Biological Resources Technical Report

Kiss Logistics Center

JULY 2023

Prepared for:

KISS Hesperia Venture, LLC.
25 Harbor Park Drive
Port Washington, New York 11050
Contact: Jin Kim

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Anna Cassady

Printed on 30% post-consumer recycled material.

Table of Contents

SECTION **PAGE NO.**

Acronyms and Abbreviations v

1 Introduction 1
1.1 Project Description 1
1.1.1 Project Location 1
1.1.2 Project Components 1

2 Regulatory Setting 3
2.1 Federal 3
2.1.1 Federal Endangered Species Act 3
2.1.2 Migratory Bird Treaty Act 3
2.1.3 Clean Water Act 3
2.2 State 5
2.2.1 California Endangered Species Act 5
2.2.2 California Fish and Game Code 6
2.2.3 California Environmental Quality Act 7
2.2.4 Porter–Cologne Water Quality Control Act 7
2.2.5 California Native Desert Plants Act 8
2.3 Local 8
2.3.1 San Bernardino County General Plan and Development Code 8
2.3.2 City of Hesperia General Plan 9
2.3.3 Hesperia Municipal Code, Chapter 16.24—Protected Plant Policy 9

3 Methods 13
3.1 Literature Review 13
3.2 Field Surveys 14
3.2.1 Vegetation Community and Land Cover Mapping 15
3.2.2 Flora 15
3.2.3 Fauna 15
3.2.4 Special-Status and Regulated Resources 16
3.2.5 Survey Limitations 19

4 Environmental Setting 21
4.1 Climate 21
4.2 Geology and Topography 21
4.3 Soils 21
4.4 Surrounding Land Uses 21
4.5 Watersheds and Hydrology 22

5 Results 23
5.1 Vegetation Communities and Land Covers 23
5.1.1 Desert Almond—Mexican Bladdersage Scrub 24
5.1.2 Joshua Tree Woodland 24
5.1.3 California Buckwheat Scrub 24
5.1.4 Rubber Rabbitbrush Scrub 25
5.1.5 Urban/Developed Land 25
5.1.6 Disturbed Habitat 25
5.2 Plants and Wildlife Observed 26
5.2.1 Plants 26
5.2.2 Wildlife 26
5.3 Special-Status and Regulated Resources 26
5.3.1 Special-Status Plants 26
5.3.2 Special-Status Wildlife 28
5.3.3 Potential Aquatic Resources 31
5.4 Wildlife Corridors and Habitat Linkages 32
6 Project Impacts 33
6.1 Explanation of Findings of Significance 33
6.2 Definition of Impacts 34
6.3 Impacts Analysis 34
6.3.1 Impact BIO-1: Special-Status Species 35
6.3.2 Impact BIO-2: Sensitive Vegetation Communities 44
6.3.3 Impact BIO-3: State or Federally Protected Wetlands 45
6.3.4 Impact BIO-4: Wildlife Corridors and Habitat Linkages 46
6.3.5 Impact BIO-5: Associated with Local Policies and Ordinances 46
6.3.6 Impact BIO-6: Habitat Conservation Plans 47
7 Mitigation 49
8 References 55

TABLES

1 Survey Conditions 14
2 Vegetation Communities and Land Cover Types within the BSA 23
3 Special-Status Plant Species Observed or with Moderate or High Potential to Occur within the BSA 27
4 Special-Status Wildlife Species Observed or with Moderate or High Potential to Occur within the BSA 28
5 Impacts to Vegetation Communities and Land Cover Types within the BSA 34

APPENDICES

A Figures
B Photo Documentation
C Mohave Ground Squirrel Protocol Survey Report
D Plant Compendium
E Wildlife Compendium
F Special-Status Plants Potentially Occurring within the BSA
G Special-Status Wildlife Potentially Occurring within the BSA
H Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan
I Burrowing Owl Relocation Plan

INTENTIONALLY LEFT BLANK

Acronyms and Abbreviations

Acronym	Definition
amsl	above mean sea level
BLM	Bureau of Land Management
BMP	best management practice
BSA	biological survey area
CDNPA	California Desert Native Plants Act
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Commission	California Fish and Game Commission
County	County of San Bernardino
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DWR	California Department of Water Resources
°F	Fahrenheit
FESA	Federal Endangered Species Act
General Plan	County of San Bernardino General Plan
GIS	geographic information system
HUC	Hydrologic Unit Code
I	Interstate
MBTA	Migratory Bird Treaty Act
OHWM	ordinary high water mark
Project	KISS Logistics Center
RWQCB	Regional Water Quality Control Board
SWP	California State Water Project
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

INTENTIONALLY LEFT BLANK

1 Introduction

This report documents the results of surveys conducted to identify potential biological resource constraints for the Kiss Logistics Center (Project) located in the City of Hesperia (City), San Bernardino County, California. A cumulative analysis of the Project is provided within this report. Figure 1, Regional Map, shows the regional location of the Project, and the site vicinity. All figures are provided in Appendix A.

The purpose of this report is to (1) describe the conditions of biological resources within the Project site in terms of vegetation communities, plants, wildlife, wildlife habitats, and wetlands; (2) quantify potential direct and indirect impacts to special-status biological resources that would result from the Project; (3) discuss those impacts in terms of biological significance in view of federal, state, and local laws and policies (specifically, the County of San Bernardino General Plan and the City of Hesperia General Plan and Municipal Code); and (4) specify measures to avoid, minimize, and/or mitigate any significant impacts that would occur to special-status biological resources as a result of project implementation.

1.1 Project Description

1.1.1 Project Location

The approximately 38.3-acre Project, including the 29.5-acre Project site and 8.9 acres of off-site improvements,[1] is located in the City of Hesperia (City), which is located in San Bernardino County (Figure 1, Regional Map; Figure 2, Project Vicinity Map). The proposed Project is located west of U.S. Highway 395 and north of Phelan Road, and south of Yucca Terrace Drive, within the City. The project site is identified by Assessor's Parcel Numbers 3064-401-03, 3064-401-04, and 3064-401-05. Specifically, the Project is located in Sections 15, 16, 21, and 22, Township 4 North, and Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California 7.5-minute topographic quadrangle map.

1.1.2 Project Components

The proposed Project will consist of constructing a new warehouse building, as well as providing landscaping, sidewalks, utility connections, stormwater facilities, and paved parking areas and drive aisles. Off-site improvements are required for roadway and utility improvements (Figure 3, Site Plan).

1.1.2.1 Site Access, Circulation, and Parking

The proposed Project would be accessible via two points of entry from Yucca Terrace Drive to the north and Phelan Road to the South. The proposed Project would include 374 vehicle parking spaces located along the northern, eastern, and southern side of the project site. 83 trailer parking stalls would also be located along the western and eastern sides of the site.

[1] Acreages do not sum due to rounding.

1.1.2.2 Off-Site Improvements

The Project would entail off-site improvements that include new roadway and utility facilities. New roadways will consist of "A" Street and Yucca Terrace Drive. "A" Street's right-of-way will be 70 feet in width with asphalt concrete paving, curb, and gutter. Yucca Terrace Drive will also have a similar section as described above for "A" Street.

Utility improvements include construction of water lines and sewer lines. Proposed water and sewer lines will extend south and east of the Project. The proposed water line extends approximately 9,300 feet from the intersection of Yucca Terrace Drive and throughout "A" Street. From the point of connection, the water line would travel approximately 1,300' south toward Phelan Road then easterly, crossing Phelan Road. The water line continues throughout the southern part of Los Banos Avenue for about 2,677 feet until it reaches Sultana Avenue. The water alignment runs approximately 164 feet easterly along Sultana Avenue until it reaches a jack and bore pit to cross beneath Oro Grande Wash, ultimately connecting to existing City water lines at the intersection of U.S. Highway 395 and Sultana Street.

The proposed sewer line begins from the northern portion of "A" Street and extends approximately 1,600 feet north until it reaches Yucca Terrace Drive. From there, the alignment travels 3,400 feet easterly passing U.S. Highway 395. The sewer line includes jack and bore pits that will be used to align the sewer beneath Oro Grande Wash.

There are no off-site storm drain improvements proposed for this Project.

2 Regulatory Setting

2.1 Federal

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. The FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to "take" any listed species; "take" is defined as, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the intentional and unintentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). Currently, the Migratory Birds office considers nests that support eggs, nestlings, or juveniles to be active. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

2.1.3 Clean Water Act

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project operator for a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The regional water quality control boards (RWQCBs) administer the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S. Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found at 33 CFR 320 and 330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which

were developed by the U.S. Environmental Protection Agency in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

2.1.3.1 Wetlands and Other Waters of the United States

Based on a recent court case ordering vacation of the Navigable Waters Protection Rule, USACE and the U.S. Environmental Protection Agency (EPA) have halted implementation of the rule and are interpreting waters of the United States consistent with the pre-2015 regulatory regime until further notice. Per 40 CFR 230.3(s), "waters of the United States" are defined as:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

The USACE/EPA Rapanos Guidance states that the USACE will regulate traditional navigable waters, adjacent wetlands, and relatively permanent waters tributary to traditional navigable waters, and adjacent wetlands. Non-relatively permanent waters (those exhibiting less than 3 months of continuous surface flows) and their adjacent wetlands would be regulated if there is a significant nexus from the site.

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards. A request for certification is submitted to the regional board at the same time that an application is filed with USACE.

2.2 State

2.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050–2068) provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike FESA, under CESA state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to FESA and is prohibited for both listed and candidate species. Take authorization may be obtained by a project applicant from the California Department of Fish and Wildlife (CDFW) under CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

On October 21, 2019, the California Fish and Game Commission (Commission) received a petition from the Center for Biological Diversity to list western Joshua tree (*Yucca brevifolia*).[2] On November 1, 2019, the Commission referred the petition to the CDFW for evaluation. CDFW evaluated the scientific information presented in the petition and other relevant information possessed by CDFW at the time of review and prepared a report for submittal to the Commission (CDFW 2020a). The report states that CDFW recommended that the Commission accept the petition for further consideration of western Joshua tree under the CESA. On September 22, 2020, the Commission approved the petition to accept the candidacy proposal for western Joshua tree, effective October 9, 2020. When a plant or wildlife species is granted candidacy under the CESA, the species is given the same protection as a threatened or endangered species while the Commission evaluates whether formal listing as threatened or endangered under the CESA is warranted. For this Project, take or removal of western Joshua tree would require a 2081 Incidental Take Permit from CDFW.

In listing western Joshua tree as a candidate species under CESA, the Commission directed CDFW staff to evaluate whether the species should be formally listed under CESA. In March 2022, CDFW staff presented its findings to the Commission and recommended against the listing, citing the species widespread distribution and lack of data regarding the extent to which climate changes are expected to affect the species. This information was presented to the Commission on June 15–16, 2022. The Commission voted on the proposed listing at this meeting, but the vote resulted in a 2–2 tie. The Commission discussed western Joshua tree's listing status at its October 12-13, 2022 meeting; however, it was decided at this meeting to extend Joshua tree's candidate status discussion until their February 23, 2023 meeting, which is anticipated to be the final meeting before a listing decision is made.

[2] On October 21, 2019, the California Fish and Game Commission received a petition to list the following as threatened under the CESA: (1) western Joshua tree (*Yucca brevifolia*) throughout its California range, or, in the event the Commission determines that listing of *Yucca brevifolia* throughout its California range is not warranted, then (2) the western Joshua tree population within the northern part of western Joshua tree's California range, or (3) the western Joshua tree population within the southern part of western Joshua tree's California range.

2.2.2 California Fish and Game Code

2.2.2.1 Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protections for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of the CDFW to maintain viable populations of all native species. Toward that end, the CDFW has designated certain vertebrate species as Species of Special Concern, because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

2.2.2.2 Section 1600–1616

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks and (2) existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation, which may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an ordinary high water mark (OHWM) to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

Under California Fish and Game Code, Sections 1600–1616, CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to CDFW must include a complete certified California Environmental Quality Act (CEQA) document.

2.2.2.3 California Native Plant Protection Act

The Native Plant Protection Act of 1977 (see Section 1900 et seq. of the California Fish and Game Code) directed CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take. CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the California Fish and Game Code. To align with federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.

2.2.2.4 Nesting Birds

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

2.2.3 California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. The act also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

The State of California CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors." A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

CDFW has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under the FESA, CESA, and other California Fish and Game Code provisions, and includes lists developed by other organizations, including for example the Audubon Watch List Species. Guidance documents prepared by other agencies, including the Bureau of Land Management (BLM) Sensitive Species and USFWS Birds of Special Concern, are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species listed as California Rare Plant Rank (CRPR) 1 and 2 by the California Native Plant Society (CNPS), and potentially some CRPR 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G (Environmental Checklist Form), of the CEQA Guidelines requires an evaluation of impacts to "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 the U.S. Fish and Wildlife Service."

2.2.4 Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Act, the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code, Section 13260[a]). The State Water Resources Control Board defines a waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]). As of April 2019, the State Water Resources Control Board has narrowed their definition of a waters of the state to include the following:

1. Natural wetlands
2. Wetlands created by modification of a surface water of the state

3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration
    b. Specifically identified in a water quality control plan as a wetland or other water of the state
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape
    d. Greater than or equal to 1 acre in size unless the artificial wetland was constructed and is currently used and maintained, primarily for one or more of the following purposes: industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling water; active surface mining—even if the site is managed for interim wetlands functions and values; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or fields flooded for rice growing.

All waters of the United States are waters of the state. Wetlands, such as isolated seasonal wetlands, that are not generally considered waters of the United States are considered waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2019). If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act.

2.2.5 California Native Desert Plants Act

The purpose of the California Desert Native Plants Act (CDNPA) is to protect certain species of California desert native plants from unlawful harvesting on both public and privately owned lands. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt, and the required tags and seals. The appropriate permits, tags and seals must be obtained from the sheriff or commissioner of the county where collecting will occur, and the county will charge a fee. More information on the CDNPA, including the species protected under the law, is available by reading the provisions of the law.

2.3 Local

2.3.1 San Bernardino County General Plan and Development Code

The County of San Bernardino General Plan contains the goals and policies that guide future development within San Bernardino County (County of San Bernardino 2007a). San Bernardino County is broken into three distinct geographic planning regions: the Valley, the Mountains, and the Desert. The Project site occurs within the Desert Planning Region of San Bernardino County. The Desert Planning Region has two goals and policies: (1) to preserve open lands by working with BLM and (2) to ensure that off-highway vehicle use is managed to protect environmentally sensitive resources.

The Project would also need to comply with the Development Code. The San Bernardino Development Code (County of San Bernardino 2007b) implements the goals and policies of the General Plan. Chapter 88.01.060, Desert Native Plant Protection, of the San Bernardino County Development Code is a subset of the Plant Protection and Management Code (Chapter 88.01 of the Development Code) and focuses on the conservation of specified desert plant species.

2.3.2 City of Hesperia General Plan

The City's Conservation and Open Space Elements (City of Hesperia 2010) contain goals and policies that address biological resources. The following goals and policies pertain to biological resources and are relevant to the Project:

Goal CN-3. Minimize development and set aside necessary open space near and along the surface waters as well as those washes and other water passageways located in the City to preserve and protect plant and animal species and their natural habitat dependent on such surface waters and waterways.

Policy CN-3.1. Monitor the development impacts to these surface water resources within the city.

Policy CN 3.2. Preserve areas within the Oro Grande wash and un-named wash #1 that exhibit ideal native habitat in a natural state.

Goal CN 4. Establish policies and regulations to protect the natural environment and habitat of the City's biological resources.

Policy CN-4.1. Preserve pristine open space areas and known wildlife corridors areas for conservation to protect sensitive species and their habitats.

Policy CN-4.2. Encourage the protection, preservation and long-term viability of environmentally sensitive habitats and species in the City.

Policy CN-4.3. Identify lands that are suitable for preservation for sensitive species and their habitats.

Policy CN-4.4. In those areas known as possible habitat for endangered and sensitive species, require proper assessments before authorizing development.

Policy CN-4.5. Where such assessments indicate the presence of endangered or sensitive species, require appropriate actions to preserve the habitat and protect the identified species.

2.3.3 Hesperia Municipal Code, Chapter 16.24—Protected Plant Policy

Chapter 16.24 of the Hesperia Municipal Code contains the City's Protected Plant Policies. This chapter establishes policies governing the removal of protected plants, including:

1. The following regulated desert native plants with stems two inches or greater in diameter or six feet or greater in height:
    a. *Psorothamnus 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).
4. All plants protected or regulated by the California Desert Native Plants Act.

Additionally, Section 16.24.060 of the Hesperia Municipal Code states the following:

> Prior to the issuance of a native tree or plant removal permit in conjunction with a development permit and/or approval of a land use application which authorizes such removal, a plot plan or grading plan shall be approved by the appropriate City review authority for each site indicating exactly which trees of plants are authorized to be removed. The required information can be added to any other required site plan. Prior to issuance of development permits in areas with native trees or plants that are subject to the provisions of this chapter, a preconstruction inspection shall be conducted by the appropriate authority. Such preconstruction inspections may be combined with any other required inspection.

2.3.3.1 Protected Plant Plan and Relocation/Adoption

Furthermore, the City's Protected Plants policy (City of Hesperia 2009) states the following for Tentative Tract, non-single-family residential developments (i.e., commercial, industrial, and apartment development):

- A protected plant plan shall be prepared by a certified arborist or registered botanist.
- An application and fee shall be completed and paid to the City.
- Healthy, transplantable plants shall be relocated on site or may be placed in an adoption program.

To qualify as an approved adoption program, a developer shall provide a letter on company letterhead, describing the program and the community notification process. The program shall identify the following, as a minimum.

A. A public notice process which may include publication in local newspapers, radio advertisement, hand distributed fliers, and other noticing techniques. Noticing must occur over a period of not less than three weeks.
B. The location where the trees may be viewed by the public and a clearly identified period of at least two weeks (including weekends) when trees/plants are available for adoption.
C. The person that will be available on-site to assist those adopting trees to find the actual trees/plants for removal. An on-site or cell phone number for that person is required.
D. A note that a copy of the City Joshua Tree Transplanting Guidelines will be provided to each adopter.
E. A log showing the name, address, and phone number of each adopter and the number and type of trees/plants they received.

Note: At least 50% of the transplantable trees and plants shall be adopted or the remaining number below 50% shall be purchased at $350 per transplantable tree. Purchased trees must be recycled at Advance Disposal.

2.3.3.2 Findings for Removals

Per Hesperia Municipal Code Section 16.24.040, the reviewing authority must authorize the removal of a native tree or plant subject to the provisions of the Hesperia Municipal Code only if the following findings are made:

A. The removal of the native tree or plant does not have a significant adverse impact on any proposed mitigation measures, soil retention, soil erosion and sediment control measures, scenic routes, flood and surface water runoff and wildlife habitats (flora and fauna), especially those with limited habitats (e.g., eagles).

B. The removal of the native tree or plant is justified for one of the following reasons:

   1. The location of the native tree or plant and/or its drip line interferes with the reasonable improvement of the site with an allowed structure, sewage disposal area, paved area or other approved improvement or ground disturbing activity. Also such improvements have been designed in such a manner as to save as many healthy native trees and/or plants as reasonably practicable in conjunction with the proposed improvements;
   2. The location of the native tree or plant and/or its drip line interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property;
   3. The location of the native tree or plant is hazardous to pedestrian or vehicular travel or safety as determined by the director of transportation, flood control and airports or other county reviewing authority;
   4. The native tree or plant or its presence interferes with or is causing excessive damage to utility services or facilities, roadways, sidewalks, curbs, gutters, pavement, sewer line(s), drainage or flood control improvements, foundations, existing structures, or municipal improvements;
   5. The condition or location of the native plant or tree is adjacent to and in such close proximity to existing or proposed structure that the native plant or tree has or will sustain significant damage.

C. Joshua trees that are proposed to be removed have been transplanted or stockpiled for future transplanting wherever possible. In the instance of stockpiling the permittee has posted a bond to insure such Joshua trees are transplanted appropriately.

INTENTIONALLY LEFT BLANK

3 Methods

Data regarding biological resources present within the Biological Study Area (BSA), which includes the 29.5-acre Project site, 8.9-acre off-site improvement area, and a 100-foot buffer (for a BSA totaling 97.5 acres) was obtained through a review of pertinent literature, field reconnaissance, habitat assessments, and protocol/focused surveys, which are described in detail in this section. For purposes of this report, special-status resources are defined as follows:

- Special-status plant species include:
  - Species designated as either rare, threatened, or endangered by CDFW or USFWS and are protected under either the CESA (California Fish and Game Code Section 2050 et seq.) or the FESA (16 USC 1531 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Species that are included on the CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2022a), or species with a CRPR of 1 or 2 in the CNPS Inventory of Rare and Endangered Plants of California (CNPS Inventory) (CNPS 2022a)
- Special-status wildlife species include:
  - Species designated as either rare, threatened, or endangered by CDFW or USFWS and are protected under either the CESA (California Fish and Game Code Section 2050 et seq.) or the FESA (16 USC 1531 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Species that are included on the CDFW Special Animals List (CDFW 2022b)
  - Species designated as a California Fish and Game Code Section 4000 fur-bearing animal
- Special-status vegetation communities are those designated as sensitive by the CDFW.

3.1 Literature Review

Prior to conducting a field assessment, Dudek biologists conducted a literature search and database review to evaluate the natural resources found or potentially occurring within the BSA. The database review included the most recent versions of the CNDDB and special-status species lists (CDFW 2022a; 2022b; 2022c), and the CNPS Inventory (CNPS 2022a). These databases were reviewed to identify sensitive biological resources present or potentially present for the U.S. Geological Survey 7.5-minute quadrangle on which the BSA is located (Baldy Mesa) and the eight surrounding quadrangles (Shadow Mountains SE, Adelanto, Victorville, Hesperia, Cajon, Silverwood Lake, Phelan, and Telegraph Peak). The CDFW occurrence data and critical habitat databases were queried using geographic information system (GIS) software based on a 5-mile buffer around the BSA. Potential and/or historical drainages and aquatic features were investigated based on a review of U.S. Geological Survey topographic maps (1:24,000-scale), aerial photographs, the USFWS National Wetland Inventory database (USFWS 2022a), the U.S. Geological Survey National Hydrography Dataset (USGS 2022), and the Natural Resource Conservation Service's Web Soil Survey (USDA 2022a).

In addition, the Final Environmental Impact Report for the Hesperia Commerce Center II Project (Dudek 2022) was reviewed to support the environmental review of the off-site Project components.

3.2 Field Surveys

Dudek conducted the following biological surveys of the BSA between March and September 2022: vegetation mapping, western Joshua tree mapping, and focused surveys for special-status plants, desert native plants, burrowing owl (*Athene cunicularia*), and Mohave ground squirrel (*Xerospermophilus mohavensis*). Focused surveys of suitable habitat within the off-site improvement areas of the Project site were conducted as a part of the Hesperia Commerce Center II Project (Dudek 2022).

Table 1 lists the dates, focus, scope, conditions, and personnel for each survey. Photos of the Project site can be found in Appendix B.

Table 1. Survey Conditions

Date(s)	Biologist	Type of Survey	Times	Weather Conditions
03/08/2022	A. Cassady	General Biological Survey (On-Site)	9:45 a.m.–2:30 p.m.	51°F -57°F; 0% cc; 1–4 mph wind
04/06/2022 to 04/10/2022	Dipodomys Ecological Consulting	Mohave Ground Squirrel Protocol Survey #1	Varied[1]	Varied[1]
04/08/2022	S. Greely	Burrowing Owl Protocol Survey #1	6:26 a.m.–9:02 a.m.	53°F–72°F; 0% cc; 1-4 mph wind
04/29/2022	S. Greely	Desert Tortoise Protocol Survey	7:29 a.m.–1:53 p.m.	48°F -74°F; 0% cc; 2-6 mph wind
05/08/2022 to 05/12/2022	Dipodomys Ecological Consulting	Mohave Ground Squirrel Protocol Survey #2	Varied[1]	Varied[1]
05/10/2022	E. Bergman	Rare Plant Survey	7:46 a.m.–6:06 p.m.	54°F–62°F; 10% cc; 0-4 mph wind
05/13/2022	S. Greely	Burrowing Owl Protocol Survey #2	6:27 a.m.–9:23 a.m.	51°F–65°F; 0% cc; 1-4 mph wind
05/20/22	K. Burritt, N. Ferris	Western Joshua Tree Survey	6:00 a.m. – 3:00 p.m.	NA
06/07/2022	S. Greely	Burrowing Owl Protocol Survey #3	6:15 a.m.–9:28 a.m.	62°F–78°F; 0% cc; 2–5 mph wind
06/28/2022	S. Greely	Burrowing Owl Protocol Survey #4	6:19 a.m.–8:35 a.m.	73°F–86°F; 0% cc; 1–5 mph wind
07/04/2022 to 07/08/2022[1]	Dipodomys Ecological Consulting	Mohave Ground Squirrel Protocol Survey #3	Varied[1]	Varied[1]
09/07/2022	S. Greely	General Biological Survey (Off-Site)	9:12 a.m.–5:50 p.m.	87°F -94°F; 0% cc; 0–5 mph wind
10/18/22	A. Castro, S. Tian	Western Joshua Tree Survey	7:00 a.m.–12:00 p.m.	NA

Notes: °F = degrees Fahrenheit; cc = cloud cover; mph = miles per hour; N.R. = Not Recorded.

1 Survey conditions for the Mohave Ground Squirrel Protocol Surveys are provided in Appendix C.

3.2.1 Vegetation Community and Land Cover Mapping

Vegetation communities and land uses within the BSA were mapped in the field using Esri Collector, a mobile data collection application, on a digital aerial-based background (Esri 2020). Following completion of the fieldwork, all vegetation linework was finalized using ArcGIS and geographic information system coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present within the study area was determined. Vegetation community classifications used in this report follow A Manual of California Vegetation, online edition (CNPS 2022b) and California Natural Community List (CDFW 2022b), where feasible, with modifications made to accommodate the lack of conformity of the observed communities (e.g., developed/disturbed land uses) using Oberbauer et al. (2008). Vegetation communities were classified based on site factors, descriptions, distribution, and characteristic species present within an area. Each natural community was mapped to the association level, where feasible.

These classification systems focus on a quantified, hierarchical approach that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed (as opposed to predicting climax or successional stages).

Vegetation mapping was conducted on foot to visually cover 100% of the BSA. Minimum mapping units were established to standardize the scale and appropriate evaluation of stands, as recommended by the CDFW (2020b). Mapping standards call for a minimum mapping unit of not greater than 10 acres for upland natural communities not considered sensitive, but usually 1 acre, and 0.25 acres for sensitive vegetation communities and wetland or riparian vegetation communities were used as minimum mapping units. Visible disturbance factors were also noted during vegetation mapping.

Following completion of the fieldwork, Dudek GIS analysts digitized the vegetation boundaries as delineated by the field biologists and created a GIS coverage for vegetation communities.

3.2.2 Flora

Latin and common names for plant species with a California Rare Plant Rank (formerly CNPS List) follow the California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2022a). For plant species without a California Rare Plant Rank, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2022), and common names follow the California Natural Community list (CDFW 2022d) or the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2022b).

