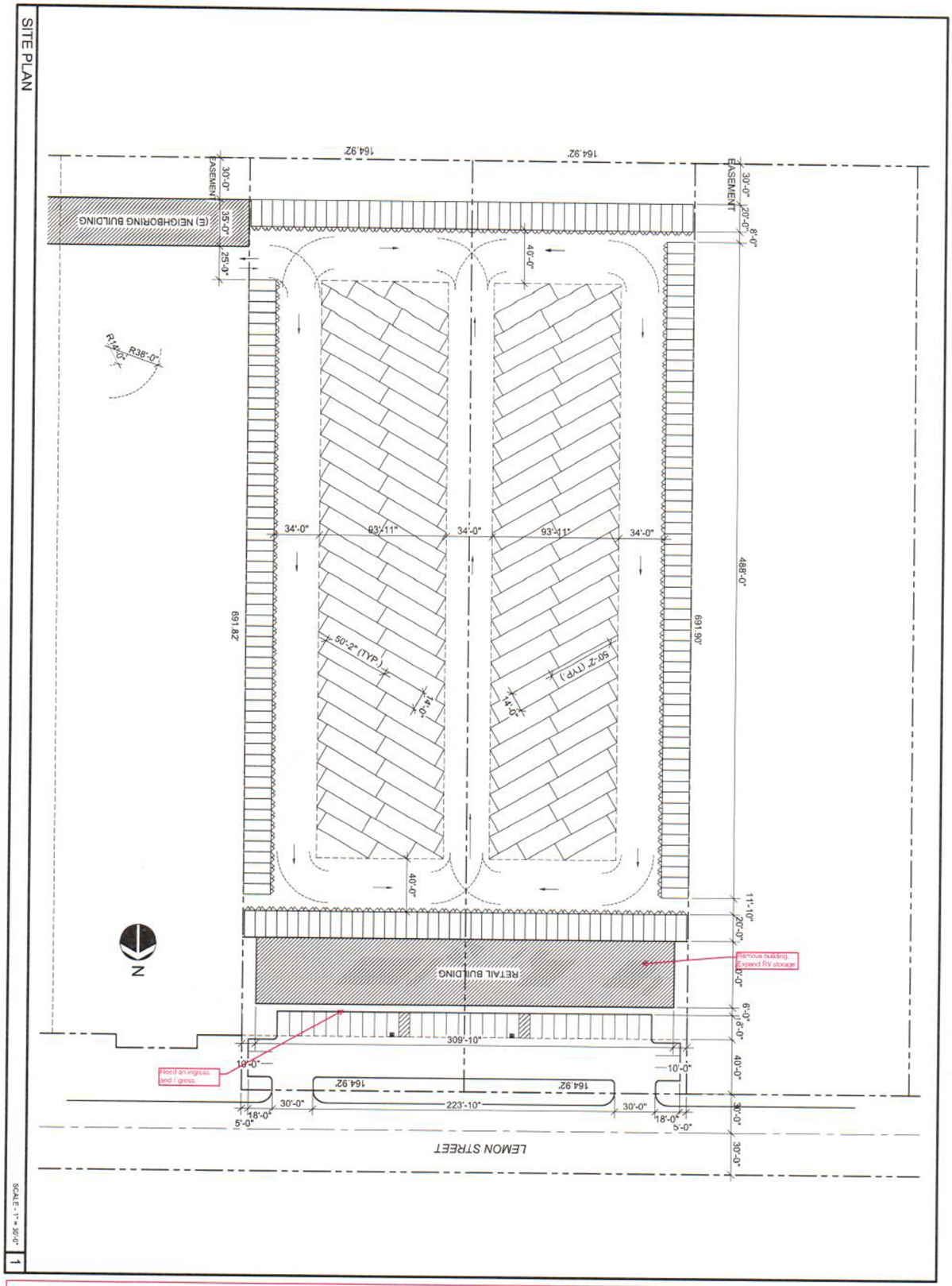


FIGURE 4
SITEPLAN

APPENDIX B

City of Hesperia
Municipal Code: Chapter 13.33

ARTICLE II. - DESERT NATIVE PLANT PROTECTION

16.24.110 - Purpose of provisions.

The city finds that it is in the public interest to preserve and protect specified desert native plants and provide for the conservation and wise use of our desert resources, through regulation, guidelines and enforcement that manage the removal or harvesting of such plants. They are also necessary to augment and coordinate with the State Department of Food and Agriculture in its efforts to implement and enforce the Desert Native Plant Act.

(Ord. 250 (part), 1997; SBCC § 811.0401)

16.24.120 - Scope of provisions.

A. The provisions of this article shall apply to all desert native plants growing on private land within the city and to desert native plants growing on public land owned by the city, county of San Bernardino or the state of California, except as specified by Article I of this chapter and as specified by this section.

B. Except as otherwise provided by this chapter, any person who willfully removes, or harvests or transplants a living desert native plant shall first obtain approval from the county to do so in accordance with the procedures set forth in Sections 16.24.040 or 16.24.110 et seq.

(Ord. 250 (part), 1997; SBCC § 811.0405)

16.24.130 - Commercial harvesting or transplanting of desert native plants.

A. The commercial harvesting of desert native plants shall be prohibited, except as permitted and authorized by the State Department of Food and Agriculture and as specified in the Desert Native Plant Act of 1983, as amended. The San Bernardino County Agricultural Commissioner shall be responsible for the issuance of the appropriate tags, seals and permits required by the state.

1. Protected desert native plants as specified by Section 16.24.150(B) may only be removed by a scientific or educational institution which has obtained a permit from the county agricultural commissioner for a specified number and species of these plants.
2. Written permission must be obtained from and signed by the owner of the property on which the plants are located. A copy of the document granting such permission shall be submitted to the county agricultural commissioner prior to issuance of the permit.

B. An application for a desert native plant commercial harvesting permit shall be filed with the county agricultural commissioner for review and processing. If it is determined that the proposed harvesting would not require an environmental impact report, the agricultural commissioner shall process the permit application in accordance with the provisions of this article. If an environmental impact report is required, the agricultural commissioner shall proceed only after an environmental impact report is certified, the concerns and issues are addressed, and findings made pursuant to law.

(Ord. 250 (part), 1997; SBCC § 811.0410)

16.24.140 - Findings for commercial harvesting or transplanting of desert native plants.

The county agricultural commissioner or other reviewing authority shall only authorize the commercial harvesting or transplanting of desert native plants listed in Section 16.24.150(B) subject to the provisions of this article only if one or more of the following findings are made:

A. The desert native plants are to be transplanted or harvested in a manner approved by the county agricultural commissioner or other reviewing authority, including any requirement for the issuance of plant tag seals and/or wood receipts;

B. The desert native plant is to be transplanted to another property within the same plant habitat under the supervision of a desert native plant expert and the removal of such plant will not adversely affect the desert environment on the subject site;

C. Any desert native plant on the site which is determined by the agricultural commissioner or other reviewing authority as requiring transplanting has or will be transplanted or stockpiled for transplanting in accordance with methods approved by the county agricultural commissioner. A desert native plant expert shall supervise and manage any required transplanting of desert native plants;

D. The harvesting operation has incorporated all mitigation measures, if any, establish by the environmental review action;

E. The harvesting operator has been notified of the availability of all known plants that are proposed to be removed by construction

activity within the vicinity so that these may be used in lieu of those proposed to be harvested.