3.2.3 Fauna

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other signs were recorded. Binoculars (8 magnification × 32 millimeter to 10 magnification × 50 millimeter) were used to aid in the identification of observed wildlife. In addition to species observed, expected wildlife use of the study area was determined by known habitat preferences of local species and knowledge of their range and relative distributions in the area. Latin and common names of animals follow Crother (2017) for reptiles and amphibians, the American Ornithological Society North and Middle American Checklist (AOS 2018) for birds, Wilson and Reeder (2005) for mammals, and North American Butterfly Association (NABA 2016) for butterflies

3.2.4 Special-Status and Regulated Resources

3.2.4.1 Special-Status Plant Survey

Based on the results of the literature review discussed in Section 3.1, eight special-status plant species were determined to have a moderate or high potential to occur within the BSA based on known species distribution, species-specific habitat preferences, and habitat conditions on site: Mojave milkweed (*Asclepias nyctaginifolia),* white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), Mojave monkeyflower (*Diplacus mohavensis*), sagebrush Loeflingia (*Loeflingia squarrosa* var. *artemisiarum*), short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), beaver dam breadroot (*Pediomelum castoreum*), Latimer's woodland-gilia (*Saltugilia latimeri*), and western Joshua tree. Therefore, focused surveys were conducted for these target species. In addition, desert native plants, in accordance with the California Desert Native Plants Act and Chapter 16.24 of the Hesperia Municipal Code, were also considered target species.

Dudek conducted a focused special-status plant survey within the on-site portion of the BSA on May 10, 2022. The survey date, biologist, and weather conditions are included in Table 1. Field survey methods and mapping of rare plants conformed to California Native Plant Society Botanical Survey Guidelines (CNPS 2001), Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFW 2018), and General Rare Plant Survey Guidelines (Cypher 2002). The surveys consisted of one survey pass in May that provided 100% coverage of the BSA. Western Joshua tree mapping within the BSA was conducted during a separate focused survey and is further discussed in Section 3.2.4.2, Western Joshua Tree Focused Survey. Suitable habitat within the off-site portion of the BSA was surveyed for special-status plants by Dudek in 2021 as a part of the Hesperia Commerce Center II Project (Dudek 2022).

Before conducting the surveys, Dudek botanists conducted reference population checks to ensure the focal special-status plant species were in bloom and identifiable. White-bracted spineflower and beaver dam breadroot were observed on May 10, 2022 (Instagram 2022). Sagebrush loeflingia was observed in Inyo County in May 2022 (iNaturalist 2022). It should be noted that short-joint beavertail is a conspicuous stem succulent species that can be identified outside the blooming period, and therefore was not included in the 2022 reference check. Similarly, western Joshua tree is a conspicuous tree that can be identified outside of the blooming period.

3.2.4.2 Western Joshua Tree Focused Survey

The California Fish and Game Commission determined that listing the western Joshua tree as threatened or endangered under the CESA may be warranted and is currently under review. During the status review, the western Joshua tree is protected under CESA as a candidate species.

Dudek's arborists performed a western Joshua tree survey to inventory and evaluate the health and relocation potential for each Joshua tree located on the Project site, off-site improvements, and a 186-foot buffer (Joshua Tree Inventory Survey Area). During the inventory, the GPS position of each Joshua tree found on site was recorded. Furthermore, the following attributes of each tree were collected:

- Species
- Diameter at standard height (4.5 feet above ground level)
- Height (feet)

- Spread (feet)
- Health (excellent, good, fair, poor, critical, and dead)[3]
- Number of branches
- Clonal status (clone or single trunk)

In addition to the general Joshua tree attributes that were collected, per CDFW, Dudek collected the following phenological data for each Joshua tree found on site:

- Number of Panicles
- New Growth
- Leaves
- Flowers
- Open flowers
- Presence of fruit

All inventoried and assessed protected trees were tagged with an aluminum tag bearing a unique identification number, which was placed on the main trunk on the north side of each western Joshua tree. Tagging on the north side allows for proper orientation during relocation (each relocated western Joshua tree will need to be oriented in the same direction as it was in its original location).

3.2.4.3 Desert Native Plant Survey

A desert native plant survey within the on-site portion of the BSA was conducted in accordance with the California Desert Native Plants Act and Chapter 16.24 of the Hesperia Municipal Code. The survey date, biologist, and weather conditions are included in Table 1. All of the desert native plant target species are conspicuous shrubs that would have been identifiable during the survey. Suitable habitat within the off-site portion of the BSA was surveyed for desert native plants by Dudek in 2021 as a part of the Hesperia Commerce Center II Project (Dudek 2022).

[3] **Health Rating Descriptions:**
Excellent. Tree has excellent health and strong vigor. No damage. Flowering and fruiting expected. Typically, only given to large, high-quality specimens (taller than 15 feet in height). Transplanting generally not recommended due to size.
Good. Tree has good health and vigor. All branches are alive and healthy. Damage is very localized and minimal. Flowering and fruiting likely if tree is large enough. Tree is transplantable.
Fair. Tree health is average. Some stressors or damage possible, but any damage is minimal to moderate (e.g., rodent grazing, insect damage). No dead/broken branches. Tree is transplantable.
Poor. Tree is under stress, and overall health is in decline, or tree has taken significant damage. Mortality likely unless stressors relieved and/or conditions change. Broken/dead limbs likely present. Tree is generally not transplantable.
Critical. Tree is in extreme decline. One or more branches dead. One or more branches dying. Physical damage likely present. Damage is significant and extensive. Mortality expected within 2 to 4 years. Tree is not transplantable.
Dead. Tree is dead.

In accordance with the City of Hesperia's Municipal Code, Chapter 16.24, the following desert native plants were considered target species:

1. The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
   a. Psorothamnus spinosa (smoketree);
   b. All species of the family Agavaceae (century plants, nolina, 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).

In accordance with the California Desert Native Plants Act, Chapter 3, the following desert native plants were considered target species:

a) All species of the family *Agavaceae* (century plants, nolinas, yuccas).
b) All species of the family *Cactaceae* (cacti), except for the plants listed in subdivisions (b) and (c) of Section 80072 which may be harvested under a permit obtained pursuant to that section.
c) All species of the family *Fouquieriaceae* (ocotillo, candlewood).
d) All species of the genus *Prosopis* (mesquites).
e) All species of the genus *Cercidium* (palos verdes).
f) *Acacia greggii* (catclaw).
g) *Atriplex hymenelytra* (desert-holly).
h) *Psorothamnus spinosa* (smoke tree).
i) *Olneya tesota* (desert ironwood), including both dead and live desert ironwood.

3.2.4.4 Desert Tortoise Protocol-Level Survey

Dudek conducted focused surveys for desert tortoise to determine the status of the species on site. To evaluate the impacts to desert tortoise, protocol surveys were conducted in accordance with the USFWS 2010 "Pre-project Field Survey Protocol for Potential Desert Tortoise," included in Preparing for any Action That May Occur Within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*) (USFWS 2010). Following the protocol, Dudek conducted surveys within the on-site portion of the BSA during April 2022. Biologists surveyed the site by walking approximately 10-meter-wide transects for 100% coverage of the BSA. Suitable habitat within the off-site portion of the BSA was surveyed for desert tortoise by Dudek in 2020 as a part of the Hesperia Commerce Center II Project (Dudek 2022).

3.2.4.5 Mohave Ground Squirrel Protocol-Level Survey

Dipodomys Ecological Consulting biologist Karla Flores conducted an initial visual survey within the Project site for Mohave ground squirrel. The visual survey for the on-site portion of the BSA was conducted using methods described within the 2003 California Department of Fish and Game Mohave Ground Squirrel Survey Guidelines (CDFW 2010). Field methods are described in detail in Appendix C. Following an initial visual survey, three 5-day live trapping surveys for the on-site portion of the BSA and concurrent camera trapping surveys for Mohave ground squirrel were conducted on April 6 to 10, May 8 to 12, and July 4 to 8, 2022 at the Project site. The methods used for this trapping effort followed the most recent CDFG Mohave Ground Squirrel Survey Guidelines issued in 2003,

with minor modifications in 2010 (CDFW 2010). Camera trapping surveys consisted of five camera stations in locations designated by CDFW, and methods are described in detail in Appendix C. Suitable habitat within the off-site portion of the BSA was surveyed for Mohave ground squirrel by Dipodomys Ecological Consulting in 2021 as a part of the Hesperia Commerce Center II Project (Dudek 2022).

3.2.4.6 Burrowing Owl Protocol-Level Survey

Dudek conducted focused burrowing owl surveys within the on-site portion of the BSA to determine the presence or absence of burrowing owl within the Project site. These surveys were conducted in accordance with Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Dudek biologists walked a combination of parallel and meandering transects through suitable habitat spaced no more than 20 meters (49 feet) apart. If observed, any burrowing owl sightings, occupied burrows, and burrows with burrowing owl sign were mapped and recorded. The surveys were conducted when conditions were suitable for detecting owls (no rain, high winds (>20 miles per hour [mph]), dense fog, or temperatures over 90°F). Protocol surveys were not conducted within the off-site portion of the BSA.

3.2.5 Survey Limitations

Limitations of the surveys include a diurnal bias and the absence of trapping for reptiles, amphibians, and small mammals at night. The surveys were conducted during the daytime to maximize the detection of most wildlife. Most birds are active in the daytime, so diurnal surveys maximize the number of bird observations. Conversely, diurnal surveys usually result in few observations of mammals, many of which may only be active at night. In addition, many species of reptiles and amphibians are secretive in their habits and are difficult to observe using standard meandering transects.

The average rainfall in 2022 was below average, which has potential to limit the growth of flora. However, initial botanical reference surveys were conducted prior to focused special-status plant surveys, and therefore conditions were monitored prior to collecting data. Surveys for special-status plant species adequately covered flora that are known to bloom within the vicinity.

INTENTIONALLY LEFT BLANK

4 Environmental Setting

The purpose of this section is to describe the general existing conditions within and adjacent to the BSA to document the baseline conditions for this report and subsequent analysis.

4.1 Climate

The BSA is located in Victor Valley/High Desert region in western San Bernardino County. Average annual temperatures range from 44°F to 81°F. The average annual precipitation is 6.72 inches (WRCC 2022). Periods of extended drought are common throughout the region.

4.2 Geology and Topography

The BSA is composed of one vacant site along the western side of U.S. Highway 395, between Yucca Terrace Drive and Phelan Road. The BSA is subject to disturbance from illegal dumping and trespassing. These unpermitted activities have led to areas of exposed bare soils (where trails and a dirt road, Caliente Road, have formed) and several debris piles. The BSA's surface elevation ranges between approximately 3,545 and 3,565 feet above mean sea level (amsl). The BSA and immediate surrounding area is relatively flat with a slight downward slope from the southwestern to northeastern corner. The BSA is located 9 miles north of Cleghorn Mountain, which occurs above Cajon Pass that divides the San Gabriel Mountains from the San Bernardino Mountains.

4.3 Soils

According to the USDA Natural Resource Conservation Service's Web Soil Survey (USDA 2022a), the BSA occurs within the San Bernardino County, Mojave River Area (CA671). The BSA consists of four soil types: Cajon sand (0% to 2% slopes; 2% to 9% slopes; and 9% to 15% slopes) and Hesperia loamy fine sand (2% to 5% slopes). This soil type is described in more detail below and presented on Figure 4, Soils.

Cajon Series consists of very deep, somewhat excessively drained soils that formed in sandy alluvium derived primarily from granite. Cajon soils are on alluvial fans, fan aprons, fan skirts, inset fans and river terraces at elevations of 200 to 4,300 feet amsl. These soils have negligible to low runoff and rapid permeability. Creosote bush, saltbush, Mormon-tea, Joshua trees, annual grasses and forbs are common vegetation found on these soils.

Hesperia Series consists of very deep, well drained soils that formed in alluvium derived primarily from granite and related rocks. Hesperia soils form on alluvial fans, valley plains, and stream terraces at elevations from 200 to 4,800 feet amsl. These soils have negligible to low runoff and moderately rapid permeability. Creosote bush and sparse annuals are common vegetation found on these soils.

4.4 Surrounding Land Uses

The BSA is currently vacant undeveloped property bound to the east by U.S. Highway 395, to the north by Yucca Terrace Drive and to the south by Phelan Road.

Land uses surrounding the BSA primarily consist of vacant land, along with some scattered residential and commercial and motor vehicular uses.

4.5 Watersheds and Hydrology

The BSA is within the Mojave Subbasin Hydrologic Unit Code (HUC) 8 (18090208), Bell Mountain Wash-Mojave River HUC 10 (1809020807), and Burkhardt Lake-Mojave River HUC 12 (180902080706) watersheds. The Mojave Subbasin HUC 8 watershed is approximately 4,618 square miles and consists of several waterbodies, waterways, dry washes, and valleys (UCD SIG 2021). The Mojave River approximately 8.5 miles to the east. The Oro Grande Wash is a tributary to the Mojave River and is located approximately 0.25 miles west of the BSA, and the California Aqueduct 1 mile to the north (USGS 2022).

5 Results

This section describes the results of the literature review, field surveys, and habitat assessments within the BSA.

5.1 Vegetation Communities and Land Covers

Six vegetation communities or land cover types were mapped within the BSA. The spatial distribution of the vegetation communities and land covers are presented on Figure 5, Biological Resources Map. The acreages of the mapped vegetation alliances/associations and other land covers in the study area are presented in Table 2, including those that are considered sensitive biological resources by CDFW under CEQA per the California Natural Community List (CDFW 2022d).

State rankings of 1, 2, or 3 are considered high priority for inventory or special-status and impacts to these communities typically require mitigation (CDFW 2022d). One vegetation community, Joshua tree woodland, has a CDFW ranking of 3 that is considered special status.

Table 2. Vegetation Communities and Land Cover Types within the BSA

Vegetation Community/ Land Cover	Alliance	Association	State Ranking[1]	Total (Acres)
Vegetation Communities				
Desert Almond—Mexican Bladdersage Scrub	*Prunus fasciculata—Scutellaria mexicana*	*Prunus fasciculata—Scutellaria mexicana*	S4	28.5
Joshua Tree Woodland*	*Yucca brevifolia*	*Yucca brevifolia / Lycium andersonii—Ephedra nevadensis*	S3	29.6
California Buckwheat Scrub	*Eriogonum fasciculatum*	*Eriogonum fasciculatum*	S5	1.0
Rubber Rabbitbrush Scrub	*Ericameria nauseosa*	*Ericameria nauseosa*	S5	16.8
Land Covers				
Urban/Developed	N/A	N/A	GNR/SNR	8.1
Disturbed Habitat	N/A	N/A	GNR/SNR	13.5
			Total[2]	**97.5**

Sources: Sawyer et al. 2009; Oberbauer et al. 2008.
Notes:
[1] The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2022):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction

4 = apparently secure
5 = demonstrably widespread, abundant, and secure
NA = not applicable
GNR = unranked, global rank not yet assessed
SNR = unranked, subnational rank not yet assessed

[2] Totals may not sum due to rounding.

* Communities listed by California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2022d)
N/A = Not Applicable

5.1.1 Desert Almond–Mexican Bladdersage Scrub

Desert almond–Mexican bladdersage scrub alliance is recognized by the Natural Communities List and the communities include desert almond (*Prunus fasciculata*), Mexican bladdersage (*Scutellaria mexicana*), and/or desert sage (*Salvia dorrii*) as the dominant or co-dominant in the shrub canopy with an open to intermittent canopy and open herbaceous layer (CNPS 2022b). This alliance occurs in arroyos, canyons, washes, and on disturbed upland sites in alluvial or colluvial origin soils.

The desert almond–Mexican bladdersage alliance is ranked as S4 and therefore is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

The BSA is primarily dominated by desert almond–Mexican bladdersage scrub. This community is dominated by Mexican bladdersage (*Scutellaria mexicana*), but also contains high cover of Cooper's goldenbush (*Ericameria cooperi* var. *cooperi*), Anderson's boxthorn (*Lycium andersonii*), and Nevada joint fir (*Ephedra nevadensis*), with lower cover of desert almond (*Prunus fasciculata*) and Joshua tree (Sawyer et al. 2009).

5.1.2 Joshua Tree Woodland

Joshua tree woodland or *Yucca brevifolia* alliance is recognized by the Natural Communities List and the communities include western Joshua tree as an emergent small tree over a shrub or grass layer (CNPS 2022b). Joshua tree woodland has an open to intermittent tree canopy less than 14 meters (45 feet) in height, and an open to intermittent shrub and herbaceous layer with perennial grasses and seasonal annuals (Sawyer et al. 2009). This alliance consists of Joshua trees evenly distributed of at least 1% cover with *Juniperus* and/or *Pinus* spp. of at least more than 1% absolute cover in tree canopy (Sawyer et al. 2009). The Joshua tree woodland alliance occurs on gentle alluvial fans, ridges, and gentle to moderate slopes. Joshua tree woodland may occupy coarse sands, very fine silts, gravel, or sandy loams (Sawyer et al. 2009).

The Joshua tree woodland alliance is ranked as S3 and is considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

Joshua tree woodland occurs within the southeastern and northwestern corners of the on-site portions of the BSA, as well as within the northern and southern portions of the off-site portions of the BSA.

5.1.3 California Buckwheat Scrub

The California Buckwheat scrub vegetation community is a shrubland alliance composed of dominant or co-dominant California buckwheat (Eriogonum fasciculatum) or chaparral yucca (Hesperoyucca whipplei) (CNPS 2022b). The shrub layer occurs in cismontane stands where emergent trees might include California juniper (Juniperus californica) and the shrub layer is typically less than 2 meters tall. Alliance membership requires over

50% relative cover of California buckwheat in the shrub layer, or greater than 30% relative cover with brittlebush (Encelia farinosa) present in the shrub layer. Habitats for this alliance include upland slopes, intermittently flooded arroyos, and channels and washes. This alliance occurs in coarse, well drained, and moderately acidic to slightly saline soils.

The California buckwheat scrub alliance is ranked by the CDFW as S5 and is therefore not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

Within the BSA, a small amount of California buckwheat scrub was mapped adjacent to U.S. Highway 395 and is likely the result of landscaping associated with the highway.

5.1.4 Rubber Rabbitbrush Scrub

Rubber rabbitbrush scrub or *Ericameria nauseosa shrubland* alliance is recognized by the Natural Communities List and the communities include rubber rabbitbrush (*Ericameria nauseosa*) as the dominant or codominant species in the shrub canopy with a sparse or grassy herbaceous layer (CNPS 2022b). Rubber rabbitbrush scrub has an open to continuous shrub canopy of less than 3 meters (9 feet) in height (Sawyer et al. 2009). This alliance consists of at least 2% absolute cover of rubber rabbitbrush or more than 25% relative cover in the shrub canopy (Sawyer et al. 2009). The rubber rabbitbrush scrub occurs in disturbed settings on well-drain sands and gravels (Sawyer et al. 2009).

The rubber rabbitbrush association is ranked as S5 and therefore is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

Within the BSA, this community is primarily located within the off-site improvement areas.

5.1.5 Urban/Developed Land

Although not recognized by the Natural Communities List (CDFW 2022d), urban/developed land represents areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are not supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). Typically, this land cover type is unvegetated or supports a variety of ornamental plants and landscaping.

Urban/Developed is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

5.1.6 Disturbed Habitat

Although not recognized by the California Natural Community List (CDFW 2021), disturbed habitat refers to areas that have had physical anthropogenic disturbance and, as a result, cannot be identified as a native or naturalized vegetation association. However, these areas do have a recognizable soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species.

Disturbed habitat is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

5.2 Plants and Wildlife Observed

5.2.1 Plants

A total of 41 species of native and naturalized plants, 34 native (83%) and 7 non-native (17%) were found within the BSA. A full list of species can be found in Appendix D, Plant Compendium. Special-status plants that were observed within the BSA are listed in Section 5.3.1.

5.2.2 Wildlife

A total of 22 wildlife species, all being native, were recorded within the BSA during surveys. Birds detected on the site included western meadowlark *(Sturnella neglecta*), house finch (*Haemorhous mexicanus*), Say's phoebe (*Sayornis saya*), Cooper's hawk (*Accipiter cooperii*), common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), northern mockingbird (*Mimus polyglottos*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), loggerhead shrike (*Lanius ludovicianus*), cactus wren (*Campylorhynchus brunneicapillus*), Bell's sparrow (*Artemisiospiza belli*), Brewer's sparrow (*Spizella breweri*), and white-crowned sparrow (*Zonotrichia leucophrys*). Mammals detected included coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), and the California ground squirrel (*Otospermophilus beecheyi*). Reptiles include common side-blotched lizard *(Uta stansburiana*), yellow-backed spiny lizard (*Sceloporus uniformis*), and tiger whiptail (*Aspidoscelis tigris*). A full list of wildlife species can be found in Appendix E, Wildlife Compendium. Special-status plants that were observed within the BSA are listed in Section 5.3.2.

5.3 Special-Status and Regulated Resources

Appendix F and Appendix G provide tables of all special-status species whose geographic ranges fall within the general BSA vicinity. Special-status species' potential to occur within the BSA were evaluated based on known species distribution, species-specific habitat preferences, and Dudek biologists' knowledge of regional biological resources. Species potentially occurring within the BSA are identified as having moderate or high potential to occur based on habitat conditions on site, and species for which there is little or no suitable habitat are identified as not expected to occur or having low potential to occur.

5.3.1 Special-Status Plants

Special-status plants include those listed, or candidates for listing, as threatened or endangered by USFWS and CDFW, and species identified as rare by the CNPS (particularly CRPR 1A, presumed extinct in California; CRPR 1B, rare, threatened, or endangered throughout its range; and CRPR 2, rare or endangered in California, more common elsewhere).

Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status plant species to occur within the BSA. Each special-status plant species was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences, vegetation community, soil, and elevation, the results of which are listed in Appendix F. According to results of this literature review and database searches, eight special-status species, Mojave milkweed, white-bracted spineflower, Mojave monkeyflower, sagebrush Loeflingia, short-joint beavertail, Beaver Dam breadroot, Latimer's

woodland-gilia, and western Joshua tree were found to have moderate or high potential within the BSA and were subject to focused surveys.

One special-status plant species, western Joshua tree, was observed within the BSA. Western Joshua tree is further discussed in Section 5.3.2; it is a state candidate for listing. No other listed species or non-listed CRPR 1 or CRPR 2 plants were observed during the focused surveys. Due to focused surveys being conducted during the appropriate blooming period, all other special-status plants are not expected to occur. In addition, there is no USFWS-designated critical habitat for listed plant species overlapping the BSA (USFWS 2022b).

Details of the western Joshua tree are below in Table 3.

Table 3. Special-Status Plant Species Observed or with Moderate or High Potential to Occur within the BSA

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Yucca brevifolia	western Joshua tree	None/SC/None	Great Basin grassland, Great Basin scrub, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland, Sonoran desert scrub, Valley and foothill grassland/ perennial leaf succulent/Apr–May/ 1,310–6,560	Present. This species was observed within the BSA.

Status Designations
SC: State listed candidate species
Notes: CRPR = California Rare Plant Rank; BSA = biological survey area.

5.3.1.1 Western Joshua Tree

Western Joshua tree is a California State Candidate for Listing. Western Joshua tree is a monocot tree in the asparagus family (*Agavaceae*) that occurs within Joshua tree woodland, Great Basin grassland and scrub, Mojavean desert scrub, pinyon and juniper woodland, Sonoran desert scrub, and valley and foothill grassland. This species occurs in San Bernardino County and other southern and eastern counties in California between 1,310 and 6,560 feet amsl (CNPS 2022b). This species typically blooms between April and May, but is a conspicuous tree and identifiable at any time of year.

A total of 578 western Joshua tree individuals were recorded within and adjacent (within 186 feet) of the limits of the proposed Project site plan. In total, 97 Joshua trees are located within the Project site and off-site improvement area, and additional 481 trees are located within 186 feet of the project site. Trees in the tree survey area vary in size and stature according to age and location. Further details are provided in Appendix H.

5.3.1.2 Desert Native Plants

No desert native plant species, except for western Joshua tree, were observed within the BSA during the focused desert native plant survey (Figure 5).

5.3.2 Special-Status Wildlife

Special-status wildlife include those listed, or candidates for listing, as threatened or endangered by USFWS and CDFW, and those designated as species of special concern by CDFW and as sensitive by USFWS.

Similar to special-status plants, Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status wildlife species to occur within the BSA. Each special-status wildlife species was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences and vegetation community/habitat association, the results of which are listed in Appendix F. Listed species with any potential to occur and non-listed special-status species with a moderate or higher potential to occur are discussed herein. Those special-status wildlife species that are not expected or have low potential to occur in the BSA are also included in Appendix G; however, these species are not discussed further as no significant direct or indirect impacts are expected.

Based on the results of the literature review and database searches, four special-status wildlife species, burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), LeConte's thrasher (*Toxostoma lecontei*), and Mohave ground squirrel (*Spermophilus (Xerospermophilus) mohavensis*) had a moderate potential to occur within the BSA. In addition, Mojave desert tortoise and Crotch bumble bee (*Bombus crotchii*) have a low potential to occur.

Focused surveys conducted for Mohave ground squirrel and Mojave desert tortoise were negative and therefore these species are not expected to occur and will not be analyzed further. Focused surveys for burrowing owl were negative; however, burrowing owl is a transient species and may still incidentally occur within the BSA. As such, it will be analyzed further. One special-status, loggerhead shrike, was incidentally observed during biological surveys. In addition, there is no USFWS-designated critical habitat for listed wildlife species overlapping the BSA (USFWS 2022b). The details of these species are presented below in Table 4.

Table 4. Special-Status Wildlife Species Observed or with Moderate or High Potential to Occur within the BSA

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Moderate potential to occur. The BSA contains suitable habitat and burrows for this species. Focused surveys for burrowing owl conducted in 2022 were negative; however, burrowing owl is a transient species and may incidentally occur.

Table 4. Special-Status Wildlife Species Observed or with Moderate or High Potential to Occur within the BSA

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Lanius ludovicianus (nesting)	loggerhead shrike	BCC/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches.	Present. Site contains suitable Joshua tree woodland. Nearest occurrence recorded 1.75 miles north of site (CDFW 2022c).
Toxostoma lecontei	LeConte's thrasher	BCC/SSC	Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and Joshua tree habitats; nests in spiny shrubs or cactus.	Moderate potential to occur. Site contains suitable open habitat and Joshua tree woodland. Nearest occurrence recorded 5.75 miles east of site (CDFW 2022c).
Bombus crotchii	Crotch bumble bee	None/SCT	Open grassland and scrub communities supporting suitable floral resources.	Low potential to occur. While the study area does contain floral resources during the spring blooming period, many of the flower patches are small and disjointed, forming marginal potential habitat for this species. Furthermore, documented occurrences of Crotch bumble bee within the high desert are historical in nature, with the more recent occurrences located along the northern foothills of the San Bernardino Mountains (Richardson 2023); however, further study is needed to understand the full distribution of this species.

Status Designations:
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
SSC: California Species of Special Concern
SCT: State candidate for listing as threatened
Notes: BSA = biological survey area.

Loggerhead Shrike

The loggerhead shrike is a USFWS Bird of Conservation Concern and a California Species of Special Concern. It is widespread throughout the United States, Mexico, and portions of Canada (Humple 2008). The species is a yearlong resident in most of the United States, including from California east to Virginia and south to Florida, and in Mexico. In California, while shrikes are widespread at the lower elevations in the state, the largest breeding populations are located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

Preferred habitats for loggerhead shrikes are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation

or human-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey items for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open canopied woodlands, although they can be quite common in agricultural and grazing areas, and can sometimes be found in mowed roadsides, cemeteries, and golf courses. Loggerhead shrikes occur only rarely in heavily urbanized areas. For nesting, the height of shrubs and presence of canopy cover are most important (Yosef 1996).