(Ord. 250 (part), 1997; SBCC § 811.0415)

16.24.150 - Subject desert native plants.

The following desert native plants are subject to the regulations specified by this chapter. In all cases the botanical names shall govern the interpretation of this article.

A. Regulated Desert Native Plants. The following desert native plants, or any part thereof except the fruit, shall not be harvested or removed except under a permit issued by the agricultural commissioner or other applicable reviewing authority:
   1. The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
      a. Dalea, Spinosa (smoketree);
      b. All species of the family Agavaceae (century plants, nolinas, yuccas);
      c. All species of the genus Prosopis (mesquites).
   2. Creosote Rings, ten feet or greater in diameter.
   3. All Joshua trees (mature and immature).

B. All plants protected or regulated by the State Desert Native Plants Act (i.e., Food and Agricultural Code 80001 et seq.) shall be required to comply with the provisions of those statues prior to the issuance of any county development permit or land use application approval. The county agricultural commissioner is the responsible agency for the issuance of any required wood tags, seals or permits.

(Ord. 250 (part), 1997; SBCC § 811.0420)

16.24.160 - Subject area.

This article is applicable only within the city in which these desert native plants grow in a natural habitat.

(Ord. 250 (part), 1997; SBCC § 811.0425)

16.24.170 - Enforcement.

In addition to the enforcement provisions and penalties prescribed in Article I of this chapter and/or the State Food and Agricultural Code, Division 23, Chapter 7, the following shall apply:

A. Upon conviction of a violation of this article, all desert native plant harvesting permits issued to the person convicted shall be revoked and the permittee shall be required to surrender any unused tags and seals or wood receipts to the agricultural commissioner and no new or additional permits shall be issued to the permittee for a period of one year from the date of conviction.

B. Upon the second conviction, all permits issued to the person convicted shall be revoked and the permittee shall be required to surrender any unused tags and seals or wood receipts to the agricultural commissioner and no new or additional permits shall be issued to the permittee at any time in the future from the date of such second conviction.

C. The reviewing authority may revoke any permit, tags, or seals issued for the purpose of harvesting if the permittee willfully fails to comply with all of the conditions or stipulations of the permit.

D. Each permit authorizing the harvesting, or possessing of desert native plants or live or dead mesquite, palo verde, or ironwood species of trees which are harvested for wood shall be accompanied by a sufficient number of tags and seals or wood receipt. Such tags, seals, or wood receipts shall be issued, transported, and may be transferred to other parties in accordance with the California Desert Native Plant Act, as amended.

(Ord. 250 (part), 1997; SBCC § 811.0430)

16.24.180 - Definitions.

Terms and phrases used within this article shall be defined by Chapter 16.08 and/or as defined by the Food and Agricultural Code. The Food and Agricultural Code definition, if one exists, shall prevail over a conflicting definition in this code.

(Ord. 250 (part), 1997; SBCC § 811.0435)

APPENDIX C

ARBORIST REPORT

3/4/23

Billy Phong
Guardian Holding LLC BRE# 01310875
C: (916) 545-8888
E: billyphong@gmail.com
9105 Bruceville Rd, Ste 6A
Elk Grove, CA 95758

Ulysses Carmona | Associate
MAGELLAN ARCHITECTURE
10540 Talbert Ave., Suite 175
Fountain Valley, CA 92708-6027
Office: (949) 515-9600
C: (562) 252-6903

This report is for parcels 0410-11-32 and 0410-11-33 adjcaent to 17147 Lemon St. Hesperia CA 92345. A site visit and field survey was performed on December 4, 2021 and photographs were taken March 3, 2023 to evaluate the parcels for Joshua Trees (Yucca brevifolia ssp. brevifolia), a candidate species under the California Endangered Species Act (CESA), effective October 9, 2020.

The current condition of the property is vacant cleared land and there are no live Joshua Trees present. It appears that the parcels were potentially cleared prior to the site visit in 2021 due to the tire marks and remaining small amounts of vegetation and trash, but the timeline is unknown. Images show recent presense of annual vegetation including Erodium sp., Schismus sp., and Amsinckia sp. Due to Google Earth Pro image history and the presence of Joshua Trees on neighboring properties, these parcels likely had Joshua Trees in the past, but beyond the current state and what is available on Google Earth, the history and conditions of these parcels are unknown.



PARCEL BOUNDARY IN RED IS NOT EXACT
PLEASE CONSULT ARCHITECTS FOR PLANS

MARINNA WAGNER
WE-13354A
ISA CERTIFIED ARBORIST
C: 408.307.2545
E: MARINNAWAGNER@GMAIL.COM

PARCELS FROM THE SOUTHWEST CORNER ON MARCH 3, 2023





PARCELS VIEW FACING EAST ON MARCH 3, 2023



PARCELS FROM THE SOUTHEAST CORNER ON MARCH 3, 2023



PARCELS VIEW FACING WEST ON MARCH 3, 2023





PARCELS VIEW FACING WEST FROM SOUTH END ON MARCH 3, 2023



PARCELS FROM THE SOUTHWEST CORNER ON DECEMBER 4, 2021



PARCELS FROM THE SOUTHEAST CORNER ON DECEMBER 4, 2021



PARCELS FROM THE NORTHEAST CORNER ON DECEMBER 4, 2021



PARCELS FROM THE NORTHWEST CORNER ON DECEMBER 4, 2021



PRESENCE OF YUCCA SPECIES ON DECEMBER 4, 2021 - YUCCA PIECES INCLUDE SMALL PORTIONS OF THE TRUNK WITHOUT THATCH AND 1 SMALL REDDISH ROOT; ALL PIECES APPROX 6” TO 24” IN LENGTH, DRY, AND SCATTERED AROUND. OTHER TREE BRANCHES, SMALL SHRUBS, PINE CONES, AND VARIOUS SMALL TRASH WERE ALSO PRESENT ON THE SITE.







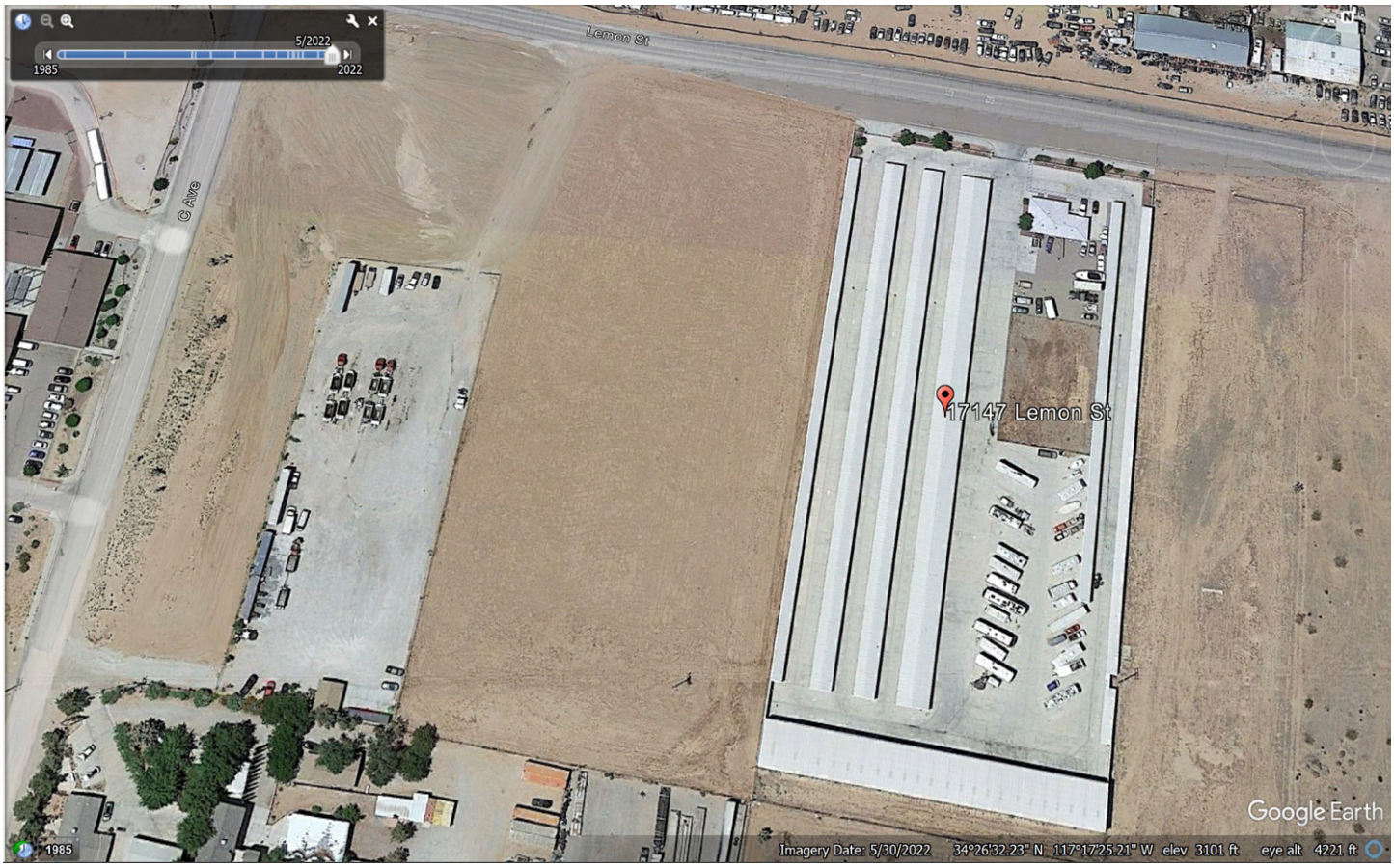


GOOGLE EARTH PRO HISTORICAL IMAGES FROM 8/2018 AND 10/2020. IMAGES SHOW SEVERAL FEATURES THAT MAY HAVE BEEN JOSHUA TREES OF UNDETERMINED CONDITION.





GOOGLE EARTH PRO HISTORICAL IMAGES FROM 5/2022 AND 6/2022. IMAGES SHOW CLEARED LOTS WITH NO VEGETATION.





APPENDIX D

CULTURAL RESOURCES ASSESSMENT

CULTURAL RESOURCES ASSESSMENT

Assessor Parcel Numbers 0410-11-32 and -33
Hesperia, San Bernardino County, California

Prepared for:

Billy Phong
Guardian Holding LLC
9105 Bruceville Road, Suite 6A
Elk Grove, California 95758

Prepared by:

David Brunzell, M.A., RPA
BCR Consulting LLC
Claremont, California 91711

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Resources: None
Keywords: None
USGS Quadrangle: 7.5-minute *Hesperia*, *California* (1980)

BCRCONSULTING LLC

August 9, 2022

MANAGEMENT SUMMARY

BCR Consulting LLC (BCR Consulting) is under contract to Guardian Holding LLC to complete a Cultural Resources Assessment of Assessor Parcel Numbers 0410-11-32 and -33 (the project) located in Hesperia, San Bernardino County, California. A cultural resources records search, intensive-level pedestrian field survey, Native American Heritage Commission (NAHC) Sacred Lands File Search, and vertebrate paleontological resources overview were conducted for the project in partial fulfillment of the California Environmental Quality Act (CEQA). The records search results revealed that nine previous cultural resource studies have taken place, and one cultural resource has been identified within the 0.5-mile research radius of the project site. None of the previous studies have assessed the project site and no cultural resources have been identified within its boundaries. No cultural resources of any kind (including historic-period or prehistoric archaeological resources, or historic-period architectural resources) were identified during the field survey. Therefore, no significant impact related to historical resources is anticipated and no further investigations are recommended for the proposed project unless:

- The proposed project is changed to include areas that have not been subject to this cultural resource assessment;
- Cultural materials are encountered during project activities.

The current study attempted to determine whether significant archaeological deposits were present on the proposed project site. Although none were yielded during the records search and field survey, ground-disturbing activities have the potential to reveal buried deposits not observed on the surface. Prior to the initiation of ground-disturbing activities, field personnel should be alerted to the possibility of buried prehistoric or historic cultural deposits. In the event that field personnel encounter buried cultural materials, work in the immediate vicinity of the find should cease and a qualified archaeologist should be retained to assess the significance of the find. The qualified archaeologist shall have the authority to stop or divert construction excavation as necessary. If the qualified archaeologist finds that any cultural resources present meet eligibility requirements for listing on the California Register or the National Register of Historic Places (National Register), plans for the treatment, evaluation, and mitigation of impacts to the find will need to be developed. Prehistoric or historic cultural materials that may be encountered during ground-disturbing activities include:

- historic-period artifacts such as glass bottles and fragments, cans, nails, ceramic and pottery fragments, and other metal objects;
- historic-period structural or building foundations, walkways, cisterns, pipes, privies, and other structural elements;
- prehistoric flaked-stone artifacts and debitage (waste material), consisting of obsidian, basalt, and or cryptocrystalline silicates;
- groundstone artifacts, including mortars, pestles, and grinding slabs;
- dark, greasy soil that may be associated with charcoal, ash, bone, shell, flaked stone, groundstone, and fire affected rocks;
- human remains.

A Sacred Lands File search with the NAHC was initiated in March. Results of the Sacred Lands File search were positive and the NAHC recommended contacting the Chemehuevi Indian Tribe and the San Manuel Band of Mission Indians for more information. The City will initiate Assembly Bill (AB) 52 Native American Consultation for the project with tribes, as

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According to CEQA Guidelines, projects subject to CEQA must determine whether the project would "directly or indirectly destroy a unique paleontological resource". The Paleontological Overview provided in Appendix B has recommended that:

> The geologic units underlying this project are mapped as older alluvium from the late Pleistocene to early Holocene period (Dibblee and Minch 2008). Pleistocene alluvial units are considered to be highly paleontologically sensitive. The Western Science Center does not have localities within the project area or within a 1 mile radius.
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> Any fossil specimen from the Assessor Parcel Numbers 0410-11-32 and 33 Project would be scientifically significant. Excavation activity associated with the development of the project area would impact the paleontologically sensitive Pleistocene alluvial units, and it is the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils associated with the study area.