Loggerhead shrike was observed during biological surveys.

LeConte's Thrasher

LeConte's thrasher is a USFWS bird of conservation concern and a California Species of Special Concern. This species is an uncommon, non-migratory, medium-sized resident songbird (Sheppard 1996). This species is found in the San Joaquin Valley and Mojave and Colorado deserts and southward into northeast Baja California. (Sheppard 1996).

LeConte's thrasher lives in the hottest and driest environments, relying on arthropods in soil and is not known to drink water; it is associated with saltbush or creosote bush growths (Sheppard 1996, Terres 1980). Elevation records range from -280 feet to 5, 250 feet, typically in smooth topography with little slope (Sheppard 1970). Individuals are wary of humans and are susceptible to disturbance from shrub removal and off-road vehicle activity (Remsen 1978). A typical density is 0 to 5 pairs per square mile, and a high density of LeConte's thrasher is 10 pairs per square mile as observed in Maricopa County, Arizona (Sheppard 1970).

LeConte's thrasher has moderate potential to occur within the BSA.

Burrowing Owl

Burrowing owl is a USFWS bird of conservation concern and a California Species of Special Concern. With a relatively wide-ranging distribution throughout the west, burrowing owls are considered to be habitat generalists (Lantz et al. 2004). In California, burrowing owls are yearlong residents of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats (Zeiner et al. 1990). Preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography, and well-drained soils (Haug et al. 1993).

The presence of burrows is the most essential component of burrowing owl habitat as they are required for nesting, roosting, cover, and caching prey (Coulombe 1971; Martin 1973; Green and Anthony 1989; Haug et al. 1993). In California, western burrowing owls most commonly live in burrows created by California ground squirrels (*Spermophilus beecheyi*). Burrowing owls may occur in human-altered landscapes such as agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable (i.e., open and sparse); usable burrows are available; and foraging habitat occurs in close proximity (Gervais et al. 2008). Debris piles, riprap, culverts, and pipes can be used for nesting and roosting.

Burrowing owl has moderate potential to occur within the BSA. Focused surveys were conducted within the BSA and were negative for burrowing owl.

Mohave Ground Squirrel

Mohave ground squirrel is a state-listed threatened species. This species' distribution range is restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo counties (Zeiner et al. 1990). Mohave ground

squirrels generally inhabit areas where the soil is friable and sandy or gravelly. Mohave ground squirrels occur in desert scrub habitats dominated by creosote bush and desert saltbush scrub at elevations between 1,800 and 5,000 feet amsl.

Mohave ground squirrel was not observed during 2022 focused protocol surveys conducted by Dipodomys Ecological Consulting, LLC. Though some suitable habitat was detected, the report determined that colonization from Mohave ground squirrel populations is unlikely in the near future. The report concluded that CDFW will stipulate that no Mohave ground squirrels occur within the BSA. The Mohave ground squirrel survey results are detailed in Appendix C.

Mojave Desert Tortoise

Desert tortoise is a federally and state-listed threatened species. The range of the Mohave population of the desert tortoise includes portions of the Mojave Desert and the Colorado Desert in Southern California (parts of Inyo, Kern, Los Angeles, San Bernardino, and Riverside Counties), southern Nevada (Clark, Esmeralda, Nye, and Lincoln Counties), northwestern Arizona (Mohave County), and southwestern Utah (Washington County).

The typical habitat for the desert tortoise in the Mojave Desert is creosote bush scrub where precipitation ranges from 2 to 8 inches, with relatively high diversity of perennial plants, and high productivity of ephemeral plants. Throughout most of the Mojave Desert, desert tortoises occur most commonly on gently sloping terrain with sandy gravel soils and where there is sparse cover of low-growing shrubs, which allows for the establishment of herbaceous plants. Soils must be friable enough for digging of burrows, but firm enough so that burrows do not collapse (USFWS 2008). Although populations of desert tortoise are not generally known to inhabit elevations much above 4,000 feet amsl, they occur from below sea level to an elevation of 7,300 feet amsl. Occupied habitat varies from flats and slopes dominated by creosote bush scrub at low elevations to rocky slopes in blackbrush and juniper woodland ecotones at higher elevations (USFWS 2011).

Desert tortoise was not observed during protocol surveys; therefore, this species is not expected to occur within the BSA.

Crotch Bumble Bee

Crotch bumblebee is a state candidate for listing as threatened. The Crotch bumblebee is distributed in coastal California, east towards the Sierra-Cascade Crest, and is less commonly in western Nevada (Koch 2012). It occurs in grassland and scrub communities that contain *Phacelia, Clarkia, Eriogonum, Eschscholzia and Antirrhinum* species which have been identified as genera with preferred nectar sources.

Crotch bumblebee has a low potential to occur within the study area. While the study area contains floral resources during the spring blooming period, many of the flower patches are small and disjointed, forming marginal potential habitat for this species. Furthermore, documented occurrences of Crotch bumble bee within the high desert are historical in nature, with the more recent occurrences located along the northern foothills of the San Bernardino Mountains (Richardson 2023); however, further study is needed to understand the full distribution of this species.

5.3.3 Potential Aquatic Resources

A Jurisdictional Aquatic Resources Delineation was unnecessary as the site reconnaissance determined the absence of wetlands and waters within the BSA.

5.4 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by ensuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as steppingstones for dispersal.

The BSA is not mapped as an essential connectivity area or natural landscape block, nor is it located near one (within 5 miles) (CDFW 2022e). Nonetheless, the BSA is mapped as a rank 3 Area of Conservation Emphasis (CDFW 2022f). According to CDFW (2022e), Rank 3 is defined as:

> Connections with implementation flexibility. These are areas that have been identified as having connectivity importance, but have not been identified as channelized areas, species corridors, or habitat linkages at this time. This may change with future changes in surrounding land use or regional specific information.

The BSA is likely mapped as a rank 3 due to the presence of Oro Grande Wash southeast of the BSA. Wildlife may locally move through Oro Grande Wash as a corridor; however, this feature is impeded to the north by the California Aqueduct. The BSA is located in an area of encroaching development and is bordered by U.S. Highway 395 to the east and Phelan Road to the south. Both roads are at-grade with the surrounding land. As a result, the Project site provides open space for wildlife movement but does not appear to serve as a significant regional wildlife corridor. On a local level, wildlife may move across the site when migrating or foraging/hunting. Since the Project does not provide for regional wildlife movement or serve as a regional wildlife corridor, it is not expected to contribute to the impediment of local or seasonal movement of wildlife through the surrounding habitat.

6 Project Impacts

This section addresses direct and indirect impacts to special-status biological resources that would result from implementation of the Project. The significance determinations for proposed or potential impacts are described and proposed mitigation is provided in Section 7, Significant Impacts and Mitigation. Cumulative impacts are addressed in the Project's environmental impact report.

6.1 Explanation of Findings of Significance

Impacts to special-status vegetation communities, plant and wildlife species, and jurisdictional waters, including wetlands, must be quantified, and analyzed to determine whether such impacts are significant under CEQA. CEQA Guidelines Section 15064(b) states that an ironclad definition of "significant" effect is not possible, because the significance of an activity may vary with the setting. Appendix G of the CEQA Guidelines, however, does provide "examples of consequences which may be deemed to be a significant effect on the environment" (14 CCR 15064[e]). These effects include substantial effects on rare or endangered species of animal or plant or the habitat of the species. CEQA Guidelines Section 15065(a) is also helpful in defining whether a project may have a significant effect on the environment. Under that section, a proposed Project may have a significant effect on the environment if the project has the potential to (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, (5) reduce the number or restrict the range of a rare or endangered plant or animal, or (6) eliminate important examples of a major period of California history or prehistory.

The following are the significance thresholds for biological resources provided in the CEQA Guidelines Appendix G Environmental Checklist, which states that a project would potentially have a significant effect if it does any of the following:

Impact BIO-1	Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
Impact BIO-2	Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.
Impact BIO-3	Has 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.
Impact BIO-4	Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.
Impact BIO-5	Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
Impact BIO-6	Conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

The evaluation of whether an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to, or result in, permanent loss of an important resource, such as a population of a rare plant or wildlife species. Impacts may be important locally, because they result in an adverse alteration of existing site conditions but considered not significant because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact is the primary determinant of whether that impact can be mitigated to a level below significance.

6.2 Definition of Impacts

Direct impacts refer to complete loss of a biological resource. For purposes of this report, it refers to the area where vegetation clearing, grubbing, or grading replaces biological resources. Direct impacts were quantified by overlaying the proposed impact limits on the biological resources map of the BSA. Direct permanent impacts would occur from construction of an industrial/warehouse building and associated off-site improvements. The proposed Project has no temporary impacts.

Indirect impacts are reasonably foreseeable effects caused by a project's implementation on remaining or adjacent biological resources outside the direct disturbance zone. For purposes of this report, indirect impacts may affect areas outside the disturbance. Indirect impacts may be short-term and construction-related, or long-term and associated with development in proximity to biological resources.

Cumulative impacts refer to the combined environmental effects of a project and other relevant projects. These impacts may be minor when analyzed individually but become collectively significant as they occur over time. Cumulative impacts are addressed in the Project's environmental impact report.

The evaluation of Project impacts is organized by the CEQA Guidelines Appendix G Environmental Checklist.

6.3 Impacts Analysis

The acreage of impacts is provided in Table 5. Figure 6, Impacts, show the areas where impacts are anticipated to occur.

Table 5. Impacts to Vegetation Communities and Land Cover Types within the BSA

Vegetation Community/ Land Cover	Alliance	Association	Total Existing BSA (Acres)	On-Site Impacts (Acres)	Off-Site Impacts Areas (Acres)	Total Impacts (Acres)
Vegetation Communities						
Desert Almond—Mexican Bladdersage Scrub	*Prunus fasciculata—Scutellaria mexicana*	*Prunus fasciculata—Scutellaria mexicana*	28.5	1.6	21.0	22.6
Joshua Tree Woodland*	*Yucca brevifolia*	*Yucca brevifolia / Lycium andersonii—Ephedra nevadensis*	29.6	3.2	7.8	11.0

Table 5. Impacts to Vegetation Communities and Land Cover Types within the BSA

Vegetation Community/ Land Cover	Alliance	Association	Total Existing BSA (Acres)	On-Site Impacts (Acres)	Off-Site Impacts Areas (Acres)	Total Impacts (Acres)
California Buckwheat Scrub	*Eriogonum fasciculatum*	*Eriogonum fasciculatum*	1.0	0.1	0.1	0.1
Rubber Rabbitbrush Scrub	*Ericameria nauseosa*	*Ericameria nauseosa*	16.8	0.7	—	0.7
Land Covers						
Urban/Developed	N/A	N/A	8.1	0.8	—	0.8
Disturbed Habitat	N/A	N/A	13.5	2.6	0.6	3.2
		Total[1]	**97.5**	**8.9**	**29.5**	**38.3**

Notes: N/A = Not Applicable
[1] Total acreages may not sum exactly due to rounding.

6.3.1 Impact BIO-1: Special-Status Species

6.3.1.1 Impacts to Special-Status Plants

Direct Impacts

No non-listed special-status plant species were observed or have high or moderate potential to occur within the BSA; therefore, the Project would have no direct or indirect impacts to non-listed special-status plant species. In addition, the BSA does not occur within federally designated critical habitat for special-status plant species, and there would be no direct impacts to critical habitat.

One listed special-status plant species was observed within the BSA: western Joshua tree.

Western Joshua Tree

Western Joshua tree, a candidate for state listing under CESA, was observed and would be directly impacted by the Project. Based on the site plan, implementation of the Project would result in direct impacts to 97 western Joshua tree individuals from construction activities. All ground-disturbing activities are considered permanent impacts to western Joshua trees. Direct impacts to western Joshua tree are considered significant absent mitigation under CEQA. Of the 97 western Joshua tree individuals, a total of 13 overlap the Hesperia Commerce Center II project (ITP No. 2021-038-06). We assume the project that takes those trees first would be responsible for the mitigation of those trees and that both projects would not be required to mitigate for the take of the trees. Figure 7 shows the overlap of impacts to western Joshua trees for the proposed Project and the Hesperia Commerce Center II project.

As required by **Mitigation Measure (MM)-BIO-1** (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 97 western Joshua trees, their seed bank, and associated habitat will be fulfilled through conservation of western Joshua trees through a payment of fees consistent with The Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. In addition, implementation of **MM-BIO-2** (Designated Biologist Authority), **MM-BIO-3** (Compliance Monitoring), **MM-BIO-4** (Education Programs), and **MM-BIO-5** (Construction Monitoring Notebook) would reduce potential direct impacts to a less-than significant level.

Implementation of **MM-BIO-1** (Western Joshua Tree Fee Payment), **MM-BIO-2** (Designated Biologist Authority), **MM-BIO-3** (Compliance Monitoring), **MM-BIO-4** (Education Programs), and **MM-BIO-5** (Construction Monitoring Notebook) would reduce potential direct impacts to western Joshua trees to less than significant.

Indirect Impacts

Typically, CDFW considers any western Joshua tree within 186 feet of a direct impact to be indirectly impacted. Thus, the Project would result in indirect impacts to western Joshua trees outside of the construction footprint.

Construction-related, short-term indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on Joshua trees, chemical spills, stormwater erosion and sedimentation, and increased wildfire risk.

Potential long-term (post-construction) indirect impacts from operation and maintenance activities may include effects of herbicides, changes in water quality, increased wildfire risk, induced demand of the surrounding area, increased traffic and vehicle emissions, and accidental chemical spills. Indirect impacts to Joshua trees are considered significant absent mitigation.

Implementation of **MM-BIO-2** (Designated Biologist Authority) gives the Project's Designated Biologist the authority to stop work if construction is not compliant with this CEQA document. **MM-BIO-3** (Compliance Monitoring) requires that an experienced biologist oversee compliance with the protective measures, including limiting impacts to the Project impact footprint. **MM-BIO-4** (Education Program) would provide construction personnel with training related to western Joshua trees that are present on and adjacent to the impact footprint. **MM-BIO-5** (Construction Monitoring Notebook) provides for documentation that the education program was administered to applicable personnel. **MM-BIO-6** (Delineation of Property Boundaries) requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the Project impact footprint. The construction crew will be responsible for unauthorized impacts from construction activities to western Joshua trees that are outside the permitted Project footprint. Thus, implementation of **MM-BIO-2** through **MM-BIO-6** will enable the Project to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

To reduce fugitive dust resulting from Project construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

MM-BIO-7 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills will be implemented, and that repair and clean-up of any hazardous waste occurs. Thus, implementation of **MM-BIO-7** (Hazardous Waste) would help to avoid and minimize impacts to western Joshua tree from any construction-related chemical spills.

A Stormwater Pollution Prevention Plan would be prepared and implemented to prevent all construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and into receiving waters. Best management practice categories employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a Stormwater Pollution Prevention Plan would help to avoid and minimize the potential effects of stormwater erosion during construction.

Construction of the Project would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the Project would be required to comply with City of Hesperia and state requirements for fire safety practices to reduce the possibility of fires during construction activities. Further, vegetation would be removed from the site prior to the start of construction. Adherence to City of Hesperia and state regulatory standards during Project construction would reduce the risk of wildfire ignition and spread during construction activities. Therefore, short-term construction impacts involving wildland fires would not be substantial.

MM-BIO-8 (Herbicides) would limit herbicide use to instances where hand or mechanical efforts are infeasible and would only be applied when wind speeds are less than 7 miles per hour to prevent drift into off-site western Joshua trees.

Implementation of low-impact-development features and best management practices would, to the maximum extent practicable, reduce the discharge of pollutants into receiving waters, including inadvertent release of pollutants (e.g., hydraulic fluids and petroleum); the improper management of hazardous materials; trash and debris; and the improper management of portable restroom facilities (e.g., regular service) in accordance with all relevant local and state development standards. In addition, in accordance with CALGreen requirements (California Green Building Standards Code, CCR, Title 24, Part 11), Project source controls to improve water quality would be provided for outdoor material storage areas, outdoor trash storage/waste handling areas, and outdoor loading/unloading areas. Therefore, impacts to western Joshua trees due to changes in water quality would be avoided and minimized through implementation of low-impact-development features and best management practices.

Upon completion of Project construction, with adherence to the City of Hesperia's Municipal Code and because of the low ignitability of the proposed structures and implementation of fire-resistant and irrigated landscaping, the Project would not facilitate wildfire spread or exacerbate wildfire risk. Further, given that surrounding off-site fuels consist of moderately spaced vegetation, wildfires in the immediate surrounding area are not common, and it is unlikely that the Project site would be exposed to the uncontrolled spread of a wildfire. It is not anticipated that the Project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks or the uncontrolled spread of a wildfire; thus, with adherence to the City of Hesperia's Municipal Code, long-term indirect impacts to western Joshua tree associated with increased wildlife risk is not expected to occur.

Implementation of MM-BIO-2 (Designated Biologist Authority), MM-BIO-3 (Compliance Monitoring), MM-BIO-4 (Education Program), MM-BIO-5 (Construction Monitoring Notebook), MM-BIO-6 (Delineation of Property Boundaries), MM-BIO-7 (Hazardous Waste), and MM-BIO-8 (Herbicides), would reduce potential indirect impacts to western Joshua tree to less than significant.

6.3.1.2 Impacts to Special-Status Wildlife

Direct Impacts

Direct impacts can potentially occur to special-status wildlife species from impacts to habitat and impacts to the species from injury or mortality of individuals from construction activities within the Project site.

The Project could result in significant, direct impacts to four special-status wildlife species: loggerhead shrike, LeConte's thrasher, burrowing owl, and Crotch bumble bee; therefore, these species are further discussed below.

Loggerhead Shrike

Loggerhead shrike was observed during the biological resource surveys. Extensive suitable nesting habitat, particularly western Joshua trees, is present within the BSA.

The Project would result in the loss of 34.3 acres of suitable habitat for loggerhead shrike, including impacts to desert almond—Mexican bladdersage scrub, Joshua tree woodland, California buckwheat scrub, and rubber rabbitbrush scrub. These potential direct impacts to loggerhead shrike are considered significant absent mitigation under CEQA.

To avoid potential impacts to nesting loggerhead shrike, it is recommended that the vegetation removal activities be conducted outside the general bird nesting season (February 1 through August 31). If vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey by a qualified biologist is required prior to vegetation removal. This requirement is outlined in **MM-BIO-9** (Pre-construction Nesting Bird Surveys and Avoidance).

As required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to 97 western Joshua trees will be fulfilled through payment of applicable fees consistent with The Western Joshua Tree Conservation Plan or through payment to a CDFW-approved mitigation bank. The fees will contribute to conservation of western Joshua tree, which will also provide habitat for loggerhead shrike. . Thus, mitigation for impacts to western Joshua tree will also mitigate for impacts to loss of suitable habitat for loggerhead shrike.

Implementation of **MM-BIO-1** (Western Joshua Tree Fee Payment) and **MM-BIO-9** (Pre-construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to loggerhead shrike to less than significant.

LeConte's Thrasher

LeConte's thrasher has a moderate potential to occur within the BSA. Suitable foraging and nesting habitat is present within the BSA.

The Project would result in the loss of approximately 23.4 acres of suitable habitat for LeConte's thrasher, including impacts to desert almond—Mexican bladdersage scrub, California buckwheat scrub, and rubber rabbitbrush scrub. These potential direct impacts to LeConte's thrasher are considered significant absent mitigation under CEQA.

To avoid potential impacts to nesting LeConte's thrasher, it is recommended that vegetation removal activities be conducted outside the general bird nesting season (February 1 through August 31). If vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey by a qualified biologist is required prior to vegetation removal. This requirement is outlined in **MM-BIO-9** (Pre-construction Nesting Bird Surveys and Avoidance).

As required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to 97 western Joshua trees will be fulfilled through payment of applicable fees consistent with The Western Joshua Tree Conservation Plan or through payment to a CDFW-approved mitigation bank. The fees will contribute to conservation of western Joshua tree, which will also provide habitat for LeConte's thrasher. Thus, mitigation for impacts to western Joshua tree would also mitigate for impacts to loss of suitable habitat for LeConte's thrasher.

Implementation of **MM-BIO-1** (Western Joshua Tree Fee Payment) and **MM-BIO-9** (Pre-construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to LeConte's thrasher to less than significant.

Burrowing Owl

Focused surveys for burrowing owl were negative; however, suitable habitat exists on site, and the species could eventually occupy the BSA prior to construction.

The Project would result in the loss of 37.5 acres of suitable habitat for burrowing owl, including impacts to desert almond—Mexican bladdersage scrub, Joshua tree woodland, California buckwheat scrub, and rubber rabbitbrush scrub, and disturbed habitat. These potential direct impacts to burrowing owls are considered significant absent mitigation under CEQA.

Pursuant to the California Fish and Game Code and the MBTA, a pre-construction survey in compliance with Staff Report on Burrowing Owl Mitigation, State of California Natural Resource Agency, Department of Fish and Game, May 7, 2012 (CDFW 2012) would be necessary to reevaluate the locations of potential burrowing owl burrows located within the Project limits so take of owls or active owl nests can be avoided. Consistent with **MM-BIO-10** (Pre-construction Surveys for Burrowing Owl and Avoidance), a pre-construction survey for burrowing owl shall be conducted in areas supporting potentially suitable habitat and within 14 days prior to the start of construction activities. A Burrowing Owl Relocation Plan has been prepared to facilitate implementation of this mitigation measure and is attached to this report as Appendix I. In addition, implementation of **MM-BIO-2** (Designated Biologist Authority), **MM-BIO-3** (Compliance Monitoring), **MM-BIO-4** (Education Programs), and **MM-BIO-5** (Construction Monitoring Notebook) would reduce potential direct impacts to a less-than significant level.

As required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to 97 western Joshua trees will be fulfilled through payment of applicable fees consistent with The Western Joshua Tree Conservation Plan or through payment to a CDFW-approved mitigation bank. The fees will contribute to conservation of western Joshua tree, which will also provide habitat for burrowing owl.. Thus, mitigation for impacts to western Joshua tree will also mitigate for impacts to loss of suitable habitat for burrowing owl, which use similar habitat.

Implementation of **MM-BIO-1 (Western Joshua Tree Fee Payment)** and **MM-BIO-10** (Pre-construction Surveys for Burrowing Owl and Avoidance) would reduce potential direct impacts to burrowing owl to less than significant.

Crotch Bumble Bee

Crotch bumble bee has a low potential to occur within the BSA.

To avoid potential impacts to nesting Crotch bumble bee, it is recommended that ground disturbing activities be conducted outside the Colony Active Period (April 1 through August 31). If vegetation cannot be removed outside the Colony Active Period, a pre-construction survey by a qualified biologist is required prior to ground disturbance. This requirement is outlined in **MM-BIO-11** (Pre-construction Survey for Crotch Bumble Bee).

As required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to 97 western Joshua trees will be fulfilled through payment of applicable fees consistent with The Western Joshua Tree Conservation Plan or through payment to a CDFW-approved mitigation bank. The fees will contribute to conservation of western Joshua tree, which will also provide habitat for Crotch bumble bee. Thus, mitigation for impacts to western Joshua tree would also mitigate for impacts to loss of potential habitat for Crotch bumble bee.

Implementation of **MM-BIO-1** (Western Joshua Tree Fee Payment) and **MM-BIO-11** (Pre-construction Survey for Crotch Bumble Bee) would reduce potential direct impacts to Crotch bumble bee to less than significant.

Nesting Migratory Birds and Raptors

Similar to most other sites containing trees, shrubs, and other vegetation, the BSA contains opportunities for birds of prey (raptors) and other avian species to nest on site. Native nesting bird species with potential to occur within the BSA are protected by California Fish and Game Code Sections 3503 and 3503.5, and by the federal MBTA (16 USC 703–711). In particular, Section 3503 provides that it is unlawful to take, possess, or needlessly destroy the active nests or eggs of any bird in California; Section 3503.5 protects all raptors and their eggs and active nests; and the MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of native migratory bird species throughout the United States. Currently, California considers any nest that is under construction or modification, or is supporting eggs, nestlings, or juveniles as "active." Therefore, impacts to nesting migratory birds and raptors would be considered significant absent mitigation under CEQA.

To ensure compliance with the California Fish and Game Code and MBTA and to avoid potential impacts to nesting birds, it is recommended that the vegetation removal activities be conducted outside the general bird nesting season (February 1 through August 31, depending on the species), and if vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey by a qualified biologist is required prior to vegetation removal. This requirement is outlined in **MM-BIO-9** (Pre-construction Nesting Bird Surveys and Avoidance). With the incorporation of mitigation, impacts associated with nesting birds, including raptors, would be less than significant.

Implementation of **MM-BIO-9** (Pre-construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to nesting migratory birds and raptors to less than significant.

Indirect Impacts

Indirect impacts to special-status wildlife species are those that occur during construction to species present near the site, but not within the construction zone. These include fugitive dust that can degrade habitat and result in health implications for wildlife species; noise and vibration that can stress wildlife species or cause them to leave an area of otherwise suitable habitat, or that can result in disruption of bird nesting and abandonment of nests; increased human presence, which can also disrupt daily activities of wildlife and cause them to leave an area; night-time lighting, which can disrupt the activity patterns of nocturnal species, including many mammals and some birds, amphibians, and reptiles; and release of chemical pollutants, such as from oil leaks from construction vehicles and machinery.

The Project site could result in significant, indirect impacts to three special-status wildlife species: loggerhead shrike, LeConte's thrasher, and burrowing owl; therefore, these species are further discussed below.

Loggerhead Shrike

Construction activities have the potential to result in indirect impacts to loggerhead shrike and their habitat. Those impacts could include dust, noise and vibration, increased human presence, vehicle collisions, chemical spills, and night-time lighting. These potential short-term or temporary indirect impacts to loggerhead shrike are considered significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to loggerhead shrike and their habitat. Those long-term impacts could result from development within or adjacent to loggerhead shrike habitat include nighttime lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to loggerhead shrikes are considered significant absent mitigation under CEQA.

MM-BIO-9 (Pre-construction Nesting Bird Surveys and Avoidance) would require nesting bird surveys and would result in establishment of construction buffers around nests, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, night-time lighting, and vehicle collisions. MM-BIO-2 (Designated Biologist Authority), MM-BIO-3 (Compliance Monitoring), MM-BIO-4 (Education Program), and MM-BIO-5 (Construction Monitoring Notebook) would require that all workers complete a WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-7 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills be implemented, and that repair and clean-up of any hazardous waste occurs. To reduce fugitive dust resulting from construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. MM-BIO-12 (Lighting) would require night-time lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Potential long-term indirect impacts that could result from development within or adjacent to loggerhead shrike habitat include night-time lighting and increased invasive plant species that may degrade habitat. MM-BIO-12 (Lighting) would require night-time lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-13 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php).

Implementation of MM-BIO-2 (Designated Biologist Authority), MM-BIO-3 (Compliance Monitoring), MM-BIO-4 (Education Program), MM-BIO-5 (Construction Monitoring Notebook), MM-BIO-7 (Hazardous Waste), MM-BIO-9 (Pre-construction Nesting Bird Surveys and Avoidance), MM-BIO-12 (Lighting), and MM-BIO-13 (Invasive Plant Management) would reduce potential indirect impacts to loggerhead shrike to less than significant.