If human remains are encountered during any project activities, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

TABLE OF CONTENTS

MANAGEMENT SUMMARY ii

INTRODUCTION 1
REGULATORY SETTING 1

NATURAL SETTING 4
GEOLOGY 4
HYDROLOGY 5
BIOLOGY 5

CULTURAL SETTING 5
PREHISTORY 5
ETHNOGRAPHY 7
HISTORY 7

PERSONNEL 8

METHODS 8
RESEARCH 8
FIELD SURVEY 8

RESULTS 9
RESEARCH 9
FIELD SURVEY 9

RECOMMENDATIONS 9

REFERENCES 11

FIGURES

1: Project Location Map 2

TABLES

A: Cultural Resources and Reports Within One Mile of the Project Site 9

APPENDICES

A: NATIVE AMERICAN HERITAGE COMMISSION CORRESPONDENCE
B: PALEONTOLOGICAL RESOURCES OVERVIEW
C: PROJECT PHOTOGRAPHS
D: RECORDS SEARCH BIBLIOGRAPHY

INTRODUCTION

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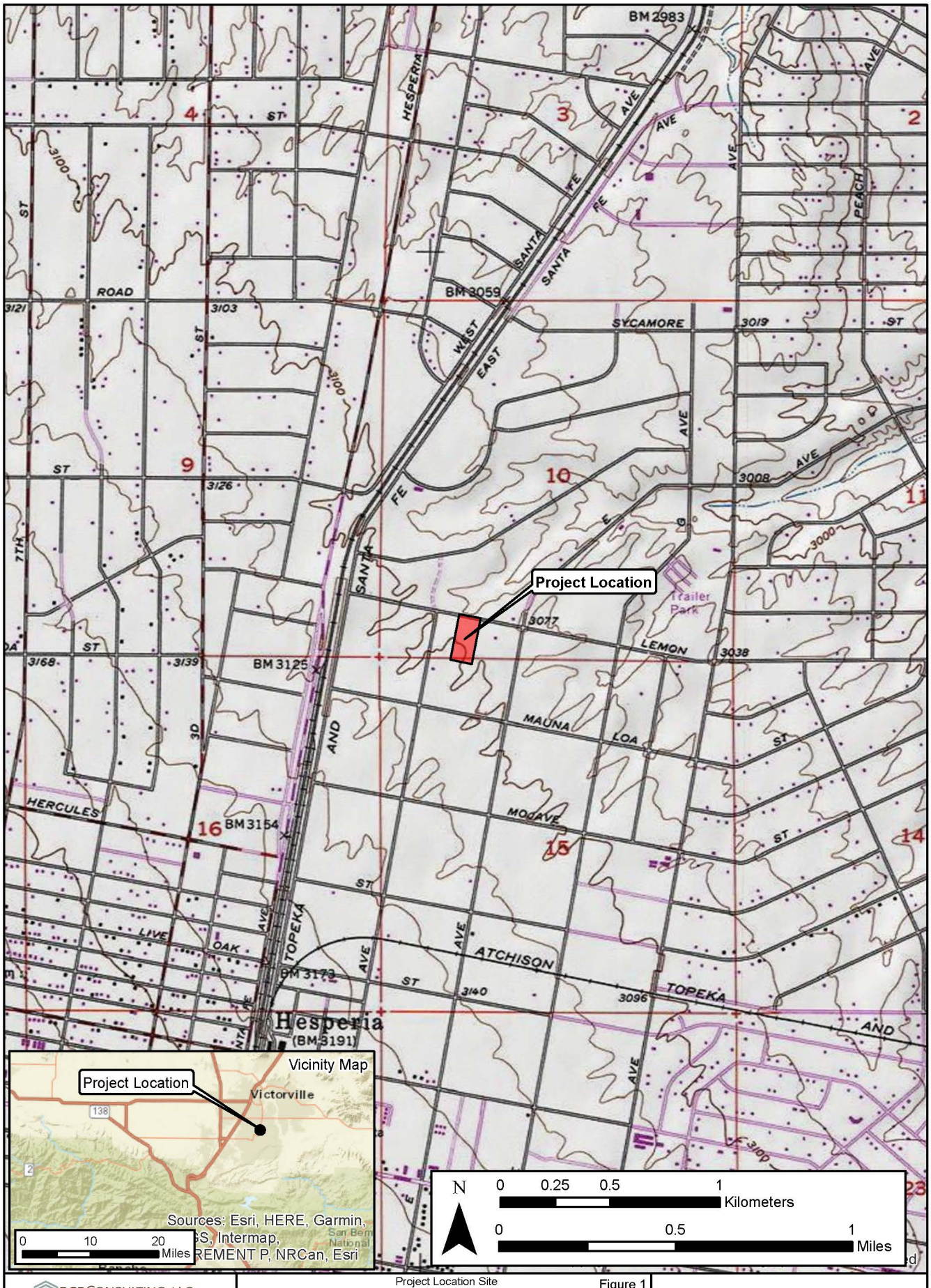
Regulatory Setting

The California Environmental Quality Act. CEQA applies to all discretionary projects undertaken or subject to approval by the state's public agencies (California Code of Regulations 14(3), § 15002(i)). Under CEQA, "A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (Cal. Code Regs. tit. 14(3), § 15064.5(b)). State CEQA Guidelines section 15064.5(a) defines a "historical resource" as a resource that meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register of Historical Resources (California Register)
- Listed in a local register of historical resources (as defined at Cal. Public Res. Code § 5020.1(k))
- Identified as significant in a historical resource survey meeting the requirements of § 5024.1(g) of the Cal. Public Res. Code
- Determined to be a historical resource by a project's lead agency (Cal. Code Regs. tit. 14(3), § 15064.5(a))

A historical resource consists of "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing in the California Register of Historical Resources" (Cal. Code Regs. tit. 14(3), § 15064.5(a)(3)).

The significance of a historical resource is impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for the California Register. If an impact on a historical or archaeological resource is significant, CEQA requires feasible measures to minimize the impact (State CEQA Guidelines § 15126.4 (a)(1)). Mitigation of significant impacts must lessen or eliminate the physical impact that the project will have on the resource. Section 5024.1 of the Cal. Public Res. Code established the California Register. Generally, a resource is considered by the lead agency to be "historically significant" if the resource meets



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Project Location Site
Assessor Parcel Numbers 0410-11-32 and -33 Project
Reference: ESRI; USGS Quad: Hesperia, California (1980)

Figure 1

Guardian Holding LLC

the criteria for listing in the California Register (Cal. Code Regs. tit. 14(3), § 15064.5(a)(3)). The eligibility criteria for the California Register are similar to those of the National Register of Historic Places (National Register), and a resource that meets one or more of the eligibility criteria of the National Register will be eligible for the California Register.

The California Register program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under CEQA. Criteria for Designation:

1. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
2. Associated with the lives of persons important to local, California or national history.
3. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time has passed since a resource's period of significance to "obtain a scholarly perspective on the events or individuals associated with the resources." (CCR 4852 [d][2]). Fifty years is normally considered sufficient time for a potential historical resource, and in order that the evaluation remain valid for a minimum of five years after the date of this report, all resources older than 45 years (i.e. resources from the "historic-period") will be evaluated for California Register listing eligibility, or CEQA significance. The California Register also requires that a resource possess integrity. This is defined as the ability for the resource to convey its significance through seven aspects: location, setting, design, materials, workmanship, feeling, and association.