LeConte's Thrasher

LeConte's thrasher was not observed within the BSA; however, there is a moderate potential for it to occur based on the vegetation, elevation, and past observations. Construction activities have the potential to result in indirect impacts to LeConte's thrashers and their habitat. Those impacts could include dust, noise and vibration, increased human presence, vehicle collisions, chemical spills, and night-time lighting. These potential short-term or temporary indirect impacts to LeConte's thrasher are considered significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to LeConte's thrasher and their habitat. Those long-term impacts could result from development within or adjacent to LeConte's thrasher habitat include nighttime lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to LeConte's thrasher are considered significant absent mitigation under CEQA.

MM-BIO-9 (Pre-construction Nesting Bird Surveys and Avoidance) would require nesting bird surveys and would result in establishment of construction buffers around nests, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, night-time lighting, and vehicle collisions. MM-BIO-2 (Designated Biologist Authority), MM-BIO-3 (Compliance Monitoring), MM-BIO-4 (Education Program), and MM-BIO-5 (Construction Monitoring Notebook) would require that all workers complete a WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-7 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills be implemented, and that repair and clean-up of any hazardous waste occurs. To reduce fugitive dust resulting

from construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. MM-BIO-12 (Lighting) would require night-time lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Potential long-term indirect impacts that could result from development within or adjacent to LeConte's thrasher habitat include night-time lighting and increased invasive plant species that may degrade habitat. MM-BIO-12 (Lighting) would require night-time lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-13 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php).

Implementation of MM-BIO-2 (Designated Biologist Authority), MM-BIO-3 (Compliance Monitoring), MM-BIO-4 (Education Program), MM-BIO-5 (Construction Monitoring Notebook), MM-BIO-7 (Hazardous Waste), MM-BIO-9 (Pre-construction Nesting Bird Surveys and Avoidance), MM-BIO-12 (Lighting), and MM-BIO-13 (Invasive Plant Management) would reduce potential indirect impacts to LeConte's thrasher to less than significant.

Burrowing Owl

Based on the results of focused surveys within the BSA, burrowing owls are considered absent from the site. However, this species may colonize an area quickly and continue to have a moderate potential to occur before construction begins. A pre-construction survey is needed to confirm their absence prior to construction. Should burrowing owls occur on site, construction activities have the potential to result in indirect impacts to burrowing owls and their habitat. Those impacts could include dust, noise and vibration, trash and debris, increased human presence, vehicle collisions, chemical spills, and night-time lighting. These potential short-term or temporary indirect impacts to burrowing owls are considered significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to burrowing owls and their habitat. Those long-term impacts could result from development within or adjacent to burrowing owl habitat include nighttime lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to burrowing owls are considered significant absent mitigation under CEQA. As burrowing owls are considered absent until pre-construction surveys further confirm so, impacts to burrowing owls associated with the Project and BSA would be less than significant under CEQA.

MM-BIO-10 (Pre-construction Surveys for Burrowing Owl and Avoidance) would require pre-construction burrowing owl surveys and result in establishment of construction buffers around any burrowing owl burrows found, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, night-time lighting, and vehicle collisions. MM-BIO-2 (Designated Biologist Authority), MM-BIO-3 (Compliance Monitoring), MM-BIO-4 (Education Program), and MM-BIO-5 (Construction Monitoring Notebook) would require that all workers complete a Worker Environmental Awareness Program (WEAP) training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-7 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills will be implemented, and that repair and clean-up of any hazardous waste occurs. To reduce fugitive dust resulting from project construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. MM-BIO-12 (Lighting) would require night-time lighting during construction within

50 feet of habitat for special-status species to be shielded downward. MM-BIO-14 (Trash and Debris) would require trash and debris to be removed regularly and would require animal-resistant trash receptacles to avoid attracting urban-related, predator species.

Potential long-term indirect impacts that could result from development within or adjacent to burrowing owl habitat include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-12 (Lighting) would require night-time lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-13 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities shall not be on the most recent version of the Cal-IPC California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php).

Implementation of MM-BIO-2 (Designated Biologist Authority), MM-BIO-3 (Compliance Monitoring), MM-BIO-4 (Education Program), MM-BIO-5 (Construction Monitoring Notebook), MM-BIO-7 (Hazardous Waste), MM-BIO-10 (Pre-construction Surveys for Burrowing Owl and Avoidance), MM-BIO-12 (Lighting), MM-BIO-13 (Invasive Plant Management), and MM-BIO-14 (Trash and Debris), would reduce potential indirect impacts to burrowing owl to less than significant.

Crotch Bumble Bee

Crotch bumble bee was not observed within the BSA; however, there is a low potential for it to occur based on the vegetation and geographic range. Construction activities have the potential to result in indirect impacts to Crotch bumble bees and their habitat. Those impacts could include dust, noise and vibration, increased human presence, vehicle collisions, chemical spills, and night-time lighting. These potential short-term or temporary indirect impacts to Crotch bumble bee are considered significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to Crotch bumble bee and their habitat. Those long-term impacts could result from development within or adjacent to Crotch bumble bee habitat include nighttime lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to Crotch bumble bee are considered significant absent mitigation under CEQA.

MM-BIO-11 (Pre-construction Survey for Crotch Bumble Bee) would require pre-construction Crotch bumble bee surveys and result in establishment of construction buffers around any active nests, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, night-time lighting, and vehicle collisions. MM-BIO-2 (Designated Biologist Authority), MM-BIO-3 (Compliance Monitoring), MM-BIO-4 (Education Program), and MM-BIO-5 (Construction Monitoring Notebook) would require that all workers complete a Worker Environmental Awareness Program (WEAP) training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-7 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills will be implemented, and that repair and clean-up of any hazardous waste occurs. To reduce fugitive dust resulting from project construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. MM-BIO-12 (Lighting) would require night-time lighting during construction within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-14 (Trash and Debris) would require trash and debris to be removed regularly and would require animal-resistant trash receptacles to avoid attracting urban-related, predator species.

Potential long-term indirect impacts that could result from development within or adjacent to Crotch bumble bee habitat include nighttime lighting and increased invasive plant species that may degrade habitat. **MM-BIO-12** (Lighting) would require night-time lighting during operations within 50 feet of habitat for special-status species to be shielded downward. **MM-BIO-13** (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities shall not be on the most recent version of the Cal-IPC California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php).

Implementation of **MM-BIO-2** (Designated Biologist Authority), **MM-BIO-3** (Compliance Monitoring), **MM-BIO-4** (Education Program), **MM-BIO-5** (Construction Monitoring Notebook), **MM-BIO-7** (Hazardous Waste), **MM-BIO-11** (Pre-construction Survey for Crotch Bumble Bee), **MM-BIO-12** (Lighting), **MM-BIO-13** (Invasive Plant Management), and **MM-BIO-14** (Trash and Debris), would reduce potential indirect impacts to Crotch bumble bee to less than significant.

Nesting Migratory Birds and Raptors

Construction activities have the potential to result in indirect impacts to nesting migratory birds and raptors, and their habitats. Those impacts could include the loss of a nest through increased dust, noise and vibration, increased human presence, and night-time lighting. These potential short-term or temporary indirect impacts to these species are considered significant absent mitigation under CEQA.

To ensure compliance with the California Fish and Game Code and MBTA and to avoid potential indirect impacts to nesting birds, it is recommended that the vegetation removal activities be conducted outside the general bird nesting season (February 1 through August 31, depending on the species), and if vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey (**MM-BIO-9**) by a qualified biologist is required prior to vegetation removal. Indirect impacts including increased dust, noise, and vibration, increased human presence, and night-time lighting, will be offset through implementation of **MM-BIO-12** (Lighting) which would require night-time lighting during construction within 50 feet of habitat for special-status species to be shielded downward. **MM-BIO-2** (Designated Biologist Authority), **MM-BIO-3** (Compliance Monitoring), **MM-BIO-4** (Education Program), and **MM-BIO-5** (Construction Monitoring Notebook) would require that all workers complete a WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. To reduce fugitive dust resulting from project construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

Implementation of **MM-BIO-2** (Designated Biologist Authority), **MM-BIO-3** (Compliance Monitoring), **MM-BIO-4** (Education Program), **MM-BIO-5** (Construction Monitoring Notebook), **MM-BIO-9** (Pre-construction Nesting Bird Surveys and Avoidance), and **MM-BIO-12** (Lighting) would reduce potential indirect impacts to nesting migratory birds and raptors to less than significant.

6.3.2 Impact BIO-2: Sensitive Vegetation Communities

6.3.2.1 Direct Impacts

A total of 38.3 acres, including 29.5 acres within the Project site and 8.9 acres within the Off-Site Improvement Areas, would be permanently impacted from the Project (Figure 6). As stated in Section 5.1, Vegetation Communities and Land Covers, CDFW state rankings of 1, 2, or 3 are considered high priority for inventory or

special-status, and impacts to these communities typically require mitigation. Joshua tree woodland is considered a sensitive biological resource by CDFW under CEQA.

All ground-disturbing activities are considered permanent impacts to Joshua tree woodland. The Project would result in permanent impacts to 11.0 acres of Joshua tree woodland, which would be considered a significant impact under CEQA absent mitigation.

The Project would also result in permanent impacts to 27.3 acres of vegetation communities and land cover types that are not considered sensitive by CDFW, including desert almond—Mexican bladdersage scrub, California buckwheat scrub, and rubber rabbitbrush scrub, and disturbed habitat, and urban/developed lands. Therefore, these direct impacts are considered less than significant under CEQA.

Mitigation for direct impacts to 97 western Joshua tree individuals will also mitigate for impacts to 11.0 acres of Joshua tree woodland. As required by **MM-BIO-1 (Western Joshua Tree Fee Payment)**, mitigation for direct impacts to 97 western Joshua trees will be fulfilled through payment of fees consistent with The Western Joshua Tree Conservation Plan or through payment to a CDFW-approved mitigation bank. Conservation efforts for western Joshua tree will focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the Project site. Thus, mitigation for impacts to western Joshua tree will also mitigate for impacts to 11.0 acres of Joshua tree woodland.

Implementation of **MM-BIO-1 (Western Joshua Tree Fee Payment)** would reduce potential direct impacts to sensitive vegetation communities (i.e., Joshua tree woodland) to less than significant.

6.3.2.2 Indirect Impacts

Construction-related indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on Joshua tree woodland, chemical spills, stormwater erosion and sedimentation, and increased wildfire risk. Potential long-term (post-construction) indirect impacts from operation and maintenance activities may include effects of herbicides, changes in water quality, increased wildfire risk, increased demand on the surrounding area, increased traffic and vehicle emissions, and accidental chemical spills. Indirect impacts to Joshua tree woodland are considered significant absent mitigation.

Implementation of **MM-BIO-1 (Western Joshua Tree Fee Payment)** and adherence to both the CDNPA and the Hesperia Municipal Code, would reduce potential indirect impacts to sensitive vegetation communities (i.e., Joshua tree woodland) to less than significant.

6.3.3 Impact BIO-3: State or Federally Protected Wetlands

No state or federal wetlands or waters are present within the BSA. Therefore, no impacts to jurisdictional wetlands and waters are proposed.

6.3.4 Impact BIO-4: Wildlife Corridors and Habitat Linkages

6.3.4.1 Direct Impacts

No significant direct permanent impacts would occur on wildlife movement or use of native wildlife nursery sites associated with Project activities. Existing nearby habitat linkages and wildlife corridor functions would remain intact while construction activities are conducted and following Project completion. Wildlife movement may be temporarily disrupted during the construction phase of the Project, although this effect would be both localized and short-term in nature. Nearby corridors that could support wildlife movement in the region, include the Oro Grande Wash and La Bureau of Power and Light Road immediately to the west, would not be impacted by the Project. Further, the Project site does not contain nursery sites, such as bat colony roosting sites or colonial bird nesting areas. Therefore, impacts associated with wildlife movement, wildlife corridors, and wildlife nursery sites would be less than significant under CEQA.

6.3.4.2 Indirect Impacts

Construction-related short-term noise and work in the vicinity would be temporary and would not be expected to significantly disrupt wildlife movement due to ambient noise conditions and the ability for wildlife to continue to move around the construction area and upland portions of the BSA during and after construction. Temporary disturbance to local species may occur but would not substantially degrade the quality or use of the vegetation communities in the vicinity. Work activities are not currently proposed during the nighttime. Therefore, implementation of the Project would not result in significant short-term indirect impacts to wildlife corridors and migratory routes.

Potential long-term (post-construction) indirect impacts from operations and maintenance activities could disrupt wildlife movement around the Project due to increased lighting from buildings. **MM-BIO-12** (Lighting) would ensure all lighting during operations, and within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife, would be directed away from natural areas.

Implementation of **MM-BIO-12** (Lighting) would reduce potential indirect impacts to wildlife movement to less than significant.

6.3.5 Impact BIO-5: Associated with Local Policies and Ordinances

6.3.5.1 California Desert Native Plants

No desert native plant species, except western Joshua tree, were recorded within the BSA (Figure 6). Western Joshua tree is further discussed below.

Western Joshua Trees

In accordance with Chapter 16.24 of the Hesperia Municipal Code, the preparation of a western Joshua tree and desert native plants relocation plan is required to mitigate impacts to Joshua trees as a result of the Project. In this case, the City did not require relocation of western Joshua tree due to Project implementation of **MM-BIO-1** (Western

Joshua Tree Fee Payment). As required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to 97 western Joshua trees will be fulfilled through payment of fees consistent with The Western Joshua Tree Conservation Plan or through payment to a CDFW-approved mitigation bank. Conservation efforts for western Joshua tree will focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the Project site. Despite the City not requiring a relocation plan, a Joshua Tree Preservation, Protection, and Relocation Plan and Desert Native Plant Relocation Plan is provided in Appendix H to provide additional details about western Joshua tree within the Project site.

The Project could result in potentially significant impacts to native desert plants, western Joshua trees, of which are addressed by state and local plant and tree preservation regulations, absent mitigation. Implementation of **MM-BIO-1** (Western Joshua Tree Fee Payment) would reduce potential impacts California desert native plants, western Joshua tree, to less than significant.

6.3.6 Impact BIO-6: Habitat Conservation Plans

The Project is located within the California Desert Conservation Area Plan (BLM 1980). The Project is also located within the Draft West Mojave Plan (BLM 2005) and the Desert Renewable Energy Conservation Plan (BLM 2016) areas. The West Mojave Plan and Desert Renewable Energy Conservation Plan are amendments to the California Desert Conservation Area Plan. The BLM issued a Record of Decision for the West Mojave Plan in 2006, although the West Mojave Plan has not been formally adopted. The Project will not conflict with the conservation criteria associated with the California Desert Conservation Area Plan or Desert Renewable Energy Conservation Plan. Therefore, impacts associated with an adopted habitat conservation plan would be less than significant under CEQA.

INTENTIONALLY LEFT BLANK

7 Mitigation

MM-BIO-1 Conservation of Western Joshua Tree Lands. Mitigation for direct impacts to 97 western Joshua tree individuals will be fulfilled through payment of the elected fees as described in Section 1927.3 of The Western Joshua Tree Conservation Act. In conformance with the fee schedule, mitigation will consist of payment of $1,000 for each western Joshua tree five meters or greater in height, and $500 for each western Joshua tree less than five meters in height. However, as noted above, a total of 13 overlap the Hesperia Commerce Center II project (ITP No. 2021-038-06), and mitigation for these impacts will be completed by the project that happens first. Alternatively, mitigation will occur through off-site conservation or through a CDFW-approved mitigation bank, or as required by an Incidental Take Permit, if received.

MM-BIO-2 Designated Biologist Authority. The Designated Biologist shall have authority to immediately stop any activity that does not comply with the biological resources mitigation measures and/or to order any reasonable measure to avoid the unauthorized take of an individual western Joshua tree.

MM-BIO-3 Compliance Monitoring. The Designated Biologist shall be on site daily when impacts occur. The Designated Biologist shall conduct compliance inspections to minimize incidental take of western Joshua trees and impacts to other sensitive biological resources; prevent unlawful take of western Joshua trees; and ensure that signs, stakes, and fencing are intact, and that impacts are only occurring outside the permitted impact footprint. Weekly written observation and inspection records that summarize oversight activities and compliance inspections and monitoring activities required by the Incidental Take Permit shall be prepared.

MM-BIO-4 Education Program. An education program (Worker Environmental Awareness Program [WEAP]) for all persons employed or otherwise working in the Project area shall be administered before performing impacts. The WEAP shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and status of western Joshua tree, burrowing owl, and loggerhead shrike; and other biological resources mitigation measures described in the California Environmental Quality Act document. Interpretation for non-English-speaking workers will be provided, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project area. Upon completion of the WEAP, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees who will be conducting work in the Project area.

MM-BIO-5 Construction Monitoring Notebook. The Designated Biologist shall maintain a construction-monitoring notebook on site throughout the construction period, which shall include a copy of the biological resources mitigation measures with attachments and a list of signatures of all personnel who have successfully completed the education program. The permittee shall ensure that a copy of the construction monitoring notebook is available for review at the Project site upon request by the California Department of Fish and Wildlife.

MM-BIO-6 Delineation of Property Boundaries. Before beginning activities that would cause impacts, the contractor shall, in consultation with the Designated Biologist, clearly delineate the boundaries with

fencing, stakes, or flags, consistent with the grading plan, within which the impacts will take place. All impacts outside the fenced, staked, or flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area.

MM-BIO-7 Hazardous Waste. The Applicant shall immediately stop work and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so.

MM-BIO-8 Herbicides. The Applicant shall limit herbicide use for invasive plant species and shall use herbicides only if it has been determined that hand or mechanical efforts are infeasible. To prevent drift, the permittee shall apply herbicides only when wind speeds are less than 7 miles per hour. All herbicide application shall be performed by a licensed applicator and in accordance with all applicable federal, state, and local laws and regulations.

MM-BIO-9 Pre-construction Nesting Bird Surveys and Avoidance. Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31), to reduce any potential significant impact to birds that may be nesting on the survey area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the Project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate buffer established around the nest, which will be determined by the biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall also be conducted when construction occurs in close proximately to an active nest buffer. No Project activities may encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until is determined the nestlings have fledged and the nest is no longer considered active.

MM-BIO-10 Pre-construction Surveys for Burrowing Owl and Avoidance. One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the Project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife] in 2012) or current version.

If burrowing owls are detected, the Burrowing Owl Relocation Plan shall be implemented in consultation with the California Department of Fish and Wildlife (CDFW). As required by the Burrowing Owl Relocation Plan, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers will be established around occupied burrows in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation or current version. No

Project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.

Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate Project area and within a buffer zone by installing one-way doors in burrow entrances. These doors will be placed at least 48 hours prior to ground-disturbing activities. The Project area shall be monitored daily for one week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat will be provided following the guidance in the Staff Report on Burrowing Owl Mitigation or current version.

Where possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow.

MM-BIO-11 Pre-construction Surveys for Crotch Bumble Bee. A pre-construction survey for Crotch bumble bee shall occur within the construction area during the primary flight period for workers and males (April through August) prior to the start of construction activities. The survey shall ensure that no nests for Crotch bumble bee are located within the construction area. Crotch bumble bee is a habitat generalist, ground-nesting bee. For the purposes of this mitigation measure, nest resources are defined as small mammal burrows, bunch grasses with a duff layer, thatch, hollow trees, rock walls, and brush piles. On June 6, 2023, the California Department of Fish and Wildlife (CDFW) released the "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species".

The pre-construction survey shall include a 1) habitat assessment and 2) focused surveys. The habitat assessment shall include historical and current species occurrences; document potential habitat onsite including foraging, nesting, and/or overwintering resources; quantify which plant species are in bloom and their percent cover, and other items described in "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species".

The pre-construction survey will be performed by a biologist with expertise in surveying for bumble bees and include at least three (3) survey passes that are not on sequential days or in the same week, preferably spaced two to four weeks apart. The timing of these surveys shall coincide with the Colony Active Period (April through August for Crotch bumble bee). Surveys shall occur at least 1 hour after sunrise and 2 hours before sunset. Surveys will not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors will wait at least 1 hour following rain. Optimal surveys are when there are sunny to partly sunny skies that are greater than 60° Fahrenheit. Surveys may be conducted earlier if other bees or butterflies are flying. Surveys shall not be conducted when it is windy (i.e., sustained winds greater than 8 mph). Within non-developed habitats, the biologist shall look for nest resources suitable for bumble bee use. Ensuring that all nest resources receive 100% visual coverage, the biologist shall watch the nest resources for up to five minutes, looking for exiting or entering worker bumble bees. Worker bees should arrive and exit an active nest site with frequency, such that their presence would be apparent after five minutes of observation. If a bumble bee worker is detected, then a representative shall be

identified to species. Biologists should be able view several burrows at one time to sufficiently determine if bees are entering/exiting them depending on their proximity to one another. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point which would provide 100% visual coverage; this could include a 30- to 50-foot-wide area. If a nest is suspected, the surveyor can block the entrance of the possible nest with a sterile vial or jar until nest activity is confirmed (no longer than 30 minutes).

Identification will include trained biologists netting/capturing the representative bumble bee in appropriate insect nets, per the protocol in U.S. National Protocol Framework for the Inventory and Monitoring of Bees. The bee shall be placed in a clear container for observation and photographic documentation if able. The bee will be photographed using a macro lens from various angles to ensure recordation of key identifying characteristics. If bumble bee identifying characteristics cannot be adequately captured in the container due to movement, the container will be placed in a cooler with ice until the bumble bee becomes inactive (generally within 15 minutes). Once inert, the bumble bee shall be removed from the container and placed on a white sheet of paper or card for examination and photographic documentation. The bumble bee shall be released into the same area from which it was captured upon completion of identification. Based on implementation of this method on a variety of other bumble bee species, they become active shortly after removal from the cold environment, so photography must be performed quickly. If Crotch bumble bee nests are not detected, no further mitigation would be required. The mere presence of foraging Crotch bumble bees would not require implementation of additional minimization measures because they can forage up to 10 kilometers from their nests.

If nest resources occupied by Crotch bumble bee are detected within the construction area, no construction activities shall occur within 100 feet of the construction zone, or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The nest resources will be avoided for the duration of the Crotch bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest as the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gyne is highly mobile and can independently disperse to outside of the construction footprint to proposed open space (see MM-WCSP-BIO-5) or other suitable areas beyond that have suitable hibernacula resources. Because construction will have occurred in the area outside of the occupied nesting resources, no suitable habitat will be present in the impact area, and it is assumed that new queens will disperse to habitat outside of the construction area.

A written survey report will be submitted to the City and CDFW within 30 days of the pre-construction survey. The report will include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch bumble bee nest sites or individuals observed. If Crotch bumble bee nests are observed, the survey report will also include the qualifications/resumes of the surveyor and approved biologists for identification of photo vouchers, detailed habitat assessment, photo vouchers, recommendations for avoidance, and the location information will be submitted to the California Natural Diversity Database (CNDDB) at the time of, or prior to, submittal of the survey report.

If the above measures are followed, it is assumed that the Project shall not need to obtain authorization from CDFW through the California Endangered Species Act Incidental Take Permit process.

If the nest resources cannot be avoided, as outlined in this measure, the project applicant will consult with CDFW regarding the need to obtain an Incidental Take Permit.

Any measures determined to be necessary through the Incidental Take Permit process to offset impacts to Crotch bumble bee may supersede measures provided in this CEQA document and shall be incorporated into the habitat mitigation and monitoring plan.

In the event an Incidental Take Permit is needed, mitigation for direct impacts to Crotch bumble bee will be fulfilled through compensatory mitigation at a minimum 1:1 nesting habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the Incidental Take Permit process. Mitigation will be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate will be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a Project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record will take into account all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

MM-BIO-12 Lighting. Lighting for construction activities and operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife will be directed away from natural areas.

MM-BIO-13 Invasive Plant Management. To reduce the spread of invasive plant species, landscape plants within 200 feet of native vegetation communities shall not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php). Post-construction, the Project applicant shall continually remove invasive plant species on site by hand or mechanical methods, as feasible.

MM-BIO-14 Trash and Debris. The following avoidance and minimization measures shall be implemented during project construction.

1) Fully covered trash receptacles that are animal-proof will be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles will be removed at least once a week from the Project site.
2) Construction work areas shall be kept clean of debris, such as cable, trash, and construction materials. All construction/contractor personnel shall collect all litter, vehicle fluids, and food waste from the Project site on a daily basis.

INTENTIONALLY LEFT BLANK

8 References

AOS (American Ornithological Society). 2018. "Check-List of North and Middle American Birds." Accessed October 24, 2018. http://checklist.aou.org/.

BLM (Bureau of Land Management). 1980. Desert Conservation Area Plan. 1980. Accessed July 2021. https://eplanning.blm.gov/public_projects/lup/66949/82080/96344/CDCA_Plan.pdf.

BLM. 2005. West Mojave Plan: A Habitat Conservation and California Desert Conservation Area Plan Amendment. Final Environmental Impact Report and Statement. Vols. 1 and 2. https://eplanning.blm.gov/eplanning-ui/project/72544/570.

BLM. 2016. Land Use Plan Amendment to the California Desert Conservation Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan. BLM/CA/PL-2016/03+1793+8321. Prepared by the BLM. September 2016.

CDFW (California Department of Fish and Wildlife). 2010. Mohave Ground Squirrel Survey Guidelines. July 2010. Accessed January 2021. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83975.

CDFW. 2012. Staff Report on Burrowing Owl Mitigation, State of California Natural Resource Agency, Department of Fish and Game, May 7, 2012.

CDFW. 2018. Protocols for Surveying and Evaluating Impacts to Special-Status Native Populations and Natural Communities. March 20, 2018. Accessed January 2021. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline.

CDFW. 2020a. "California Fish and Game Commission Notice Of Findings, Western Joshua Tree (*Yucca brevifolia*)." September 24, 2020. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=183565&inline.

CDFW. 2022a. "Special Vascular Plants, Bryophytes, and Lichens List." California Natural Diversity Database. Sacramento, California: CDFW, Biogeographic Data Branch. April 2022. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline.

CDFW. 2022b. "Special Animals List." California Natural Diversity Database. Sacramento, California: CDFW, Biogeographic Data Branch. April 2022. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline=1.

CDFW. 2022c. RareFind 5, Version 5.2.14. California Natural Diversity Database. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed November 2021. https://map.dfg.ca.gov/rarefind/view/RareFind.aspx.

CDFW 2022d. "California Natural Communities List." Sacramento, California: CDFW, Vegetation Classification and Mapping Program. July 5, 2022. Accessed September 2022. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline.

CDFW. 2022e. Biogeographic Information and Observation System (BIOS). Version 5.108.157. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed October 2022. https://apps.wildlife.ca.gov/bios/?al=ds85.

CDFW. 2022f. Areas of Conservation Emphasis. Version 5.108.119. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed October 2022. https://apps.wildlife.ca.gov/ace/.

City of Hesperia. 2009. Protected Plant Policy. May 29, 2009. http://www.cityofhesperia.us/DocumentCenter/View/1571/PL-17-protected-plant-policy-5-29-09?bidId=

City of Hesperia. 2010. The City of Hesperia General Plan 2010. Hesperia, California. Accessed May 2022. https://www.cityofhesperia.us/409/Hesperia-General-Plan.