Finally, CEQA requires that significant effects on unique archaeological resources be considered and addressed. CEQA defines a unique archaeological resource as any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA Guidelines Section 15064.5 Appendix G includes significance criteria relative to archaeological and historical resources. These have been utilized as thresholds of significance here, and a project would have a significant environmental impact if it would:

a) cause a substantial adverse change in the significance of a historical resource as defined in section 10564.5;

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 10564.5;

c) Disturb any human remains, including those interred outside of formal cemeteries.

Tribal Cultural Resources. The Legislature added requirements regarding tribal cultural resources for CEQA in Assembly Bill 52 (AB 52) that took effect July 1, 2015. AB 52 requires consultation with California Native American tribes and consideration of tribal cultural resources in the CEQA process. By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a Proposed Project. Since the City will initiate and carry out the required AB52 Native American Consultation, the results of the consultation are not provided in this report. However, this report may be used during the consultation process, and BCR Consulting staff are available to answer questions and address comments as necessary.

Paleontological Resources. CEQA provides guidance relative to significant impacts on paleontological resources, indicating that a project would have a significant impact on paleontological resources if it disturbs or destroys a unique paleontological resource or site or unique geologic feature. Section 5097.5 of the California Public Resources Code specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, California Penal Code Section 622.5 sets the penalties for damage or removal of paleontological resources. CEQA documentation prepared for projects would be required to analyze paleontological resources as a condition of the CEQA process to disclose potential impacts. Please note that as of January 2018 paleontological resources are considered in the geological rather than cultural category. Therefore, paleontological resources are not summarized in the body of this report. A paleontological overview completed by the Western Science Center is provided as Appendix B.

NATURAL SETTING

Geology

The project is located in the southwestern portion of the Mojave Desert. Sediments within the project boundaries include a geologic unit composed of unconsolidated, undissected alluvial silt, sand, and gravel of valley areas derived from adjacent higher ground deposited in the late Holocene Epoch of the Quaternary Period (Dibblee 2008). Field observations during the

current study are basically consistent with these descriptions, and are described further in Results, below.

Hydrology

The project elevation is approximately 3,060 to 3,020 feet above mean sea level (AMSL). Sheetwashing and some rilling occur generally from the southwest to the northeast. The project site drains into an unnamed and partially channelized wash which runs through the south half of the project area from its western border. Ultimately, the wash drains into the Mojave River at a point approximately 4.25 miles to the northeast. To the south, the peaks of the San Gabriel Mountains rise above 10,000 feet and are often capped with snow until late spring or early summer. The area currently exhibits a relatively arid climate, with dry, hot summers and cool winters. Rainfall ranges from five to 15 inches annually (Jaeger and Smith 1971:36-37). Precipitation usually occurs in the form of winter and spring rain or snow at high elevations, with occasional warm monsoonal showers in late summer.

Biology

The mild climate of the late Pleistocene allowed piñon-juniper woodland to thrive throughout most of the Mojave (Van Devender et al. 1987). The vegetation and climate during this epoch attracted significant numbers of Rancholabrean fauna, including dire wolf, saber toothed cat, short-faced bear, horse, camel, antelope, mammoth, as well as birds which included pelican, goose, duck, cormorant, and eagle (Reynolds 1988). The drier climate of the middle Holocene resulted in the local development of complementary flora and fauna, which remain largely intact to this day. Common native plants include creosote, cacti, rabbit bush, interior golden bush, cheese bush, species of sage, buckwheat at higher elevations and near drainages, Joshua tree, and various grasses. Common native animals include include coyotes, cottontail and jackrabbits, rats, mice, desert tortoises, roadrunners, raptors, turkey vultures, and other bird species (see Williams et al. 2008).

CULTURAL SETTING

Prehistory

The prehistoric cultural setting of the Mojave Desert has been organized into many chronological frameworks (see Warren and Crabtree 1986; Bettinger and Taylor 1974; Lanning 1963; Hunt 1960; Wallace 1958, 1962, 1977; Wallace and Taylor 1978; Campbell and Campbell 1935), although there is no definitive sequence for the region. The difficulties in establishing cultural chronologies for the Mojave are a function of its enormous size and the small amount of archaeological excavations conducted there. Moreover, throughout prehistory many groups have occupied the Mojave and their territories often overlap spatially and chronologically resulting in mixed artifact deposits. Due to dry climate and capricious geological processes, these artifacts rarely become integrated in-situ. Lacking a milieu hospitable to the preservation of cultural midden, Mojave chronologies have relied upon temporally diagnostic artifacts, such as projectile points, or upon the presence/absence of other temporal indicators, such as groundstone. Such methods are instructive, but can be limited by prehistoric occupants' concurrent use of different artifact styles, or by artifact re-use or re-sharpening, as well as researchers' mistaken diagnosis, and other factors (see Flenniken 1985; Flenniken and Raymond 1986; Flenniken and Wilke 1989). Recognizing the shortcomings of comparative temporal indicators, this study synthesizes Warren and Crabree

(1986), who have drawn upon this method to produce a commonly cited and relatively comprehensive chronology.

Paleoindian (12,000 to 10,000 BP) and Lake Mojave (10,000 to 7,000 BP) Periods. Climatic warming characterizes the transition from the Paleoindian Period to the Lake Mojave Period. This transition also marks the end of Pleistocene Epoch and ushers in the Holocene. The Paleoindian Period has been loosely defined by isolated fluted (such as Clovis) projectile points, dated by their association with similar artifacts discovered in-situ in the Great Plains (Sutton 1996:227-228). Some fluted bifaces have been associated with fossil remains of Rancholabrean mammals approximately dated to ca. 13,300-10,800 BP near China Lake in the northern Mojave Desert. The Lake Mojave Period has been associated with cultural adaptations to moist conditions, and resource allocation pointing to more lacustrine environments than previously (Bedwell 1973; Hester 1973). Artifacts that characterize this period include stemmed points, flake and core scrapers, choppers, hammerstones, and crescentics (Warren and Crabtree 1986:184). Projectile points associated with the period include the Silver Lake and Lake Mojave styles. Lake Mojave sites commonly occur on shorelines of Pleistocene lakes and streams, where geological surfaces of that epoch have been identified (Basgall and Hall 1994:69).

Pinto Period (7,000 to 4,000 BP). The Pinto Period has been largely characterized by desiccation of the Mojave. As formerly rich lacustrine environments began to disappear, the artifact record reveals more sporadic occupation of the Mojave, indicating occupants' recession to the more hospitable fringes (Warren 1984). Pinto Period sites are rare, and are characterized by surface manifestations that usually lack significant in-situ remains. Artifacts from this era include Pinto projectile points and a flake industry similar to the Lake Mojave tool complex (Warren 1984), though use of Pinto projectile points as an index artifact for the era has been disputed (see Schroth 1994). Milling stones have also occasionally been associated with sites of this period (Warren 1984).