CNPS (California Native Plant Society). 2001. "CNPS Botanical Survey Guidelines." Published December 9, 1983, revised June 2, 2001.

CNPS. 2022a. Inventory of Rare and Endangered Plants (online edition, v8-03). Sacramento, California: California Native Plant Society, Rare Plant Program. Accessed February 2022. http://www.rareplants.cnps.org/.

CNPS. 2022b. A Manual of California Vegetation, Online Edition. http://www.cnps.org/cnps/vegetation/ searched on June 2022. California Native Plant Society, Sacramento, CA.

Coulombe, H.N. 1971. "Behavior and Population Ecology of the Burrowing owl, Speotyto cunicularia, in the Imperial Valley of California." Condor 73:162–176.

County of San Bernardino. 2007a. 2006 General Plan Program, Final Environmental Impact Report and Appendices. SCH No. 2005101038. February 2007. http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FinalEIR2007.pdf.

County of San Bernardino. 2007b. County of San Bernardino 2007 Development Code. Amended 2014. http://www.sbcounty.gov/Uploads/lus/DevelopmentCode/DC011614.pdf.

Crother, B.I. 2017. "Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding. 8th ed." Herpetological Circular No. 43. Ed. J.J. Moriarty. Shoreview, Minnesota: Society for the Study of Amphibians and Reptiles.

Cypher, E.A. 2002. "General Rare Plant Survey Guidelines." Bakersfield, California: California State University, Stanislaus, Endangered Species Recovery Program. Revised July 2002. Accessed May 2012. http://www.fws.gov/sacramento/ES/Survey-Protocols-Guidelines/Documents/rare_plant_protocol.pdf.

Dudek. 2022. Final Environmental Impact Report for the Hesperia Commerce Center II Project. February 2022.

Gervais, J.A., D.K. Rosenberg, and L.A. Comrack. 2008. "Burrowing Owl (*Athene cunicularia*)." In California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California, edited by W.D. Shuford and T. Gardali, 218–226. Studies of Western Birds no. 1. California: Western Field Ornithologists (Camarillo), and California Department of Fish and Game (Sacramento). February 4, 2008. Accessed December 11, 2012. http://www.dfg.ca.gov/wildlife/nongame/ssc/birds.html.

Green, G.A. and R.G. Anthony. 1989. "Nesting Success and Habitat Relationships of Burrowing owls in the Columbia Basin, Oregon." Condor 91:347–354.

Haug, E.A., B.A. Millsap, and M.S. Martell. 1993. "The Burrowing Owl (*Speotyto cunicularia*)." In The Birds of North America, edited by A. Poole and F. Gill. Philadelphia, Pennsylvania: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.

Humple, D. 2008. "Loggerhead Shrike (*Lanius ludovicianus*)." In California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California, edited by W.D. Shuford and T. Gardali, 271–277. Studies of Western Birds no. 1. California: Western Field Ornithologists (Camarillo) and California Department of Fish and Game (Sacramento). February 4, 2008. Accessed December 11, 2012. http://www.dfg.ca.gov/wildlife/nongame/ssc/birds.html.

Instagram. 2022. "socalrare_plants." Accessed September 2022. https://www.instagram.com/socalrare_plants/.

Jepson Flora Project. 2022. Jepson eFlora. Berkeley, California: University of California. Accessed January 2022 at http://ucjeps.berkeley.edu/interchange/index.html.

Lantz, S. J., H. Smith, and D.A. Keinath. 2004. Species Assessment for Western Burrowing Owl (*Athene cunicularia hypugaea*) in Wyoming. Prepared for the U.S. Department of Interior and Bureau of Land Management, Wyoming State Office, Cheyenne, Wyoming. September 2004.

Martin, D.J. 1973. "Selected Aspects of Burrowing owl Ecology and Behavior." Condor 75: 446–456.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. Draft Vegetation Communities of San Diego County. March 2008. https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/references/rtcref/ch9.0/rtcrefaletters/O14%202013-12-19_OberbauerTM2008.pdf.

Remsen, J. V. 1978. "Bird species of special concern in California." California Department of Fish and Game, Wildlife Management Branch.

Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. A Manual of California Vegetation. 2nd ed. Sacramento, California: California Native Plant Society.

Sheppard, J. M. 1970. "A study of LeConte's Thrasher." Calif. Birds. 1:85–95.

Sheppard, J.M. 1996. LeConte's Thrasher (*Toxostoma lecontei*). The Birds of North America, Life Histories for the 21st Century, No. 230, 1996. Eds. A. Poole and F. Gill. The Academy of Natural Sciences of Philadelphia.

SWRCB (State Water Resources Control Board). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019. https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_conformed.pdf.

Terres, J. K. 1980. Audubon Society Encyclopedia of North American Birds. Distributed by Random House. Chicago.

UCD SIG (University of California Davis Sustainability Indicators Group). 2021. "Oro Grande Wash." California Water Sustainability. Accessed July 2021. https://indicators.ucdavis.edu/cwip/huc/180902080704.

USDA (U.S. Department of Agriculture). 2022a. "Web Soil Survey" USDA, Natural Resources Conservation Service. Accessed July 2022. http://websoilsurvey.nrcs.usda.gov/.

USDA. 2022b. PLANTS Database. USDA Natural Resources Conservation Service. Accessed February 2022. http://plants.usda.gov/java/.

USFWS (U.S Fish and Wildlife Service). 2008. Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*). California and Nevada Region, Sacramento, California.

USFWS. 2010. Preparing for any Action That May Occur Within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*).

USFWS. 2011. Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*). Sacramento, California: Region 8, Pacific Southwest Region, U.S. Fish and Wildlife Service. May 6, 2011. https://www.fws.gov/nevada/desert_tortoise/documents/recovery_plan/RRP%20for%20the%20Mojave%20Desert%20Tortoise%20-%20May%202011.pdf.

USFWS. 2022a. "National Wetlands Inventory." U.S. Department of the Interior, USFWS. Accessed May 2022. http://www.fws.gov/wetlands/.

USFWS. 2022b. Environmental Conservation Online System, Information for Planning and Conservation Report (online edition, v2.3.2). Accessed November 2021. http://ecos.fws.gov/ipac/.

USGS. 2022. Flow Lines, Water Points, Watershed Boundaries for Hydrologic Units, Water Bodies (GIS data). National Hydrology Dataset. Last accessed August 2022. http://nhd.usgs.gov/.

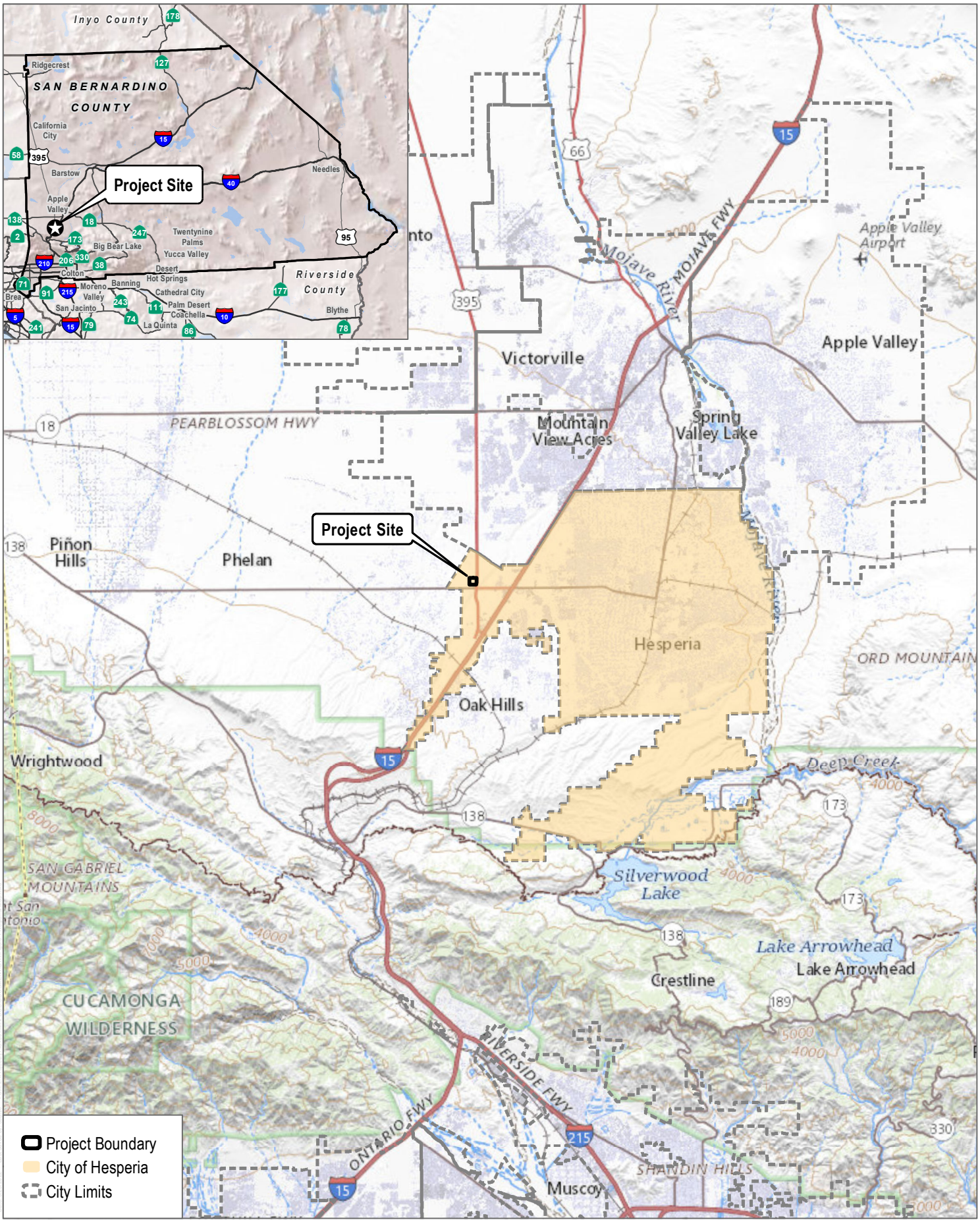
Wilson, D.E., and D.M. Reeder, eds. 2005. Mammal Species of the World: A Taxonomic and Geographic Reference, 3rd ed. (MSW3 database). http://www.bucknell.edu/msw3/.

WRCC (Western Regional Climate Center). 2022. "Hesperia, California: Period of Record Monthly Climate Summary." Accessed July 2022. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3935.

Yosef, R. 1996. "Loggerhead Shrike." In The Birds of North America Online, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. Accessed February 12, 2008. http://bna.birds.cornell.edu/bna/species/231.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1990. California's Wildlife. Vol. II. Birds. Sacramento, California: California Department of Fish and Game.

Appendix A
Figures



SOURCE: USGS Topo Maps 2022; County of San Bernadino 2022

DUDEK

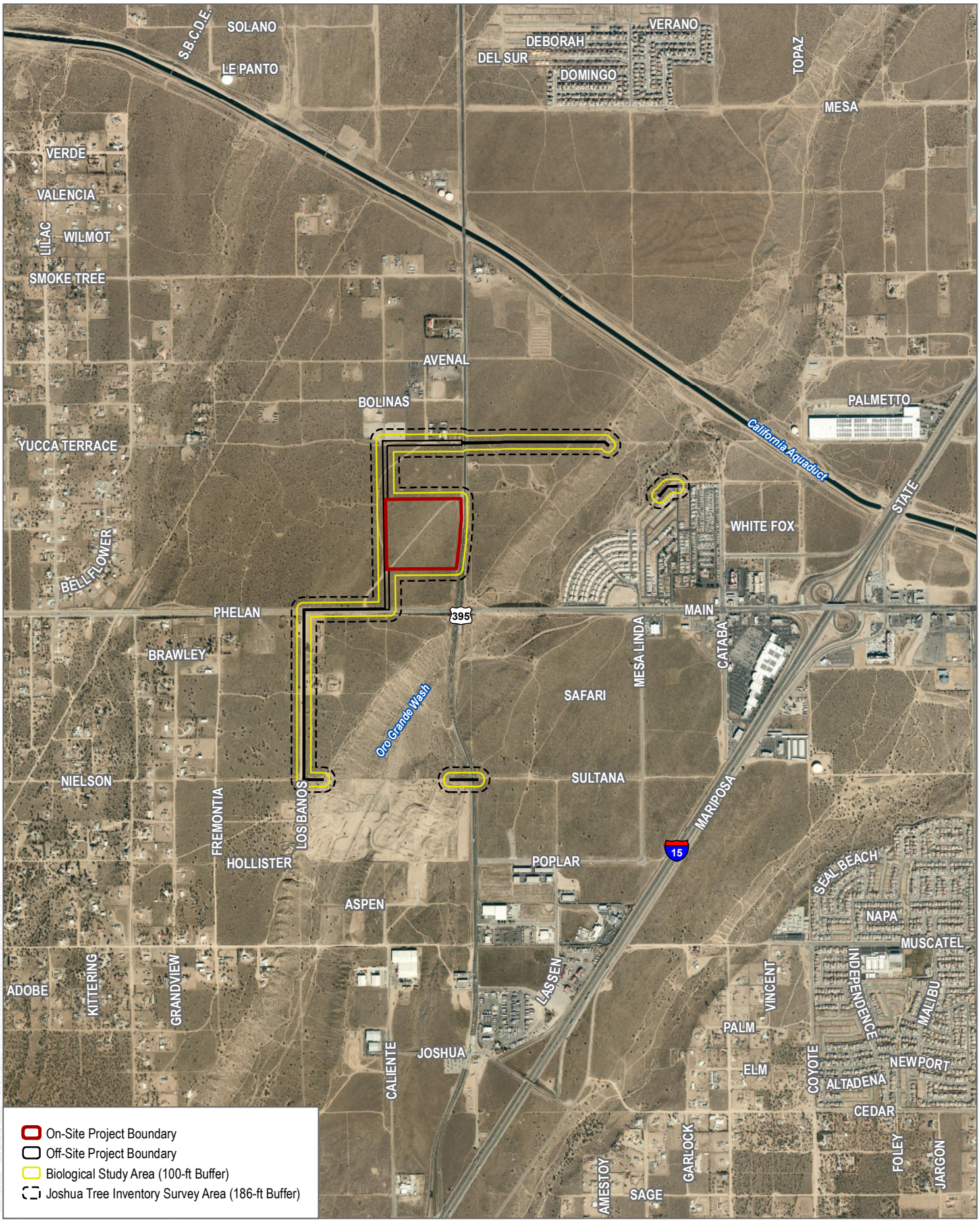
0 10,500 21,000 Feet

FIGURE 1

Regional Map

Kiss Logistics Center Biological Resources Technical Report

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; County of San Bernadino 2017

DUDEK

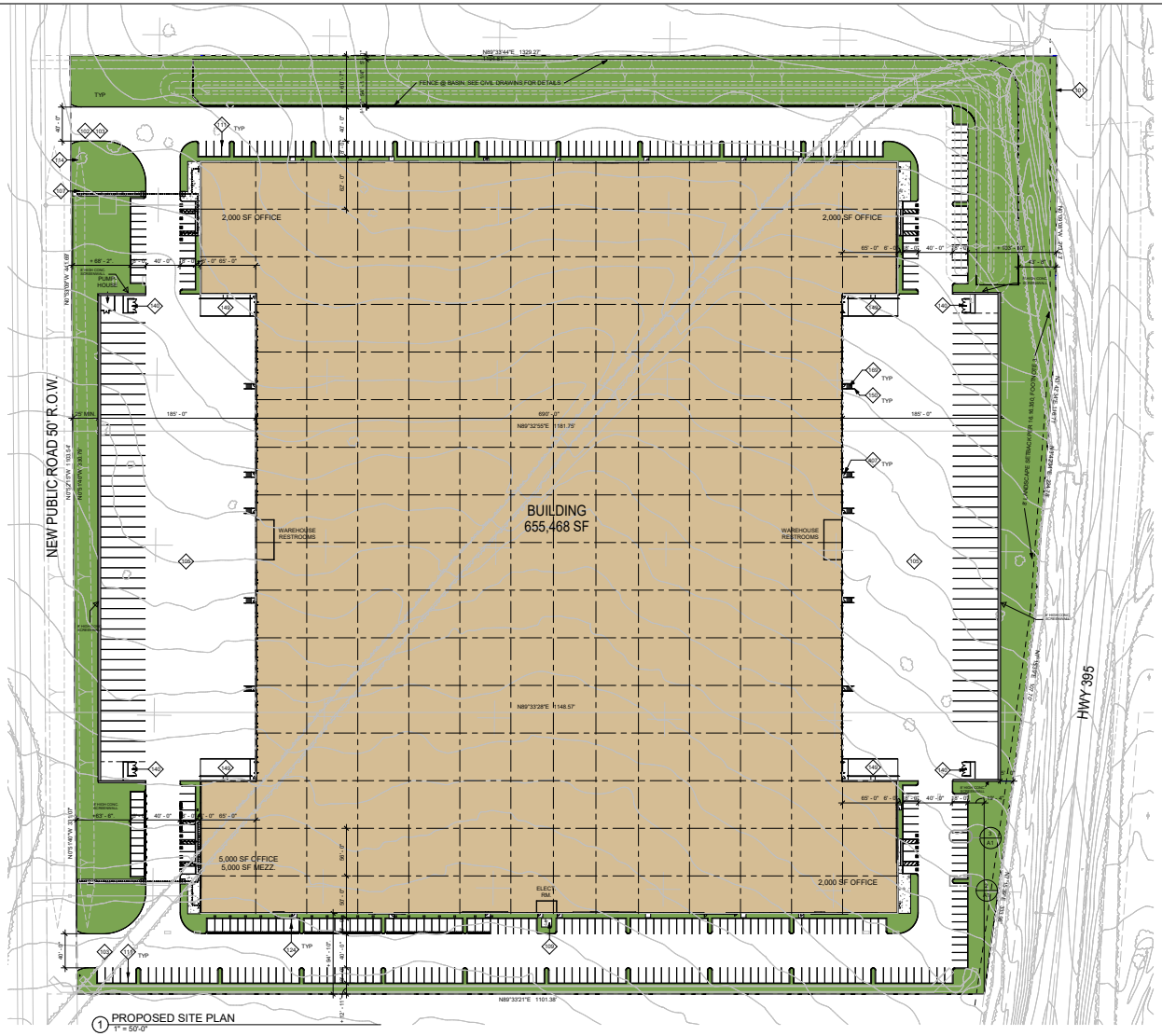
0 1,000 2,000 Feet

FIGURE 2

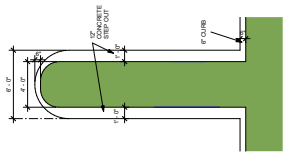
Project Vicinity

Kiss Logistics Center Biological Resources Technical Report

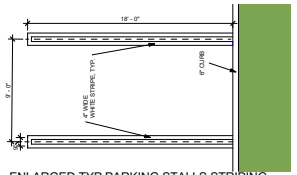
INTENTIONALLY LEFT BLANK



1 PROPOSED SITE PLAN
1" = 50'-0"



2 ENLARGED TYP LANDSCAPE FINGER PLAN
1/4" = 1'-0"



3 ENLARGED TYP PARKING STALLS STRIPING
1/4" = 1'-0"

DEVELOPER/OWNER

KISS HESPERIA VENTURE, LLC
25 HARBOR PARK DRIVE
PORT WASHINGTON, NEW YORK 11050
CONTACT: JIN KIM
EMAIL: JIN@KISSUSA.COM

APPLICANT'S REPRESENTATIVE/ARCHITECT

HERDMAN ARCHITECTURE & DESIGN, INC.
100 BAYVIEW CIRCLE SUITE 100
NEWPORT BEACH, CA 92660
CONTACT: BRADLEY HERDMAN
PHONE: 714.389.2800
EMAIL: PROJECTADMIN@HERDMAN-AD.COM

SCOPE OF WORK

CONSTRUCT NEW ONE STORY + MEZZANINE CONCRETE TILT-UP WAREHOUSE/DISTRIBUTION FACILITY WITH ELECTRICAL AND PLUMBING SERVICES, EXTERIOR LIGHTING, LANDCAPING & IRRIGATION AND TRASH ENCLOSURES. FIRE SPRINKLER AND GRADING PLANS TO BE A SEPARATE SUBMITTAL AND PERMIT

LEGAL DESCRIPTION & ZONING

LEGAL DESCRIPTION: THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF HESPERIA, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:
THE SOUTH 1/3 OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4, SECTION 16, TOWNSHIP 4 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

A. A.EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA IN FEE SIMPLE ABSOLUTE BY THAT CERTAIN FINAL ORDER OF CONDEMNATION DATED NOVEMBER 7, 2002 AND RECORDED NOVEMBER 7, 2002 AS INSTRUMENT NO. 2002-0679234 OFFICIAL RECORDS. **APN 3064-401-05-0-000**

PARCEL 2:
THE NORTH 1/2 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 16, TOWNSHIP 4 NORTH, RANGE 4 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

B. EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA IN FEE SIMPLE ABSOLUTE BY THAT CERTAIN FINAL ORDER OF CONDEMNATION DATED NOVEMBER 7, 2002 AND RECORDED NOVEMBER 7, 2002 AS INSTRUMENT NO. 2002-0679234 OFFICIAL RECORDS. **APN 3064-401-04-0-000**

PARCEL 3:
THE SOUTH 1/2 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 16, TOWNSHIP 4 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

C. EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA IN FEE SIMPLE ABSOLUTE BY THAT CERTAIN FINAL ORDER OF CONDEMNATION DATED NOVEMBER 7, 2002 AND RECORDED NOVEMBER 7, 2002 AS INSTRUMENT NO. 2002-0679234 OFFICIAL RECORDS. **APN 3064-401-05-0-000**

ASSESSOR'S PARCEL NO. APN:3064-401-03, APN 3064-401-04, APN 3064-401-05, THE THREE LOTS ARE TO BE MERGED

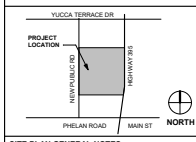
SPECIFIC PLAN LEGEND: N/A

ZONING: *B-P* BUSINESS PARK

SHEET INDEX

A0	TITLE SHEET
A1	SITE PLAN
A2	GROUND LEVEL FLOOR PLANS
A4	EXTERIOR ELEVATIONS
A4_1	COLOR BOARD
C1	PRELIMINARY GRADING/DRAINAGE PLAN

VICINITY MAP



SITE PLAN GENERAL NOTES

1. THE SITE PLAN SHALL MEET ALL ENGINEERING & NPDES REQUIREMENTS.
2. GENERAL CONTRACTOR TO REVIEW THE SOILS REPORT AND ALL AMENDMENTS LISTED ON THE TITLE SHEET AND FOLLOW ALL RECOMMENDATIONS.
3. U.O.N. ALL DIMENSIONS TO CONCRETE WALLS AND CURBS ARE EITHER TO THE CENTER (SHOWN WITH A CENTERLINE) OR FACE OF THE WALL OR CURB. ALL DIMENSIONS TO FRAMED WALLS ARE EITHER TO THE CENTER LINE OF THE WALL FRAMING (SHOWN WITH A CENTERLINE) OR THE FACE OF THE WALL FINISH.
4. REFER TO CIVIL AND MEP PLANS TO CONFIRM UTILITY INFORMATION SHOWN ON THE ARCHITECT'S SITE PLAN AND FOR ADDITIONAL UTILITY INFORMATION. GENERAL CONTRACTOR TO COORDINATE ALL POINTS OF CONNECTION.
5. REFER TO CIVIL DRAWINGS FOR ALL FINISHED GRADES AND SLOPES. ALL FINISHED GRADES TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING. GENERAL CONTRACTOR TO FIELD VERIFY.
6. ALL ACCESSIBLE ROUTES IDENTIFIED ON THE SITE PLAN DRAWINGS SHALL CONFORM TO THE FOLLOWING:
   a) SLOPES IN THE DIRECTION OF TRAVEL DO NOT EXCEED 5%. CROSS SLOPES DO NOT EXCEED 2%.
   b) THE CLEAR WIDTH OF ALL WALKWAYS IS 4'-0" MIN.
   c) CHANGES IN LEVEL UP TO 1/2" COMPLY w/ 11A0.2.1. CHANGES IN LEVEL GREATER THAN 1/2" IF THEY OCCUR ARE RAMPED. SEE PLANS.
   d) THE VERTICAL CLEARANCE ALONG THE ACCESSIBLE ROUTE IS 80" MIN.
7. ALL PAVED AND LANDSCAPED AREAS TO BE BOUND BY A MIN. 6" HIGH, 6" WIDE CONCRETE CURB U.O.N.
8. A CONCRETE MOW STRIP EXTENDING 12" BEYOND EA END OF THE OPENING SHALL BE PROVIDED @ ALL EXTERIOR GLAZING WHERE THE SILL IS WITHIN 3' VERTICAL OF THE FINISHED GRADE. SEE 3/AD1.1
9. PROVIDE PIPE BOLLARD PROTECTION POSTS AS REQUIRED BY THE FIRE AUTHORITY. BOLLARDS AT ALL EXTERIOR ELECTRICAL EQUIPMENT AND FIRE PREVENTION DEVICES. IF PIPE BOLLARD PROTECTION POST DETAILS ARE NOT PROVIDED BY UTILITY COMPANIES AND OR FIRE AUTHORITY SEE DETAIL 3/AD1.1
10. ALL EXPOSED BIORETENTION DEVICE COVERINGS SHALL BE PAINTED FOREST GREEN.
11. WHERE OCCURS, GENERAL CONTRACTOR TO PROVIDE FLUID APPLIED DAMP PROOFING AT ALL RETAINING AND PLANTER WALLS. WHERE THE SIDE OF THE WALL OPPOSITE THE SOIL SIDE IS EXPOSED TO VIEW AND ALL EXTERIOR WALLS WHERE THE ADJACENT FLOOR SLAB IS BELOW GRADE. SEE 6/AD1.2
12. PROVIDE A HOSE BIB NEAR THE MAIN ENTRANCE AND IN THE TRASH ENCLOSURE. SEE PLAN FOR LOCATION.

KEYNOTES

101	PROPERTY LINE.
102	PROPOSED DRIVEWAY, PER JURISDICTIONAL STANDARDS.
103	DECORATIVE PAVING. SEE LANDSCAPING DRAWINGS FOR ADDITIONAL INFORMATION.
105	CONCRETE PAVING.
107	(N) SIDEWALK.
109	(N) TRANSFORMER LOCATION.
111	TYP U.O.N., STANDARD PARKING STALL: 9'-0" WIDE x 18'-0" DEEP
114	ACCESSIBLE SITE ENTRANCE SIGN.
124	EXERIOR CONCRETE LANDING.
140	TRASH ENCLOSURE w/ ROOF COVERING.
149	CONCRETE TRUCK RAMP w/ 42" HIGH CONCRETE TILT-UP GUARD ON OPEN SIDE(S). PAINT ALL SIDES OF GUARD WALLS AND HANDRAILS.SEE ARCHITECTURAL DRAWINGS FOR COLOR SCHEDULE.
150	STEEL PIPE BOLLARD PROTECTION POST.
169	CONCRETE STAIRS ON GRADE.
407	PAINTED HOLLOW METAL PEDESTRIAN DOOR.

GROSS AND NET SITE AREA

	SQUARE FOOTAGE	ACRES
GROSS:	1268811 SF	29.61
NET:	1246195 SF	28.61

FLOOR AREA RATIO

BUILDING AREA	SITE AREA	FAR ALLOWABLE	FAR PROVIDED
655468 SF	1246203 SF	100%	52.6%

BUILDING AREA SUMMARY

NAME	AREA
GROUND FLOOR	
WAREHOUSE	639468 SF
OFFICE	11000 SF
	650468 SF
MEZZANINE	
OFFICE	5000 SF
	5000 SF
GROUND LEVEL + MEZZANINE	
WAREHOUSE	639468 SF
OFFICE	16000 SF
TOTAL BUILDING AREA	655468 SF

LANDSCAPE AREA SUMMARY

LOT AREA	% LANDSCAPING REQUIRED	LANDSCAPING AREA PROVIDED	% LANDSCAPING PROVIDED
1246203 SF	5%	209075 SF	16.8%

TOTAL PARKING REQUIRED

BUILDING USE	BUILDING AREA	PARKING RATIO 1/X	REQ. PARKING
OFFICE	16000 SF	300	54
WAREHOUSE	10000 SF	500	20
WAREHOUSE	629468 SF	2500	252
TOTAL	655468 SF		326

REQUIRED PARKING BREAKDOWN

SPACE TYPE	SPACES REQUIRED
FUTURE EV CHARGING ONLY AMBULATORY STALL	1
STANDARD STALLS	270
STANDARD ACCESSIBLE STALLS	4
VAN ACCESSIBLE STALLS	4
CLEAN AIR STALLS	10
FUTURE EV CHARGING ONLY STALLS	35
FUTURE EV CHARGING ONLY STANDARD ACCESSIBLE STALLS	1
FUTURE EV CHARGING ONLY VAN ACCESSIBLE STALLS	1
TOTAL	326

PARKING PROVIDED

SPACE TYPE	SPACES PROVIDED
STANDARD STALLS	309
STANDARD ACCESSIBLE STALLS	12
VAN ACCESSIBLE STALLS	4
CLEAN AIR STALLS	11
FUTURE EV CHARGING ONLY STALLS	35
FUTURE EV CHARGING ONLY STANDARD ACCESSIBLE STALLS	1
FUTURE EV CHARGING ONLY AMBULATORY STALL	1
FUTURE EV CHARGING ONLY VAN ACCESSIBLE STALLS	1
TOTAL	374

TRAILER PARKING REQUIRED NO. CITY REQ.	TRAILER PARKING PROVIDED
0	83

SITE LEGEND

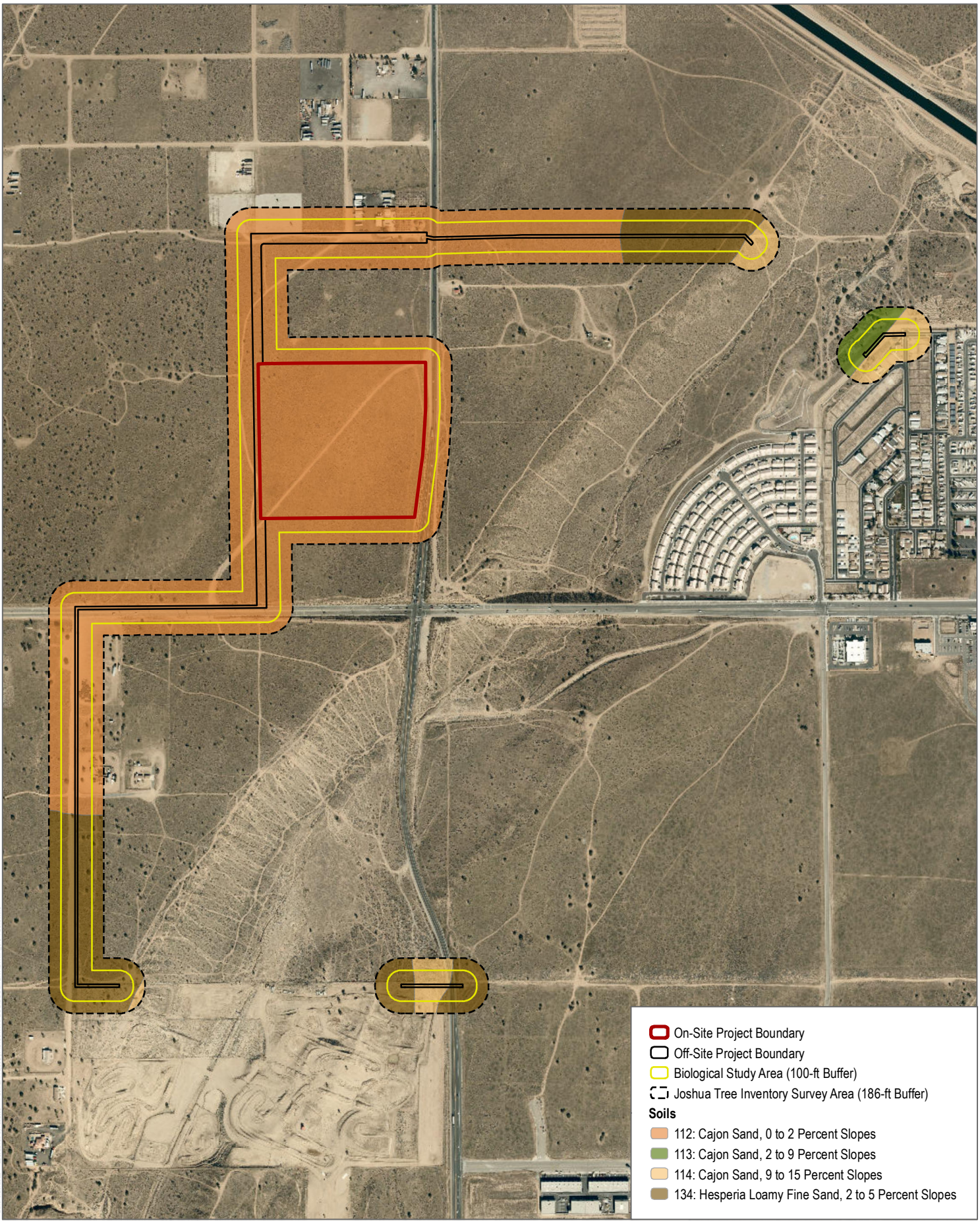
- LANDSCAPE AREA
- CONCRETE PAVING. SEE CIVIL DRAWINGS FOR PAVING SECTIONS
- FIRE HYDRANT. PROVIDE PIPE BOLLARD PROTECTION POSTS AS REQUIRED BY THE FIRE AUTHORITY. SEE 3/AD1.1
- STREET LIGHT
- INDICATES AN ACCESSIBLE ROUTE. MUST COMPLY w/ SITE PLAN GENERAL NOTE #6
- PROPERTY LINE
- DOCK HIGH DOOR
- DRIVE THRU. DOOR

Path: Z:\Projects\10212018\MAP\DOCS\DOCUMENT\Vault\BoulderBrushMemo

FIGURE 3
Site Plan
Kiss Logistics Center Biological Resources Technical Report

DUDEK

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; County of San Bernadino 2017

DUDEK

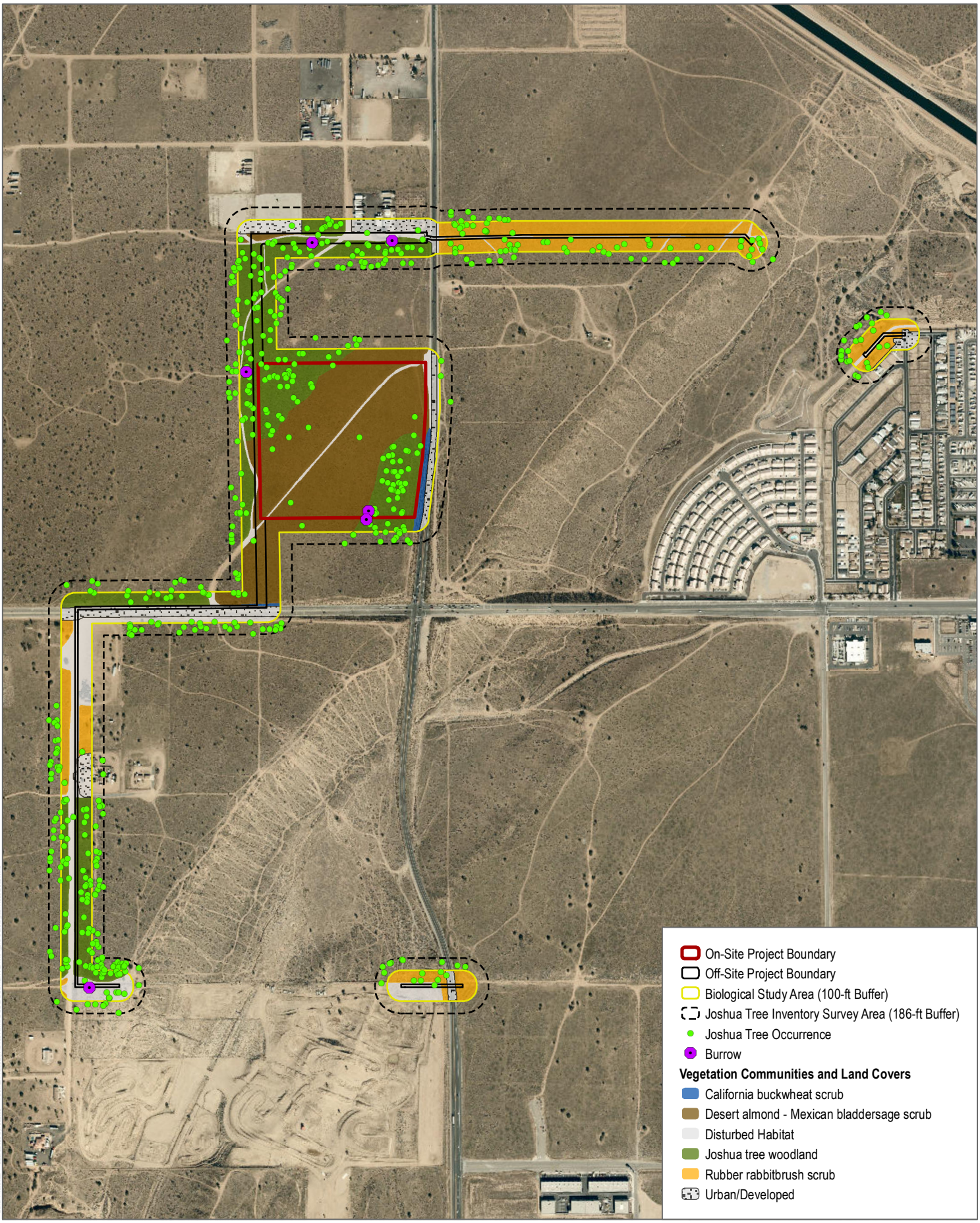
0 455 910 Feet

FIGURE 4

Soils

Kiss Logistics Center Biological Resources Technical Report

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; County of San Bernadino 2017

DUDEK

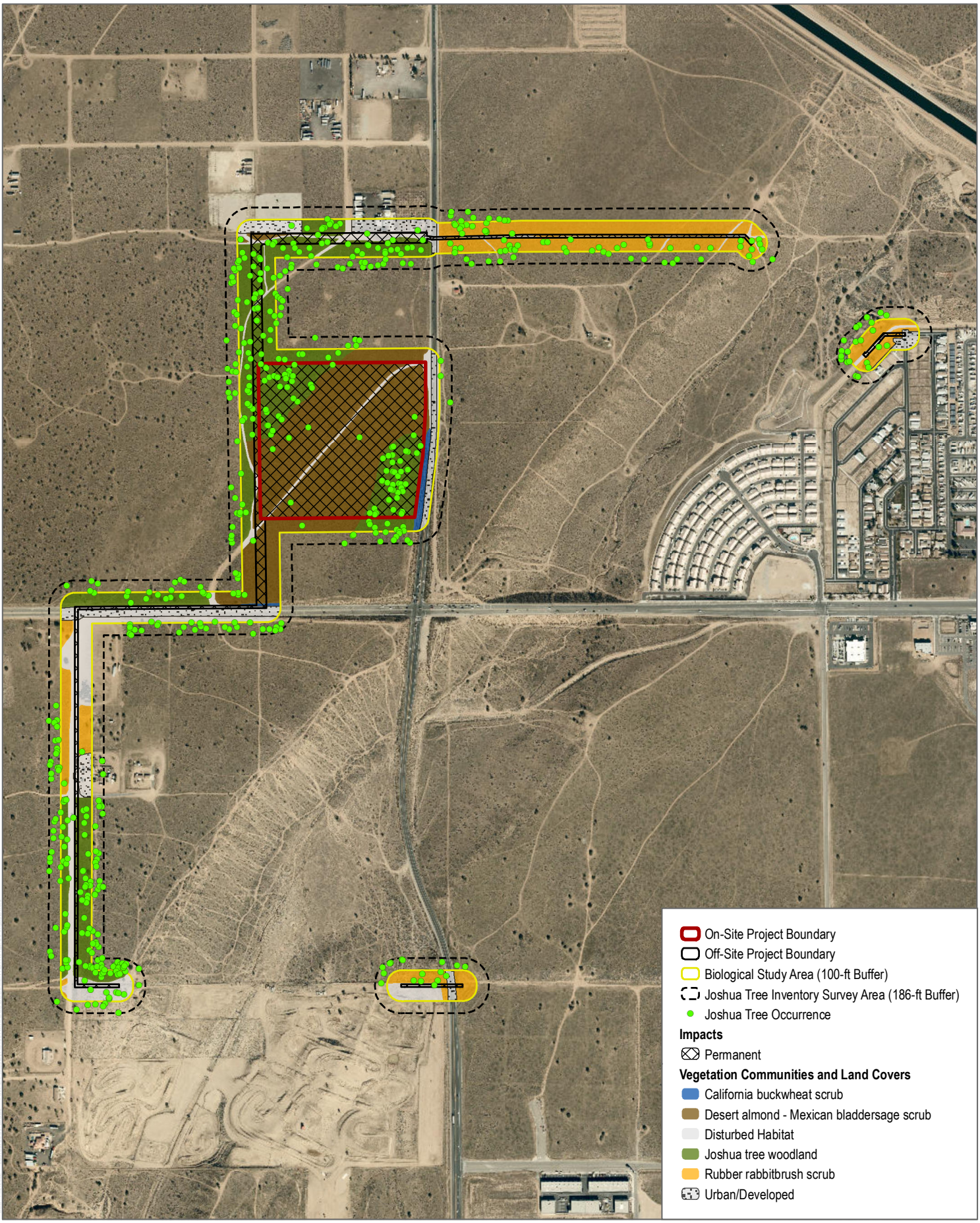
0 455 910 Feet

FIGURE 5

Biological Resources

Kiss Logistics Center Biological Resources Technical Report

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; County of San Bernadino 2017

DUDEK

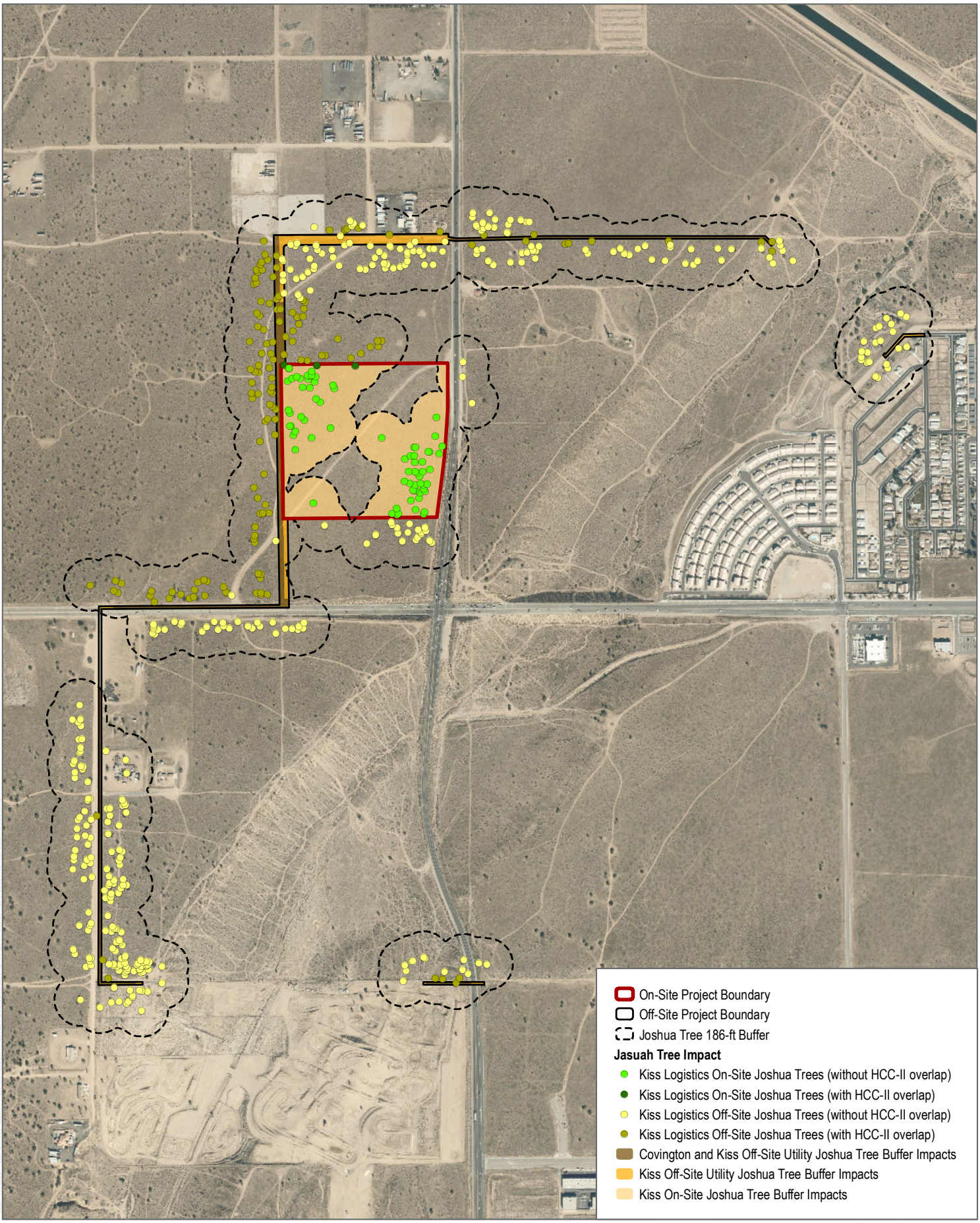
0 460 920 Feet

FIGURE 6

Impacts

Kiss Logistics Center Biological Resources Technical Report

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; County of San Bernadino 2017

DUDEK

0 460 920 Feet

FIGURE 7

Impacts to Joshua Tree Buffers within 186-Feet of Project with Trees

Kiss Logistics Center Biological Resources Technical Report

INTENTIONALLY LEFT BLANK

Appendix B
Photo Documentation

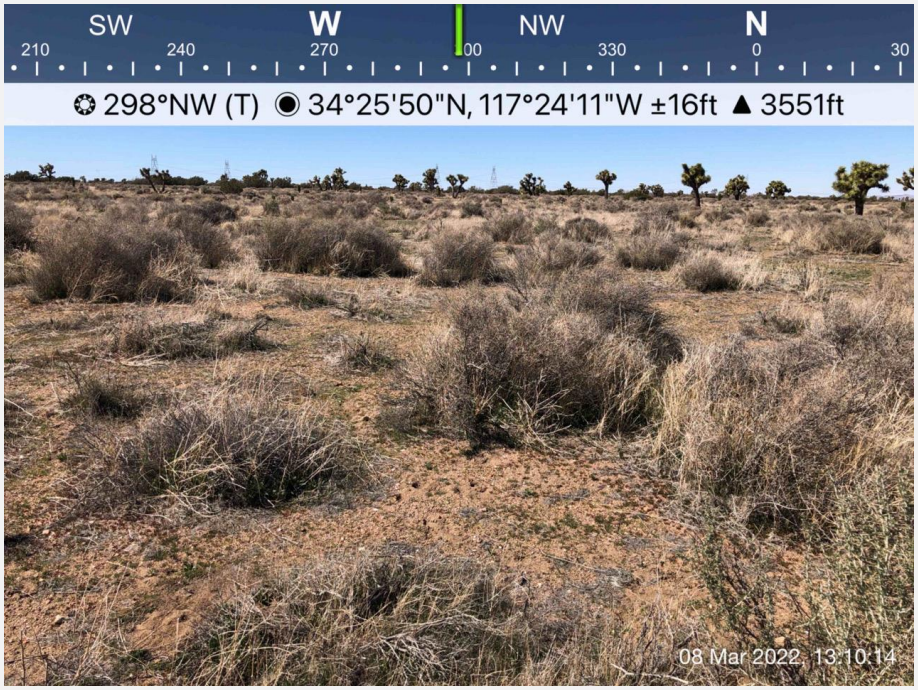


Photo 1. Facing northwest from the northeast corner of the project site.

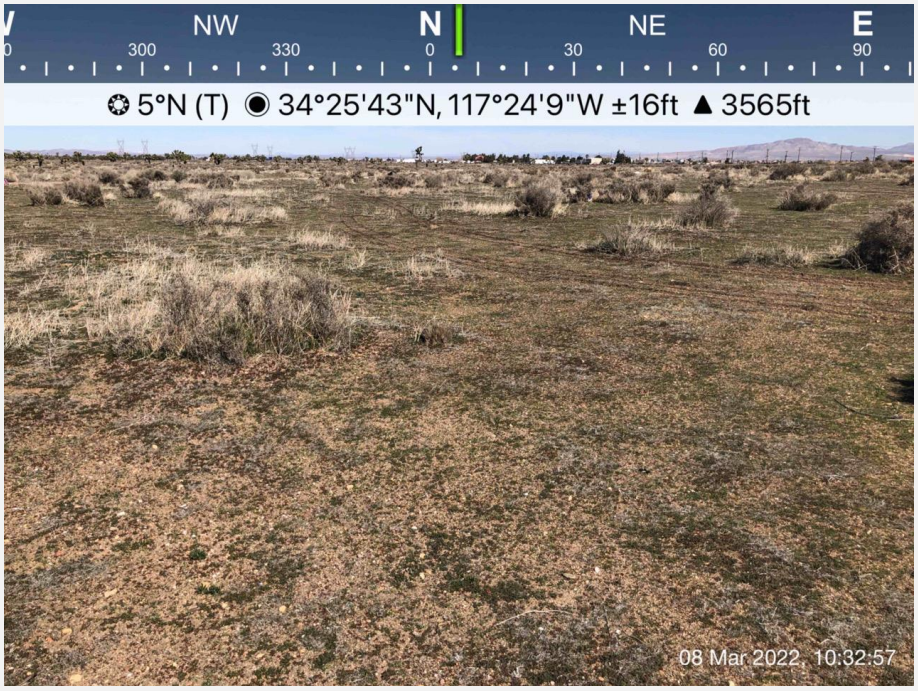


Photo 2. Facing north from the southern boundary of the project site.

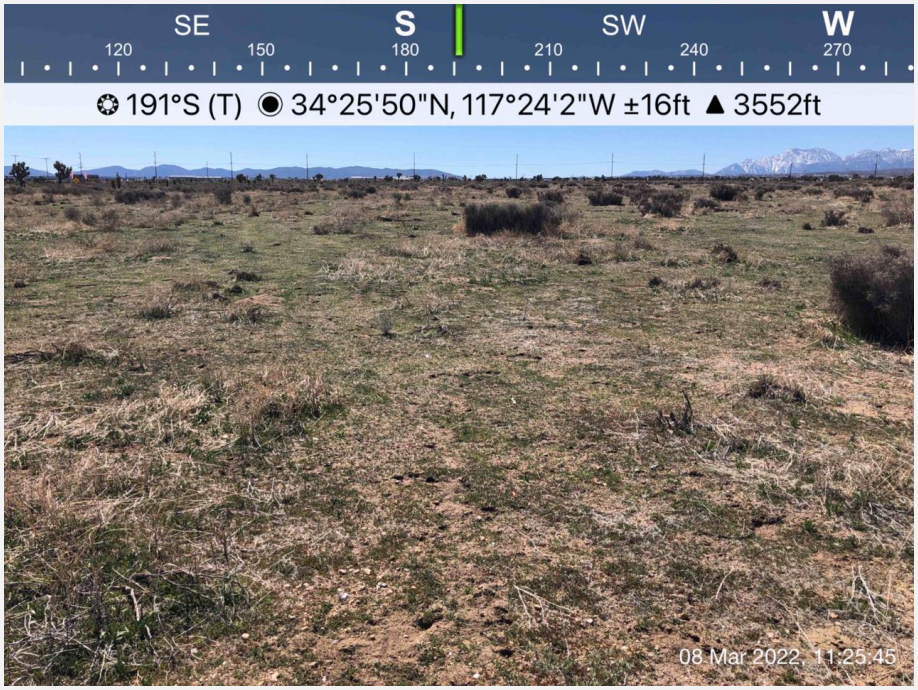


Photo 3. Facing south from the northeast corner of the project site.



Photo 4. Western Joshua trees in southeastern corner of the project site.

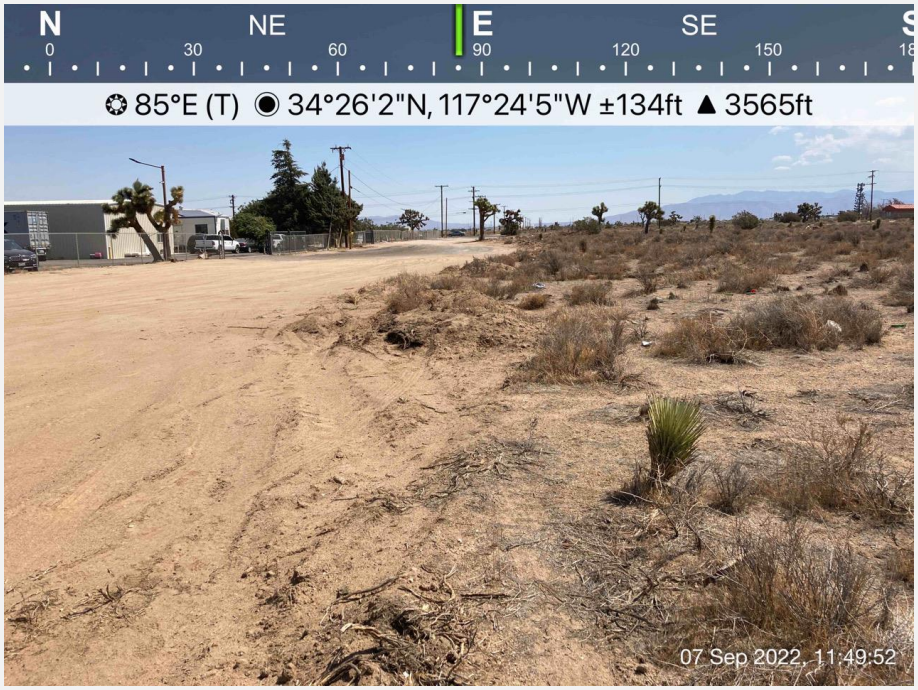


Photo 5. Facing east along the northern off-site improvement area.



Photo 6. Facing southwest along the northern off-site improvement area.