Gypsum Period. (4,000 to 1,500 BP). A temporary return to moister conditions during the Gypsum Period is postulated to have encouraged technological diversification afforded by the relative abundance of resources (Warren 1984:419-420; Warren and Crabtree 1986:189). Lacustrine environments reappear and begin to be exploited during this era (Shutler 1961, 1968). Concurrently a more diverse artifact assemblage reflects intensified reliance on plant resources. The new artifacts include milling stones, mortars, pestles, and a proliferation of Humboldt Concave Base, Gypsum Cave, Elko Eared, and Elko Corner-notched dart points (Warren 1984; Warren and Crabtree 1986). Other artifacts include leaf-shaped projectile points, rectangular-based knives, drills, large scraper planes, choppers, hammer stones, shaft straighteners, incised stone pendants, and drilled slate tubes. The bow and arrow appears around 2,000 BP, evidenced by the presence of a smaller type of projectile point, the Rose Spring point (Rogers 1939; Shutler 1961).

Saratoga Springs Period (1,500 to 800 BP). During the Saratoga Springs Period regional cultural diversifications of Gypsum Period developments are evident within the Mojave. Basketmaker III (Anasazi) pottery appears during this period, and has been associated with turquoise mining in the eastern Mojave Desert (Warren and Crabtree 1986:191). Influences from Patayan/Yuman assemblages are apparent in the southern Mojave, and include buff and brown wares often associated with Cottonwood and Desert Side-notched projectile points (Warren 1984:423). Obsidian becomes more commonly used throughout the Mojave and characteristic artifacts of the period include milling stones, mortars, pestles, ceramics, and

ornamental and ritual objects. More structured settlement patterns are evidenced by the presence of large villages, and three types of identifiable archaeological sites (major habitation, temporary camps, and processing stations) emerge (McGuire and Hall 1988). Diversity of resource exploitation continues to expand, indicating a much more generalized, somewhat less mobile subsistence strategy.

Shoshonean Period (800 BP to Contact). The Shoshonean period is the first to benefit from contact-era ethnography –as well as be subject to its inherent biases. Interviews of living informants allowed anthropologists to match artifact assemblages and particular traditions with linguistic groups, and plot them geographically (see Kroeber 1925; Gifford 1918; Strong 1929). During the Shoshonean Period continued diversification of site assemblages, and reduced Anasazi influence both coincide with the expansion of Numic (Uto-Aztecan language family) speakers across the Great Basin, Takic (Uto-Aztecan language family) speakers into southern California, and the Hopi across the Southwest (Sutton 1996). Hunting and gathering continued to diversify, and the diagnostic arrow points include desert side-notch and cottonwood triangular. Ceramics continue to proliferate, though are more common in the southern Mojave during this period (Warren and Crabtree 1986). Trade routes have become well established across the Mojave, particularly the Mojave Trail, which transported goods and news across the desert via the Mojave River, to the west of the current project. Trade in the western Mojave was more closely related to coastal groups than others.

Ethnography

The Uto-Aztecan “Serrano” people occupied the western Mojave Desert periphery. Kroeber (1925) applied the generic term “Serrano” to four groups, each with distinct territories: the Kitanemuk, Tataviam, Vanyume, and Serrano. Only one group, in the San Bernardino Mountains and West-Central Mojave Desert, ethnically claims the term Serrano. Bean and Smith (1978) indicate that the Vanyume, an obscure Takic population, was found along the Mojave River at the time of Spanish contact. The Kitanemuk lived to the north and west, while the Tataviam lived to the west. The Serrano lived mainly to the south (Bean and Smith 1978). All may have used the western Mojave area seasonally. Historical records are unclear concerning precise territory and village locations. It is doubtful that any group, except the Vanyume, actually lived in the region for several seasons yearly.

History

Historic-era California is generally divided into three periods: the Spanish or Mission Period (1769 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American Period (1848 to present).

Spanish Period. The first European to pass through the project area is thought to be a Spaniard called Father Francisco Garces. Having become familiar with the area, Garces acted as a guide to Juan Bautista de Anza, who had been commissioned to lead a group across the desert from a Spanish outpost in Arizona to set up quarters at the Mission San Gabriel in 1771 near what today is Pasadena (Beck and Haase 1974). This is the first recorded group crossing of the Mojave Desert and, according to Father Garces’ journal, they camped at the headwaters of the Mojave River, one night less than a day’s march from the mountains. Today, this is estimated to have been approximately 11 miles southeast of Victorville (Marenczuk 1962). Garces was followed by Alta California Governor Pedro Fages, who briefly explored the western Mojave region in 1772. Searching for San Diego Presidio deserters, Fages had traveled north through Riverside to San Bernardino, crossed over the mountains into the

Mojave Desert, and then journeyed westward to the San Joaquin Valley (Beck and Haase 1974).

Mexican Period. In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes (Beattie and Beattie 1974).

American Period. The American Period, 1848–Present, began with the Treaty of Guadalupe Hidalgo. The Gold Rush had attracted huge numbers of American settlers and in 1850, California was accepted into the Union. The cattle industry reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849–1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep and cattle from the eastern U.S. When the beef market collapsed, many California ranchers lost their ranchos. A series of disastrous floods in 1861–1862, followed by a significant drought diminished the economic impact of local ranching. This decline combined with ubiquitous agricultural and real estate developments of the late 19th century, set the stage for diversified economic pursuits that have continued to proliferate to this day (Beattie and Beattie 1974; Cleland 1941).

PERSONNEL

David Brunzell, M.A., RPA acted as the Project Manager/Principal Investigator for the current study, and authored the technical report. Mr. Brunzell performed the records search through the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. BCR Consulting Archaeological Crew Chief, Nichola Shepetuk and Staff Archaeologist Johnny Defachelle carried out the pedestrian field survey.

METHODS

Research

Mr. Brunzell completed an archaeological records search using SCCIC records of California State University, Fullerton for the current project. This archival research reviewed the status of all recorded historic and prehistoric cultural resources, and survey and excavation reports completed within the project site boundaries and within a 0.5-mile radius of it. Additional resources reviewed included the National Register of Historic Places (National Register), the California Register, the Built Environmental Resource Directory (BERD), and documents and inventories published by the California Office of Historic Preservation. These include the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and the Inventory of Historic Structures.

Field Survey

An intensive-level cultural resources field survey of the project site was conducted on June 3, 2022. The survey was conducted by walking parallel transects spaced approximately 15 meters apart across the project site. Digital photographs were taken at various points within the project site.

RESULTS

Research

Data from the South Central Coastal Information Center (SCCIC) revealed that nine previous cultural resource studies have taken place, and one cultural resource has been identified within the 0.5-mile research radius of the project site. None of the previous studies have assessed the project site and no cultural resources have been identified within its boundaries. The records search is summarized in Table A, and a bibliography is provided as Appendix D.

Table A. Cultural Resources and Reports Within One Half-Mile of the Project Site

USGS Quad	Cultural Resources	Studies
Hesperia, California (1980)	P-36-20419: Historic-Period Structure Foundations and Refuse (Adjacent East)	SB-2667, 4413, 4970, 5766, 6120, 6538, 7156, 7495, 7496

Field Survey

During the field survey, BCR Consulting archaeologists identified no cultural resources (including historic-period or prehistoric archaeological sites, or historic-period architectural resources) of any kind within the project site boundaries. The project has been subject to severe artificial disturbances associated with vegetation clearing and discing for weed abatement. Vegetation consisted of sparse non-native scrub and seasonal grasses which afforded surface visibility of approximately 95 percent. Surficial sediments observed were chiefly composed of dry, yellowish-brown sandy silt, with relatively low levels of subangular gravel.

RECOMMENDATIONS

BCR Consulting conducted a cultural resources assessment of Assessor Parcel Numbers 0410-11-32 and -33 in the City of Hesperia, San Bernardino County, California. No cultural resources of any kind (including historic-period or prehistoric archaeological resources, or historic-period architectural resources) were identified. Therefore, no significant impact related to historical resources is anticipated and no further investigations are recommended unless:

- The proposed project is changed to include areas that have not been subject to this cultural resource assessment;
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APPENDIX A

NATIVE AMERICAN HERITAGE COMMISSION CORRESPONDENCE

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
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Luiseño

VICE CHAIRPERSON
Reginald Pagaling
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PARLIAMENTARIAN
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Kumeyaay

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Raymond C. Hitchcock
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NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

June 20, 2022

David Brunzell
BCR Consulting, LLC

Via Email to: bcrllc2008@gmail.com

Re: Assessor Parcel Numbers 0410-11-32 and -33 (GHL2201) Project, San Bernardino County

Dear Mr. Brunzell:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Chemehuevi Indian Tribe and the San Manuel Band of Mission Indians on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological 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. Please contact all of those listed; if they cannot supply information, they may 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 the NAHC. 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

Native American Heritage Commission
Native American Contact List
San Bernardino County
6/20/2022

Chemehuevi Indian Tribe
Sierra Pencille, Chairperson
P.O. Box 1976 1990 Palo Verde Drive
Havasu Lake, CA, 92363
Phone: (760) 858 - 4219
Fax: (760) 858-5400
chairman@cit-nsn.gov
Chemehuevi

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov
Cahuilla
Serrano

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov
Cahuilla
Serrano

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com
Quechan

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com
Quechan

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838
Newhall, CA, 91322
Phone: (503) 539 - 0933
Fax: (503) 574-3308
ddyocum@comcast.net
Kitanemuk
Vanyume
Tataviam

San Manuel Band of Mission Indians
Jessica Mauck, Director of Cultural Resources
26569 Community Center Drive
Highland, CA, 92346
Phone: (909) 864 - 8933
Jessica.Mauck@sanmanuel-nsn.gov
Serrano

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com
Serrano

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com
Serrano

Twenty-Nine Palms Band of Mission Indians
Darrell Mike, Chairperson
46-200 Harrison Place
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-nsn.gov
Chemehuevi

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 Assessor Parcel Numbers 0410-11-32 and -33 (GHL2201) Project, San Bernardino County.

Twenty-Nine Palms Band of Mission Indians
Anthony Madrigal, Tribal Historic Preservation Officer
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-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 Assessor Parcel Numbers 0410-11-32 and -33 (GHL2201) Project, San Bernardino County.

APPENDIX B

PALEONTOLOGICAL RESOURCES OVERVIEW

WESTERN SCIENCE CENTER

May 26, 2022

BCR Consulting, LLC
Joseph Orozco
505 W. 8th St.
Claremont, CA 91711

Dear Mr. Orozco,

This letter presents the results of a record search conducted for the Assessor Parcel Numbers 0410-11-32 and 33 Project located in the City of Hesperia, San Bernardino County, California. The project site is located north of Mauna Loa Street, south of Lemon Street, and west of E Avenue on Township 4 North, Range 4 West, Sections 10 and 15 on the *Adelanto, CA* USGS 7.5 minute quadrangle.

The geologic units underlying this project are mapped as older alluvium from the late Pleistocene to early Holocene period (Dibblee and Minch 2008). Pleistocene alluvial units are considered to be highly paleontologically sensitive. The Western Science Center does not have localities within the project area or within a 1 mile radius.

Any fossil specimen from the Assessor Parcel Numbers 0410-11-32 and 33 Project would be scientifically significant. Excavation activity associated with the development of the project area would impact the paleontologically sensitive Pleistocene alluvial units, and it is the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils associated with the study area.

If you have any questions, or would like further information, please feel free to contact me at bstoneburg@westerncentermuseum.org.

Sincerely,

Brittney Elizabeth Stoneburg
Collections Technician

Assessor Parcel Numbers 0410-11-32 and 33 Project

project area + 1 mile radius

Legend

- 1 Mile Radius
- Assessor Parcel Numbers 0410-11-32 and 33 Project
- Q: Quaternary alluvium and marine deposits (Pliocene to Holocene)

LKQ Pick Your Part - Hesperia
AIM Recycling Hesperia
Hesperia Animal Services
Advance Disposal
SA Recycling
Encore High School for the Arts - High...
Holy Family Church
Lemon St
Eucalyptus St
Mauna Loa St
Willow St
Seventh Ave
Sixth Ave
Hesperia Rd
E Ave
F Ave
Peach Ave

Google Earth

4000 ft

N

APPENDIX C

PROJECT PHOTOGRAPHS



Photo 1



Photo 2



Photo 3



Photo 4

APPENDIX D

RECORDS SEARCH BIBLIOGRAPHY

Report List

GHL2201

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-02667	NADB-R - 1062667; Voided - 92-6.8	1992	MCKENNA, JEANETTE A.	A PHASE I LINEAR SURVEY: CULTURAL RESOURCES INVESTIGATIONS FOR THE CITY OF HESPERIA INDUSTRIAL REVITALIZATION IMPROVEMENT DISTRICT (91-020), A-1 (A.P.N. 410), HESPERIA, SAN BERNARDINO COUNTY, CALIFORNIA	MCKENNA ET AL.	
SB-04413	NADB-R - 1064413	2004	CERRETO, RICHARD and CHRISTY MALAN	CULTURAL RESOURCE ASSESSMENT FOR 5.62 ACRES IN THE CITY OF HESPERIA, SAN BERNARDINO COUNTY, CA. 21PP	ANALYTIC ARCHAEOLOGY	36-020419
SB-04970	NADB-R - 1064970	2005	Goodwin, Riordan and David Brunzell	Cultural Resource Assessment: Centex Homes-Mojave Street Project, City of Hesperia, San Bernardino County, California.	LSA	
SB-05766	NADB-R - 1065766	1997	Love, Bruce	Cultural Resources Report: Bakersfield—Rialto Fiberoptic Line Project, Kern, Los Angeles and San Bernardino Counties, California.	CRM TECH	
SB-06120	NADB-R - 1066120	2006	Lantsberger, Steven J.	Form SF-424 Preapplication for Economic Development Administration (EDA) Grant Funds.	City of Hesperia	
SB-06538		2009	Bonner, Diane F. and Robert J. Wlodarski	Cultural Resources Record Search and Archaeological Survey Results for the proposed Royal Street Communications, California LLC, Site LA3326A (Animal Control Yard) located at 11011 Santa Fe Avenue East, Hesperia, San Bernardino County, California 92345-8307	HEART	
SB-07156	NADB-R - 1067156	2011	Tang, Bai “Tom”, Daniel Ballester, and Nina Gallardo	Historical/Archaeological Resources Survey Report: Water Supply System Improvements Projects, Fiscal Years 2010/2011 – 2014/2015, Victorville Water District, San Bernardino County, California.	CRM TECH	36-000968, 36-002910, 36-006793, 36-007545, 36-007694, 36-009360, 36-010316, 36-012658
SB-07495	NADB-R - 1067495	2011	Gust, Sherri and Molly Valasik	Cultural Resource Assessment for the Mojave Water Agency Groundwater Regional Recharge and Recovery (R3) Project, San Bernardino County, California.	Cogstone	36-002910, 36-003033, 36-004179, 36-004269, 36-004272, 36-004275, 36-006793, 36-007545, 36-007694, 36-010316, 36-021744, 36-021745, 36-021746, 36-021747, 36-021748, 36-021749, 36-021750, 36-021751, 36-021752, 36-021753, 36-021754, 36-021755