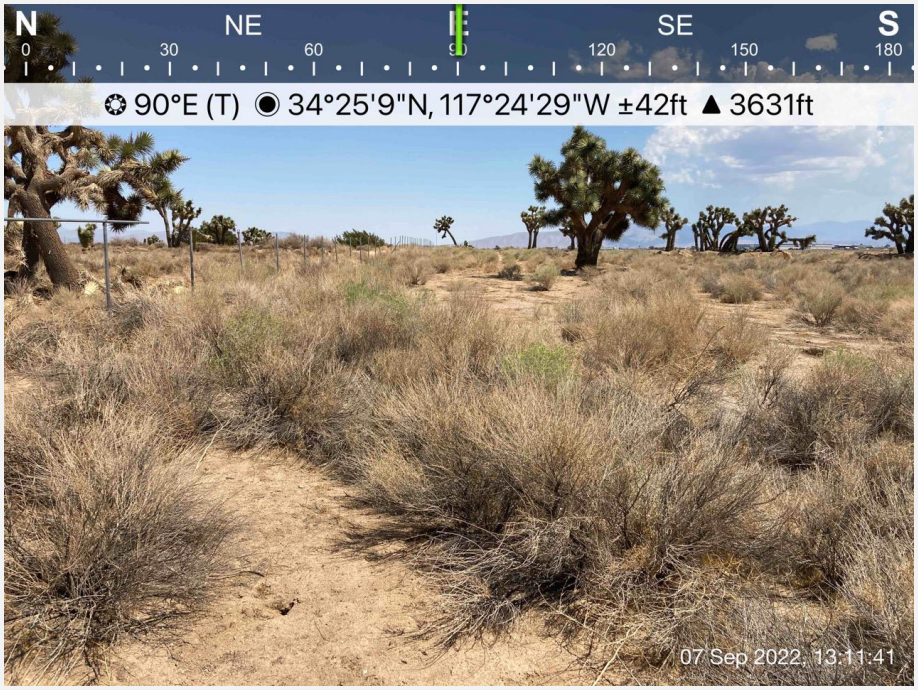


Photo 7. Facing east along the southern off-site improvement area.

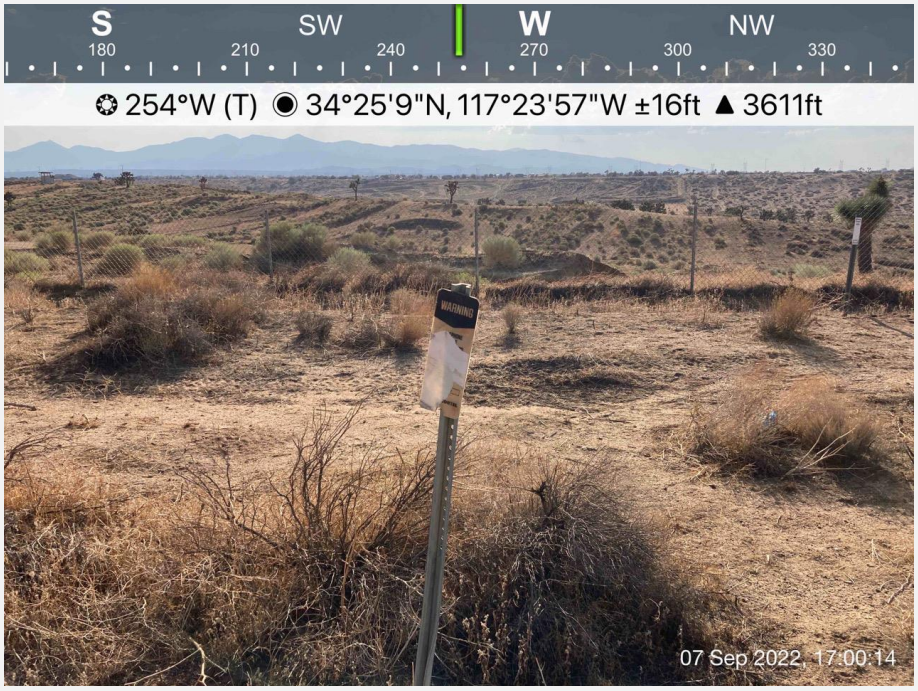


Photo 8. Facing west along the southern off-site improvement area.

Appendix C

Mohave Ground Squirrel Protocol Survey Report

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

July 28, 2022

Megan Enright
Dudek
605 Third Street
Encinitas, CA 92024
Via email: menright@dudek.com

Subject: Results of Mohave Ground Squirrel Protocol Surveys for the 30-acre site West of Highway 395 Project, Hesperia, San Bernardino County, California

Dear Ms. Enright:

The purpose of this report is to document the results of a California Department of Fish and Wildlife (CDFW) protocol survey for Mohave ground squirrel (*Xerospermophilus mohavensis*; MGS) conducted by Dipodomys Ecological Consulting LLC (DEC) for the 30-acre site West of Highway 395 Project (project). Presented in this report are a description of the project, project location, the biological setting of the site, MGS natural history, survey methodology, results of trapping efforts for MGS, and conclusions.

Project Description and Location

CH Realty Partners CM, LLC, proposes to develop a speculative industrial distribution warehouse on the 30-acre parcel. The project parcel is located within the City Hesperia in San Bernardino County. The parcel is bordered by Yucca Terrace Drive on the north, Phelan Road on the south, Highway 395 on the east and an unnamed dirt road on the west. (**Figures 1 and 2**). The parcel is surrounded by undeveloped land to the west and south. Undeveloped land is also present to the east of Highway 395. Some sparse commercial developments (primarily semi-trailer truck parking/storage) are located north of the project site. The primary source of disturbance is past and current off highway vehicle (OHV) activity as well as illegal dumping, and debris associated with transient encampments. The project sites can be found on U.S. Geological Survey (USGS) 7.5-minute Baldy Mesa topographic quadrangle map within Section 16, Township 4 North, and Range 5 West, as shown in **Figure 1**, Project Location.

Biological Setting

Vegetation communities within the project site include Nevada joint fir-Anderson's boxthorn-spiny hopsage scrub (CA CDFW Code 33.185.00) and rubber rabbitbrush scrub (35.310.00). Dominant plants present include Joshua tree (*Yucca brevifolia*), Cooper's boxthorn (*Lycium cooperi*), Nevada joint-fir (*Ephedra nevadensis*), Mexican bladdersage (*Scutellaria mexicana*), Cooper's goldenbush (*Ericameria cooperi*), California buckwheat (*Eriogonum fasciculatum*), cottonthorn (*Tetradymia stenolepis*), and rubber rabbitbrush (*Ericameria nauseosa*). Herbaceous plants present on site include fiddleneck (*Amsinckia tessellata*), goldfields (*Lasthenia californica*), red-stemmed filaree (*Erodium cicutarium*),

rattlesnake sandmat (*Euphorbia albomarginata*), short-podded mustard (*Hirschfeldia incana)*, London rocket (*Sysimbrium irio*), and foxtail brome (*Bromus madritensis*).

Soils consist of Cajon Sand (WebSoil 2022). The project site is located at an elevation of approximately 3,456 feet above mean sea level (amsl).

Mohave Ground Squirrel Natural History

Mohave ground squirrels (*Xerospermophilus mohavensis*) are medium-sized (210-230mm, 85-130g), diurnal squirrels. Their dorsal pelage is light gray to cinnamon-brown, while their ventral side is creamy. Unlike round-tailed ground squirrels, which occur sympatrically in the southeast portion of their range, MGS have a short, flat tail that is light-colored on its underside, and have brown cheeks instead of white.

MGS inhabit a small geographic area in the western Mojave Desert. This species ranges from Palmdale in the southwest, the Lucerne Valley in the southeast, Olancha in the northwest, and the Avawatz Mountains in the northeast (Gustafson 1993). Although occurrences in the southern portion of their range are rare, occurrences have been documented on the California Natural Diversity Database (CNDDB) as recently as 2011 (Figure 3). Vegetation communities (as classified by the California Native Plant Society) typically associated with MGS include Mojave Creosote Scrub, Shadscale Scrub, Desert Saltbush Scrub, Desert Sink Scrub, and Joshua Tree Woodland. MGS feed primarily on the leaves and seeds of forbs and shrubs. In the northern portion of their range, MGS have been found to feed on spiny hopsage (*Grayia spinosa*), winterfat (*Krascheninnikovia lanata*) and saltbush (*Atriplex* sp.), especially in early spring when forbs are unavailable, during summer when forbs have dried out, and during drought conditions (Leitner and Leitner 1998). Recent studies have also indicated that MGS feed on the following forbs and shrubs: freckled milkvetch (*Astragalus lentiginosus*), Mojave lupine (*Lupinus odoratus*), buckwheat (*Eriogonum* sp.), white mallow (*Eremalche exilis*), fiddleneck, Russian thistle (*Salsola tragus*), desert pincushion (*Chaenactis* sp.), Cryptantha (*Cryptantha pterocarya*), Coreopsis (Leptosyne bigelovii), Valley lessingia (*Lessingia glandulifera*), desert dandelion (*Malacothrix glabrata*), Phacelia (*Phacelia* sp.), wire lettuce (*Stephanomeria* sp.) Anderson's desert thorn (*Lycium andersonii*), spiny horsebrush, and Joshua tree (Leitner and Leitner 2017).

MGS have adapted to live in hot desert environments by limiting their activity aboveground through estivation and hibernation. The timing of emergence from hibernation varies by location: in the northern portion of their range male MGS emerge mid-March (Leitner and Leitner 1998); however, in the southern portion of their range, MGS may emerge as early as mid-January (Recht 1977). Throughout their active period, MGS store fat in preparation for estivation, which typically occurs between July and September, but may occur as early as April or May during drought conditions (Leitner et al. 1995). MGS reproduction is dependent on fall and winter rains and individuals may forgo breeding entirely if low rainfall (<80mm) results in reduced herbaceous plants (Leitner and Leitner 2017).

Throughout the range of MGS, they may co-occur with antelope ground squirrels, round-tailed ground squirrels, and California ground squirrels. MGS may be misidentified with round-tailed ground squirrels, but this is unlikely to occur with antelope grounds squirrels, because the latter species has white dorsal stripes that makes them resemble a chipmunk more than an MGS. California ground squirrels are also notably larger and are not typically confused with MGS.

MGS are classified as threatened and are protected under the California Endangered Species Act. Primary threats to MGS include limited distribution, low abundance, and habitat loss from by converting suitable habitat to urban, suburban, agricultural, and military land uses (Gustafson 1993, Leitner and Leitner 2017).

Methods

Mohave ground squirrel (MGS) Protocol surveys for the 30-acre site West of Highway 395 Project were conducted in accordance with the 2010 CDFW MGS Survey Guidelines and consisted of an initial visual survey followed by live trapping and camera trapping efforts. Details for each survey type are described below.

Visual Survey

An initial review of the California Natural Diversity Database (CNDDB) was conducted prior to the visual assessment to determine the historical recorded occurrences of MGS near the project site (**Figure 3**). Principal Investigator Karla Flores (MOU and Scientific Collection Permit SC-10572) and Independent Researcher Karl Fairchild (SCP S-182820007-18333-001) conducted the visual survey on April 5, 2022. The visual survey consisted of driving and walking throughout the project site to identify suitable habitat for MGS. This included identifying plants known to provide forage material for MGS such as spiny hopsage, winterfat, Cooper's boxthorn, Anderson's desert thorn, and Joshua tree (Leitner 2022). Areas supporting suitable habitat for MGS where these plants are concentrated were recorded on an aerial map. Suitable soil types for burrowing and burrow densities were also noted.

Live Trapping

Karla Flores conducted the live trapping surveys. Surveys consisted of setting up one 100-trap 10x10 survey grid (315x315) within the project parcel. Coordinate locations for the northern and southern grids are listed in **Table 1**. Traps in the grid were spaced 35 meters apart and utilized XLK Sherman live-traps (3x3.75x12") with accompanying A-frame cardboard shade covers staked to the ground with metal tent stakes. All traps were baited with 4-way livestock feed and peanut butter powder and were opened within one hour of sunrise and were checked no more than every four hours. All traps were closed within hour of sunset. Trapping was conducted when temperatures were between 50 degrees Fahrenheit and 90 degrees Fahrenheit, and inclement conditions (rain, thunderstorms) were not present. All animals captured were released at their capture location, and the following information recorded for each capture: species, weight, age, sex, and reproductive condition. Live-trapping surveys were conducted for a period of five days in each of the three survey windows established by the MGS survey guidelines (1st: March 15-April 3; 2nd May 1-31;3rd June 15-July 15). Details for each survey period are presented in **Table 2.** MGS Survey and Trapping Forms, including weather details, are presented in **Attachment A** and **Attachment B**.

TABLE 1
UTM COORDINATES FOR CORNERS OF NORTH AND SOUTH LIVE TRAPPING GRIDS

Corner	Zone	Easting	Northing
SW	11	462905	3809750
NW	11	462905	3810065
SE	11	463220	3809750
NE	11	463220	3810065

*Datum: WGS 1984

TABLE 2
MOHAVE GROUND SQUIRREL SURVEY DATE AND TYPE

Session	Date	Survey Type	Surveyor
1	April 6-10, 2022	LT/CT	Karla Flores
2	May 8-12, 2022	LT/CT	Karla Flores
3	July 4-8, 2022	LT/CT	Karla Flores

LT: Live Trapping CT: Camera Trapping

Camera Trapping

Camera trapping surveys were used to supplement live-trapping efforts and consisted of setting up five camera trapping stations throughout the project site (**Figure 2**). Each camera trap station consisted of a Bushnell Core Low Glow Trail Camera (Model 1199932CB) secured to a 36-inch U-post facing a bait station. The bait station consisted of a feeding tube filled with 4-way livestock feed staked to the ground with a 12-inch railroad spike. Cameras operated 24 hours a day, concurrent with live-trapping surveys, and followed the set-up specifications described in Delaney et al. 2017. Coordinate locations for each camera trap station are listed below in **Table 3**.

Photos from the camera trap stations were downloaded and reviewed by the Principal Investigator after every five-day trapping session. A list of species detected at the camera trap stations is included in **Table 5**

TABLE 3
COORDINATE LOCATIONS FOR CAMERA TRAP STATIONS

Camera	Zone	Easting	Northing
1	11	462930	3809945
2	11	462999	3810056
3	11	463065	3809966
4	11	463151	3810055
5	11	463207	3809810

*Datum: WGS 1984

Results

Visual Survey

Based on the habitat data collected during the visual survey, some MGS habitat is present onsite. Primary MGS food plants (winterfat, spiny hopsage) are not present onsite. However, other plants identified as MGS food plants in recent microhistology and metabarcoding studies (Leitner 2022) are present, including Joshua tree, Cooper's boxthorn, and fiddleneck. Visual observations of burrows and burrow complexes showed that soil onsite is suitable for burrowing.

Live Trapping

No Mohave ground squirrels were captured during the three live-trapping survey periods. Live-trapping captures consisted entirely of non-target species: white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), California ground squirrel (*Otospermophilus beecheyi*), Great Basin whiptail (*Aspidoscelis tigris*), yellow-backed spiny lizard (*Sceloporus uniformis*), and cactus wren (*Campylorhynchus brunneicapillus*) (**Table 4; Figure 4**).

TABLE 4
RESULTS OF MOHAVE GROUND SQUIRREL PROTOCOL SURVEYS

Common name	Scientific name	Session			Total
		1	2	3	
White-tailed antelope ground squirrel	*Ammospermophilus leucurus*	12	39	50	101
California ground squirrel	*Otospermophilus beecheyi*	1	5	9	15
Great Basin whiptail	*Aspidoscelis tigris*	7	1	0	8
Yellow-backed spiny lizard	*Sceloporus uniformis*	1	0	0	1
Cactus wren	*Campylorhynchus brunneicapillus*	0	0	2	2
	Total	21	45	61	**127**

Camera Trapping

No Mohave ground squirrels were detected in the images collected during the camera trapping surveys. Twelve species were captured visiting the camera trap stations. Mammal species that visited the camera trap stations were white-tailed antelope ground squirrel, California ground squirrel, deer mouse (*Peromyscus maniculatus*), black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), kangaroo rat (*Dipodomys* sp.), and southern grasshopper mouse (*Onychomys torridus*). Other non-target species included: Bell's sparrow (*Artemisiospiza belli*), cactus wren, common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), and Great Basin whiptail.

TABLE 5
RESULTS OF MOHAVE GROUND SQUIRREL CAMERA TRAPPING

Common Name	Scientific Name
white-tailed antelope ground squirrel	*Ammospermophilus leucurus*
Bell's sparrow	*Artemisiospiza belli*
black-tailed jackrabbit	*Lepus californicus*
cactus wren	*Campylorhynchus brunneicapillus*
California ground squirrel	*Otospermophilus beecheyi*
common raven	*Corvus corax*
coyote	*Canis latrans*
deer mouse	*Peromyscus maniculatus*
Great Basin whiptail	*Aspidoscelis tigris tigris*
kangaroo rat sp.	*Dipodomys* sp.
northern mockingbird	*Mimus polyglottos*
southern grasshopper mouse	*Onychomys torridus*

Conclusions

The 30-acre site West of Highway 395 Project is located within the southern portion of the mapped MGS range, where MGS occurrences are rare, and population densities have historically been low. A review of the California Natural Diversity Database (CNDDB) for the Baldy Mesa and eight surrounding quadrangles showed that the most recent MGS occurrence in the vicinity occurred in 2011, approximately 8.3 miles northwest of the project site (recent aerials show this site has since been developed into a solar farm). The closest MGS occurrence occurred in 2005 approximately 1.3 miles north of the project site (recent aerials show intact habitat: **Figure 3**). Both the 2005 and 2011 MGS occurrences were recorded north of California Aqueduct, likely represent a significant barrier to dispersal (no MGS occurrences are recorded in CNDDB south of the California Aqueduct and east of Pinon Hills since the aqueduct was constructed). Additionally, the site is located outside of the MGS core population areas, peripheral population areas, and linkage areas described in the 2019 CDFW MGS Conservation Strategy.

Although some suitable habitat was detected during the visual survey, including the presence of some MGS food plants: Joshua tree, Cooper's boxthorn, and fiddleneck (Leitner 2022), no MGS were captured during the live trapping or camera trapping surveys. Furthermore, the distance from core population areas and significant barriers to dispersal between the project site and documented recent occurrences make it unlikely that colonization from core MGS populations will occur within the near future. Based on the results of this survey, the CDFW survey guidelines indicate that the department will stipulate that no MGS occur on the project site. This stipulation will expire one year from the last day of trapping, July 8, 2022.

I hereby certify that the information in this report is true, and that it conforms to accepted biological standards. Please feel free to contact Karla Flores by phone at (619) 972-4319 or by email at

kflores@dipodomysecological.com or Karl Fairchild by phone at (541) 609-1038 or by email at kfairchild@dipodomysecological.com, with any questions regarding this report.

Sincerely,

Karla L. Flores
Principal Investigator

Karl Fairchild
Independent Researcher

Figures and Attachments
Figure 1-Project Location
Figure 2-Survey Area
Figure 3- Historical MGS Occurrences
Figure 4- Results

Attachment A-CDFW Mohave Ground Squirrel Survey and Trapping Form(s)
Attachment B-Weather Details
Attachment C-Species Compendium
Attachment D-Representative Photographs

References

California Department of Fish and Game. Mohave Ground Squirrel Survey Guidelines. July 2010.

California Department of Fish and Wildlife. California Natural Diversity Database Rarefind. March 14, 2022.

Delaney D.K., Leitner, P. and D. Hacker. 2017. Use of Cameras in Mohave ground Squirrel Studies.

Gustafson, J.R. 1993. A Status Review of the Mohave Ground Squirrel (*Spermophilus mohavensis*). Department of Fish and Game. Nongame Bird and Mammal Report 93-9.

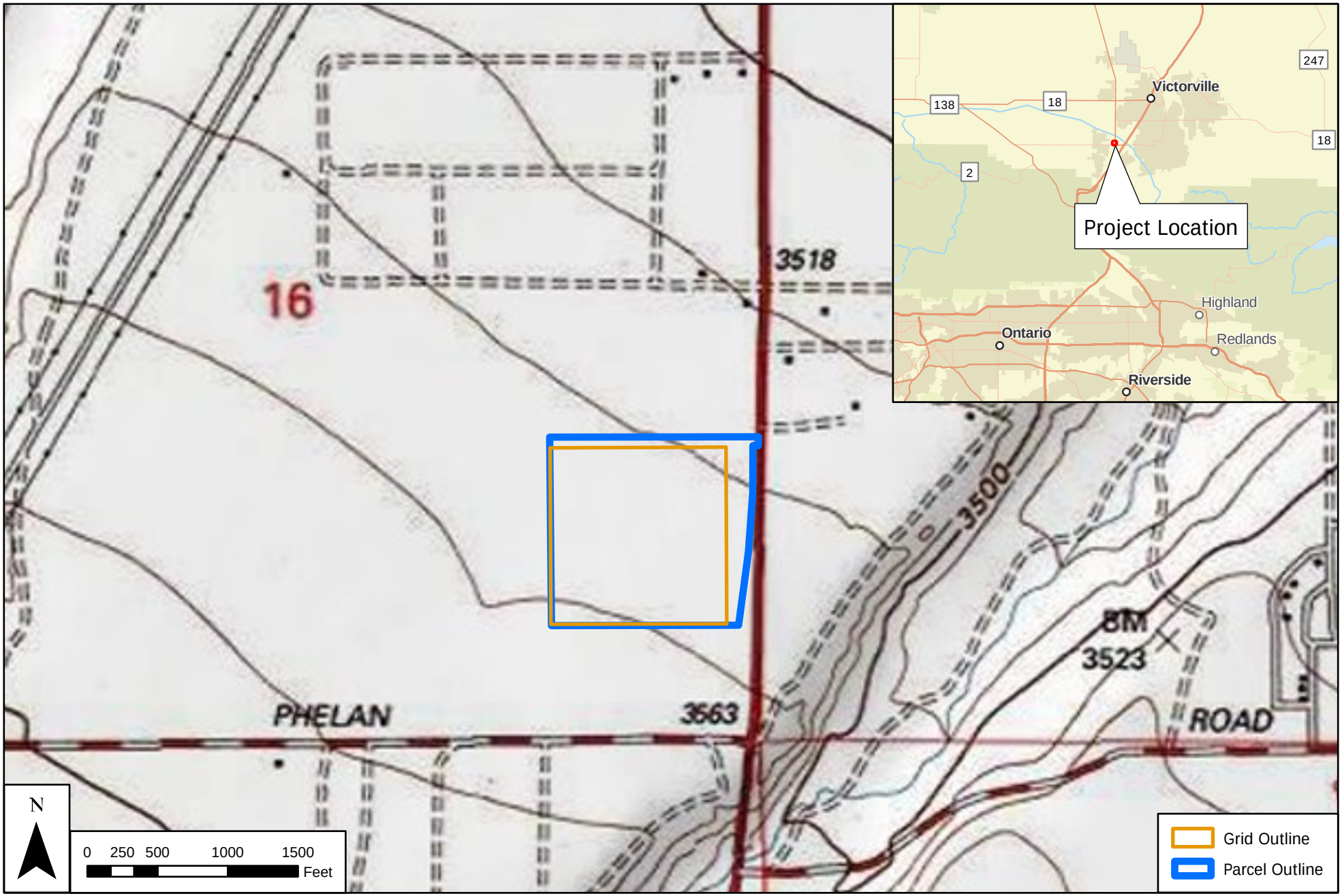
Leitner, P. and B.M. Leitner. 1998. Coso grazing exclosure monitoring study, Mohave ground squirrel study Coso Known Geothermal Resource Area, Major Findings 1988-1996. Final Report.

Leitner, P. and B.M. Leitner. 2017. Diet of the Mohave ground squirrel (*Xerospermophilus mohavensis*) in relation to season and rainfall. *Western North American Naturalist*, 77(1), 1-13.

Leitner, B. 2022. Primary Food Items Consumed by Mohave Ground Squirrels based on visual observations of MGS and microhistology and metabarcoding of fecal pellets from 1988-2021.

Recht, M.A. 1977. The biology of the Mohave ground squirrel, *Spermophilus mohavensis*. Ph.D. Dissertation, University of California, Los Angeles. 117 pp.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: http://websoilsurvey.sc.egov.usda.gov/. Accessed [07/11/2022].