Report List

GHL2201

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-07496	NADB-R - 1067496	2012	Gust, Sherri and Courtney Richards	Monitoring Compliance Report for Construction of the Mojave Water Agency Regional Recharge and Recovery (R3) Project, San Bernardino County, California.	Cogstone	

Resource List

GHL2201

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-36-020419		Resource Name - TS-1	Site	Historic	AH02; AH04	2004 (MALAN+CUNNINGHAM, Analytic Archaeology)	SB-04413

APPENDIX E

MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MONITORING AND REPORTING PROGRAM – GUARD DOG OF HESPERIA SELF-STORAGE AND RV PARKING EXPANSION PROJECT

Mitigation Measure	Enforcement and Monitoring Responsibility	Timing/ Implementation	Verification (Date and Initials)
BIOLOGICAL RESOURCES			
Mitigation Measure BIO-1: Vegetation clearing and ground disturbance shall be prohibited during the migratory bird nesting season (February 1 through September 15), unless a migratory bird nesting survey is completed in accordance with the following requirements: a. A migratory bird nesting survey of the Project's impact footprint, including suitable habitat within a 500-foot radius, shall be conducted by a qualified biologist within three (3) days prior to initiating vegetation clearing or ground disturbance. b. A copy of the migratory bird nesting survey results shall be provided to the City of Hesperia. If the survey identifies the presence of active nests, then the qualified biologist shall provide the City with a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be subject to review and approval by the City and shall be no less than a 100-foot radius around the nest for non-raptors and no more than a 500-foot radius around the nest for raptors. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing, within which no vegetation clearing or ground disturbance shall commence until the qualified biologist and the City verify that the nests are no longer occupied and juvenile birds can survive independently from the nests.	City of Hesperia Development Services Department, Planning Department; Construction Contractor	Within three (3) days prior to site disturbance	
Mitigation Measure BIO-2: Within 30 days prior to grading, a qualified biologist shall conduct a survey of suitable habitat on site and make a determination regarding the presence or absence of the burrowing owl. The determination shall be documented in a report and shall be submitted, reviewed, and accepted by the City of Hesperia prior to the issuance of a grading permit and subject to the following provisions: a. In the event that the pre-construction survey identifies no burrowing owls on the property, a grading permit may be issued without restriction. b. In the event that the pre-construction survey identifies the presence of at least one individual burrowing owl, then prior to the issuance of a grading permit and prior to the commencement of ground-disturbing activities on the property, the qualified biologist shall passively or actively relocate any burrowing owls. Passive relocation, including the required use of one-way	City of Hesperia Development Services Department, Planning Department; Construction Contractor	Within thirty (30) days prior to site disturbance	

Mitigation Measure	Enforcement and Monitoring Responsibility	Timing/ Implementation	Verification (Date and Initials)
doors to exclude owls from the site and the collapsing of burrows, will occur if the biologist determines that the proximity and availability of alternate habitat is suitable for successful passive relocation. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. If proximate alternate habitat is not present as determined by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit.			
Mitigation Measure BIO-3: Removal of any living or dead western Joshua tree is prohibited by the CDFW due to the species being listed as "candidate threatened". Any attempt to remove or relocate western Joshua tree will require the application and approval of an Incidental Take Permit (ITP).	City of Hesperia Development Services Department, Planning Department; Construction Contractor	Prior to the removal of any living or dead western Joshua tree	
CULTURAL RESOURCES			
Mitigation Measure CUL-1: In the event that cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the Project outside of the buffered area may continue during this assessment period. Additionally, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as detailed within **Mitigation Measure TCR-1**, regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.	City of Hesperia Development Services Department, Planning Department; Construction Contractor; Consulting Archaeologist	Immediately upon discovery	
Mitigation Measure CUL-2: If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within **Mitigation Measure TCR-1.** The archaeologist shall monitor the remainder of the Project and implement that Plan accordingly.	City of Hesperia Development Services Department, Planning Department; Construction Contractor; Consulting Archaeologist	Immediately upon discovery	

MITIGATION MONITORING AND REPORTING PROGRAM – GUARD DOG OF HESPERIA SELF-STORAGE AND RV PARKING EXPANSION PROJECT

Mitigation Measure	Enforcement and Monitoring Responsibility	Timing/ Implementation	Verification (Date and Initials)
CULTURAL RESOURCES (cont.)			
Mitigation Measure CUL-3: If human remains or funerary objects are encountered during any activities associated with the Project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the Project.	City of Hesperia Development Services Department, Planning Department; County Coroner	Immediately upon discovery	
GEOLOGY AND SOILS			
Mitigation Measure GEO-1: In the event a paleontological resources or other geologically sensitive resources (such as fossils or fossil formations) are identified during any phase of Project-related work, regardless of depth of work or location, work shall be halted within 30 feet of the find and a qualified paleontologist shall be notified immediately so that an assessment of its potential significance can be undertaken. If determined to be significant, the fossil shall be collected from the field. The paleontologist may also make recommendations regarding additional mitigation measures, such as paleontological monitoring. The paleontologist shall notify the appropriate representative at the City of Hesperia Planning Department who shall coordinate with the paleontologist as to any necessary investigation of the find. If scientifically significant paleontological resources are collected, a report of findings shall be prepared to document the collection. This measure shall be implemented to the satisfaction of the City of Hesperia Planning Department.	City of Hesperia Development Services Department, Planning Department; Construction Contractor; Consulting Paleontologist	Immediately upon discovery	
TRIBAL CULTURAL RESOURCES			
Mitigation Measure TCR-1: The Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as detailed in **Mitigation Measure CUL-1,** of any pre-contact and/or historic-era cultural resources discovered during Project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the Project, should YSMN elect to place a monitor on-site.	City of Hesperia Development Services Department, Planning Department; Consulting Archaeologist	Immediately upon discovery	

MITIGATION MONITORING AND REPORTING PROGRAM – GUARD DOG OF HESPERIA SELF-STORAGE AND RV PARKING EXPANSION PROJECT

Mitigation Measure	Enforcement and Monitoring Responsibility	Timing/ Implementation	Verification (Date and Initials)
TRIBAL CULTURAL RESOURCES (cont.)			
Mitigation Measure TCR-2: Any and all archaeological/cultural documents created as part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to YSMN. The Lead Agency and/or applicant shall, in good faith, consult with YSMN throughout the life of the Project.	City of Hesperia Development Services Department, Planning Department; Consulting Archaeologist	On-going	