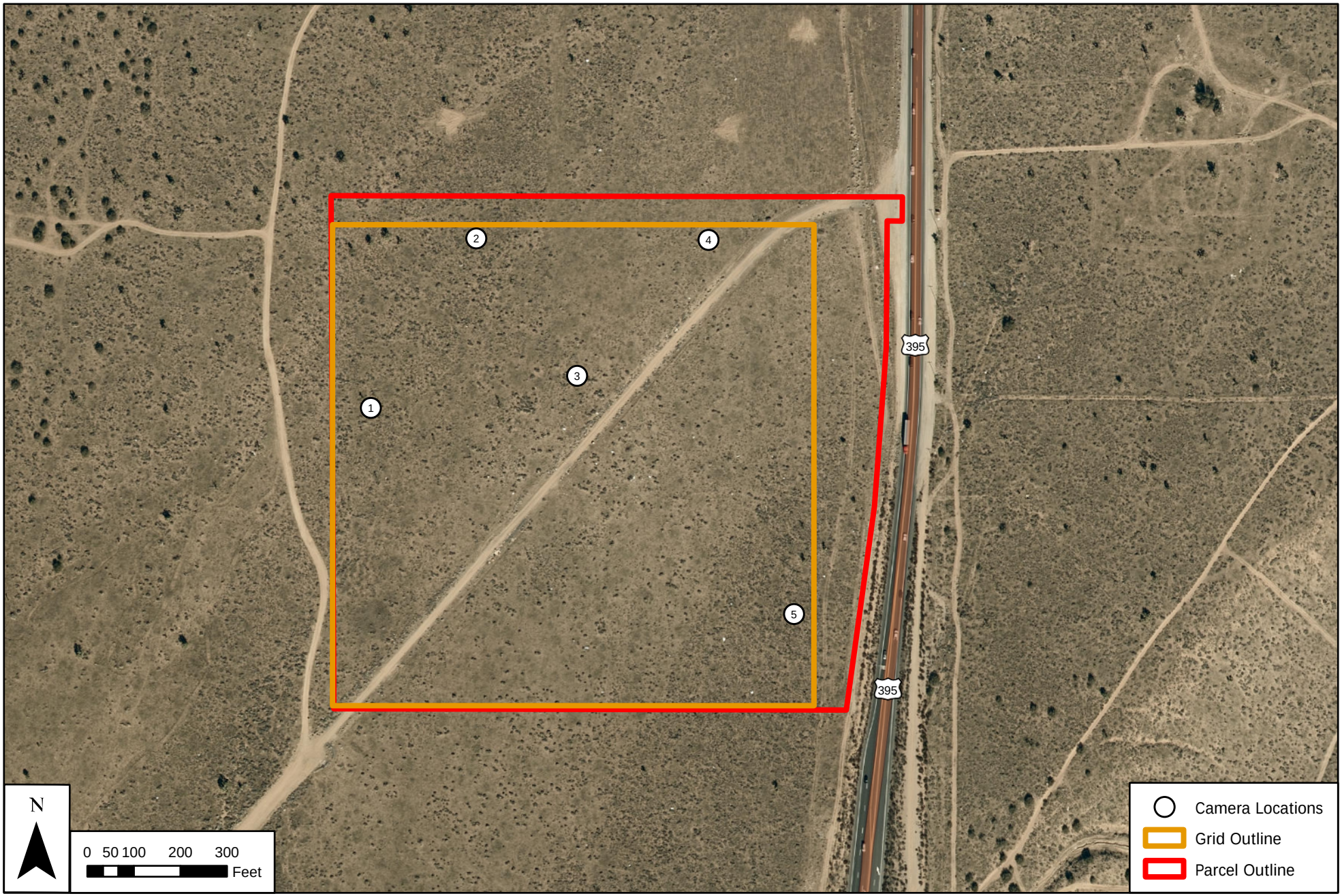
SOURCE: ESRI

West of 395 Project

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Figure 1

Project Location



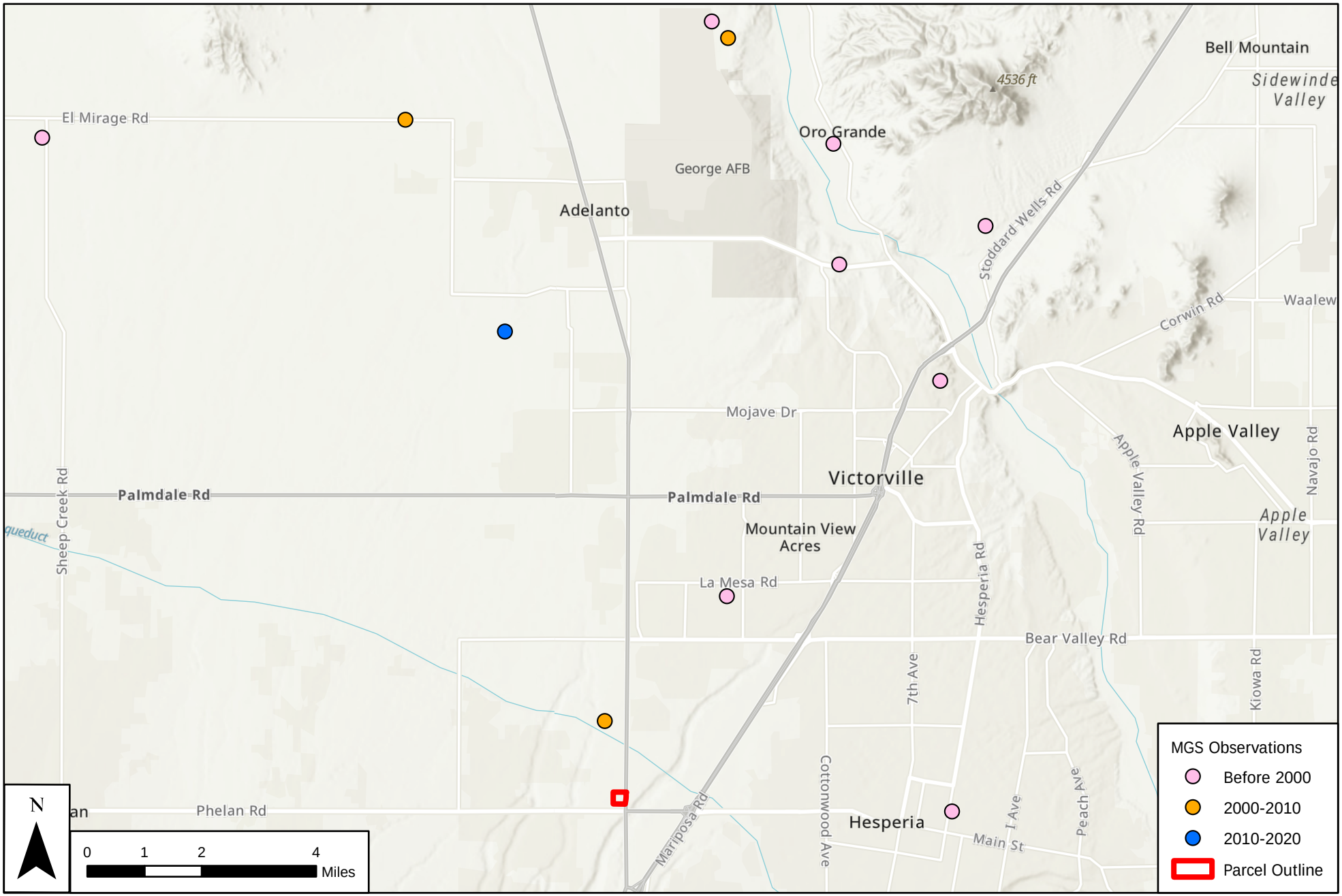
SOURCE: ESRI

West of 395 Project

Figure 2

Survey Area

DIPODOMYS
ECOLOGICAL CONSULTING, LLC



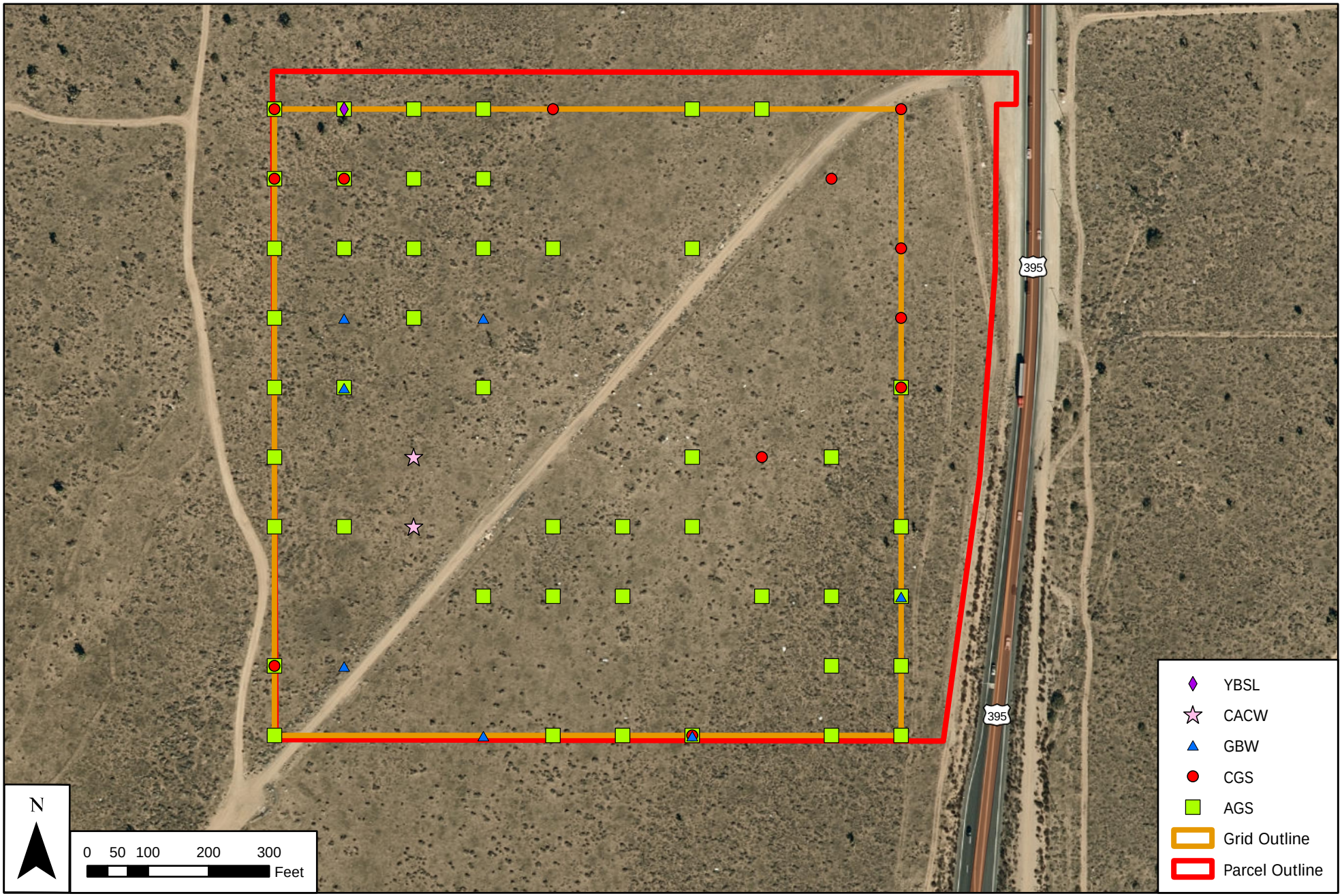
SOURCE: ESRI

West of 395 Project

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Figure 3

Historical MGS Occurrences



SOURCE: ESRI

West of 395 Project

Figure 4

Trapping Results

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Attachment A

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: 30-acre Site West of Highway 395 Project Property owner: CH Realty Partners CM, LLC

Location: Township 04N ; Range 05W ; Section 16 ; ¼ Section _____

Quad map/series: Baldy Mesa UTM coordinates: SW: 462905 3809750 NW: 462905 3810065 SE: 463220 3809750 NE: 463220 3810065
GPS coordinates of trapping-grid corners

Acreage of Project Site: 30 acres Acreage of potential MGS habitat on site: 30 acres

Total acreage visually surveyed on project site: 30 acres Date(s): April 5, 2022
visual surveys

Visual surveys conducted by: Karla Flores and Karl Fairchild
names of all persons by date (use back of form, if needed)

Total acres trapped: 30 acres Number of sampling grids: 1

Trapping conducted by: Karla Flores
names of all persons by sampling term and sampling grid (use back of form, if needed)

Dates of sampling term(s): FIRST April 6-10, 2022 SECOND May 8-12, 2022 THIRD July 4-8, 2022
if required if required

PART II - GENERAL HABITAT DESCRIPTION (use back of form, if needed)
Vegetation: dominant perennials: *Yucca brevifoilia, Lycium cooperi, Scutellaria mexicana, Ericameria nauseosa, Ephedra nevadensis*
other perennials: *Tetradymia stenolepis, Ericameria cooperi, Eriogonum fasciculatum*
dominant annuals: *Amsinckia tessellata, Erodium cicutarium, Lasthenia californica*
other annuals: *Bromus sp. Hirschfeldia incana,Sisymbrium irio*

Land forms (mesa, bajada, wash): desert plain

Soils description: Cajon sand

Elevation: 3,456 feet Slope: 0-2%

PART III - WEATHER (report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made; use a separate blank sheet for each day)

Temperature: AIR minimum and maximum; SOIL minimum and maximum; Cloud Cover: % in AM and % in PM; Wind Speed: in AM and in PM

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Attachment B

Attachment B: Weather details for California Department of Fish and Wildlife (CDFW) Mohave ground squirrel (*Xerospermophilus mohavensis*) protocol surveys. Details include date, survey (1-3), air temperature (min-max ° Fahrenheit), soil temperature (min-max ° Fahrenheit), wind speed (mph) and percent cloud cover (%).

Date		Air Temperature (°F)		Soil temperature (°F)		Wind (mph)		Cloud Cover (%)	
		Min	Max	Min	Max	Start	End	Start	End
4/6/2022	1	62.4	81.6	55.8	77.1	2.6	7.8	0	0
4/7/2022	1	66.2	82.6	56.1	76	3.8	5.7	0	0
4/8/2022	1	80.4	88.7	56.1	62.8	2.4	7.4	0	5
4/9/2022	1	73.2	84.3	63.6	83.6	8.1	12.6	10	0
4/10/2022	1	59.2	81.8	60.5	81.6	3.6	13	5	25
5/8/2022	2	53	66.7	58.9	79.5	6	7.4	5	10
5/9/2022	2	53.3	62.8	59.2	66.4	8	13.1	5	15
5/10/2022	2	51	70	55.9	69.5	4.8	9.8	15	25
5/11/2022	2	50	66.3	57.9	81.2	10.4	14.1	2	0
5/12/2022	2	61.3	74	54.8	71.6	5.3	3.1	2	10
7/4/2022	3	67.7	86.5	70.6	73.8	8.7	14.7	0	0
7/5/2022	3	69	86.4	70.8	74.1	4.7	11.1	0	0
7/6/2022	3	71.2	85.3	71.6	90.8	5.1	18	0	0
7/7/2022	3	73.4	90	70.1	77.4	3	14.1	0	0
7/8/2022	3	80.6	90	74.1	77.7	3.3	11.2	10	10

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

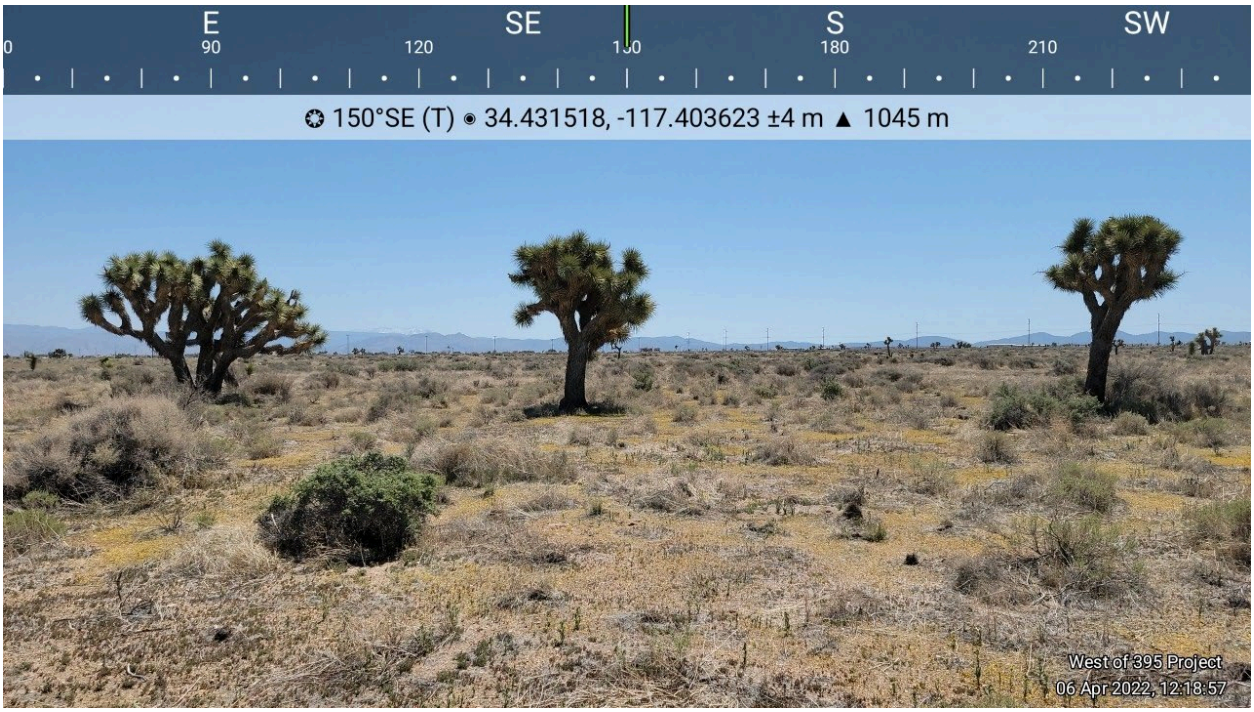
Attachment C

Common name	Scientific name	SSC*
Plants		
California buckwheat	*Eriogonum fasciculatum*	
Cooper's boxthorn	*Lycium cooperi*	
cottonthorn	*Tetradymia stenolepis*	
fiddleneck	*Amsinckia tessellata*	
foxtail brome	*Bromus madritensis*	
goldfields	*Lasthenia californica*	
Joshua tree	*Yucca brevifolia*	
London rocket	*Sisymbrium irio*	
Mexican bladdersage	*Scutellaria mexicana*	
Nevada joint-fir	*Ephedra nevadensis*	
red-stemmed filaree	*Erodium cicutarium*	
rubber rabbitbrush	*Ericameria nauseosa*	
short-podded mustard	*Hirschfeldia incana*	
Birds		
American pipit	*Anthus rubescens*	
Bell's sparrow	*Artemisiospiza belli*	
Brewer's sparrow	*Spizella breweri*	
cactus wren	*Campylorhynchus brunneicapillus*	
California quail	*Callipepla californica*	
common raven	*Corvus corax*	
horned lark	*Eremophila alpestris*	
house finch	*Haemorhous mexicanus*	
house sparrow	*Passer domesticus*	
loggerhead shrike	*Lanius ludovicianus*	Y
mourning dove	*Zenaida macroura*	
northern mockingbird	*Mimus polyglottos*	
red-tailed hawk	*Buteo jamaicensis*	
savannah sparrow	*Passerculus sandwichensis*	
western kingbird	*Tyrannus verticalis*	
western meadowlark	*Sturnella neglecta*	
white-crowned sparrow	*Zonotrichia leucophrys*	
Mammals		
black-tailed jackrabbit	*Lepus californicus*	
California ground squirrel	*Otospermophilus beecheyi*	
white-tailed antelope ground squirrel	*Ammospermophilus leucurus*	
Reptiles		
Great Basin whiptail	*Aspidoscelis tigris*	
yellow-backed spiny lizard	*Sceloporus uniformis*	

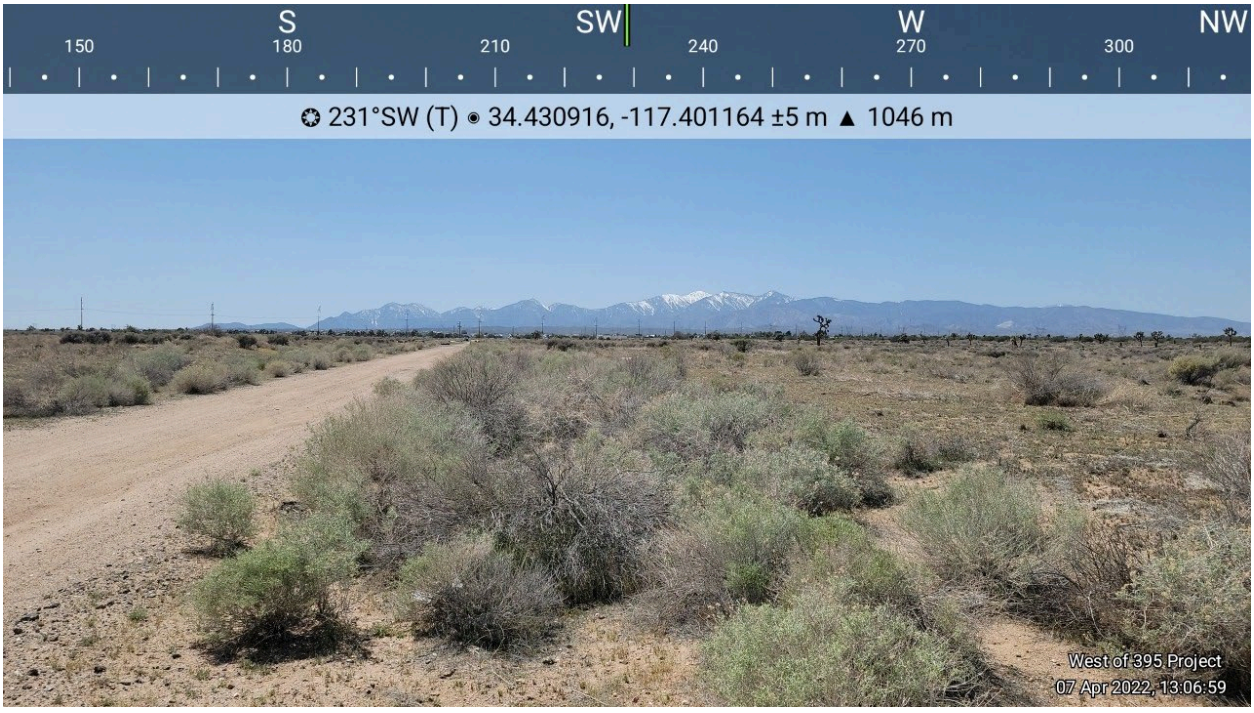
*SSC: Species of Special Concern

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Attachment D



Photograph 1: Representative vegetation on-site, facing southeast.



Photograph 2: Representative vegetation on-site, facing southeast.



Photograph 3: Camera trapping station, each station consisted of a Bushnell camera secured to a 36-inch u-post, facing a bait tube.



Photograph 4: White-tailed antelope ground squirrel (*Ammospermophilus leucurus*) captured.



Photograph 5(a-b). Representative captures (a) cactus wren (*Campylorhynchus brunneicapillus*) and (b) Great Basin whiptail (*Aspidoscelis tigris tigris*).

Appendix D
Plant Compendium

Plant Species

Vascular Species

Eudicots

ASTERACEAE — SUNFLOWER FAMILY

Ambrosia acanthicarpa — flatspine bur ragweed
Ambrosia salsola var. *salsola* — burrobrush
Ericameria cooperi var. *cooperi* — Cooper's goldenbush
Ericameria linearifolia — narrowleaf goldenbush
Ericameria nauseosa — rubber rabbitbrush
Lasthenia gracilis — needle goldfields
Lessingia glandulifera var. *glandulifera* — valley lessingia
Senecio flaccidus var. *douglasii* — Douglas' ragwort
Stephanomeria pauciflora — brownplume wirelettuce
Tetradymia axillaris var. *longispina* — longspine horsebrush
Tetradymia spinosa — shortspine horsebrush
Tetradymia stenolepis — Mojave cottonthorn

BORAGINACEAE — BORAGE FAMILY

Amsinckia tessellata var. *tessellata* — bristly fiddleneck

BRASSICACEAE — MUSTARD FAMILY

* *Sisymbrium altissimum* — tall tumblemustard
Tropidocarpum gracile — dobie pod

CHENOPODIACEAE — GOOSEFOOT FAMILY

Chenopodium californicum — California goosefoot
Krascheninnikovia lanata — winterfatland
* *Salsola tragus* — prickly Russian thistle

EUPHORBIACEAE — SPURGE FAMILY

Euphorbia albomarginata — whitemargin sandmat

FABACEAE — LEGUME FAMILY

Acmispon strigosus — strigose bird's-foot trefoil

GERANIACEAE — GERANIUM FAMILY

* *Erodium cicutarium* — redstem stork's bill

LAMIACEAE — MINT FAMILY

Scutellaria mexicana — Mexican bladdersage

MONTIACEAE — MONTIA FAMILY

Calyptridium monandrum — common pussypaws

NYCTAGINACEAE — FOUR O'CLOCK FAMILY

Mirabilis laevis var. *crassifolia* — California four o'clock

POLEMONIACEAE — PHLOX FAMILY

Eriastrum sapphirinum ssp. *sapphirinum* — sapphire woollystar

Leptosiphon aureus — golden linanthus

POLYGONACEAE — BUCKWHEAT FAMILY

Chorizanthe brevicornu var. *brevicornu* — brittle spineflower

Eriogonum fasciculatum var. *polifolium* — California buckwheat

SOLANACEAE — NIGHTSHADE FAMILY

Datura wrightii — sacred thorn-apple

Lycium andersonii — Anderson's boxthorn

Lycium cooperi — peach thorn

ZYGOPHYLLACEAE — CALTROP FAMILY

Larrea tridentata — creosote bush

Gymnosperms and Gnetophytes

CUPRESSACEAE — CYPRESS FAMILY

Juniperus californica — California juniper

EPHEDRACEAE — EPHEDRA FAMILY

Ephedra nevadensis — Nevada joint fir

Monocots

AGAVACEAE — AGAVE FAMILY

Yucca brevifolia — Joshua tree

POACEAE — GRASS FAMILY

* Bromus hordeaceus — soft brome

* Bromus rubens — red brome

* Bromus tectorum — cheatgrass

Elymus elymoides — squirreltail

* *Schismus barbatus* — common Mediterranean grass

Stipa speciosa — desert needlegrass

* signifies introduced (non-native) species

Appendix E
Wildlife Compendium

Wildlife Species – Vertebrates

Birds

Blackbirds, Orioles and Allies

ICTERIDAE — BLACKBIRDS

Sturnella neglecta — western meadowlark

Finches

FRINGILLIDAE — FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus — house finch

Flycatchers

TYRANNIDAE — TYRANT FLYCATCHERS

Sayornis saya — Say's phoebe

Hawks

ACCIPITRIDAE — HAWKS, KITES, EAGLES, AND ALLIES

Accipiter cooperii — Cooper's hawk

Jays, Magpies and Crows

CORVIDAE — CROWS AND JAYS

Corvus corax — common raven

Larks

ALAUDIDAE — LARKS

Eremophila alpestris — horned lark

Mockingbirds and Thrashers

MIMIDAE — MOCKINGBIRDS AND THRASHERS

Mimus polyglottos — northern mockingbird

New World Quail

ODONTOPHORIDAE — NEW WORLD QUAIL

Callipepla californica — California quail

Pigeons and Doves

COLUMBIDAE — PIGEONS AND DOVES

Zenaida macroura — mourning dove

Shrikes

LANIIDAE — SHRIKES

Lanius ludovicianus — loggerhead shrike

Wrens

TROGLODYTIDAE — WRENS

Campylorhynchus brunneicapillus — cactus wren

New World Sparrows

PASSERELLIDAE — NEW WORLD SPARROWS

Artemisiospiza belli — Bell's sparrow

Spizella breweri — Brewer's sparrow

Zonotrichia leucophrys — white'crowned sparrow

Mammals

Canids

CANIDAE — WOLVES AND FOXES

Canis latrans — coyote

Cats

FELIDAE — CATS

Lynx rufus — bobcat

Hares and Rabbits

LEPORIDAE — HARES AND RABBITS

Lepus californicus — black'tailed jackrabbit

Squirrels

SCIURIDAE — SQUIRRELS

Otospermophilus beecheyi — California ground squirrel

Rats, Mice, and Voles

CRICETIDAE — RATS, MICE, AND VOLES

Onychomys torridus — southern grasshopper mouse

Peromyscus maniculatus — eastern deermouse

Reptiles

Lizards

PHRYNOSOMATIDAE — IGUANID LIZARDS

Uta stansburiana — common side’blotched lizard

TEIIDAE — WHIPTAIL LIZARDS

Aspidoscelis tigris — tiger whiptail

INTENTIONALLY LEFT BLANK

Appendix F

Special-Status Plants Potentially Occurring within the BSA

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Asclepias nyctaginifolia	Mojave milkweed	None/None/2B.1	Mojavean desert scrub, Pinyon and juniper woodland/perennial herb/ May–June/2,870–5,575	Not expected to occur. The site is located within the species' known elevation range and the site contains Mojavean desert scrub. As such, this species was a target species for the May 2022 rare plant survey. This species was not observed during the focused May 2022 rare plant survey and is considered absent from the site.
Astragalus lentiginosus var. *antonius*	San Antonio milk-vetch	None/None/1B.3	Lower montane coniferous forest, Upper montane coniferous forest/perennial herb/Apr–July/4,920–8,530	Not expected to occur. The site is located outside of the species' known elevation range and there is no suitable habitat present.
Botrychium ascendens	upswept moonwort	None/None/2B.3	Lower montane coniferous forest, Meadows and seeps; Mesic/perennial rhizomatous herb/(June)July–Aug/ 3,655–9,990	Not expected to occur. While the site is located within the species' known elevation range, there is no suitable habitat present to support this species.
Botrychium crenulatum	scalloped moonwort	None/None/2B.2	Bogs and fens, Lower montane coniferous forest, Marshes and swamps, Meadows and seeps, Upper montane coniferous forest/perennial rhizomatous herb/June–Sep/4,160–10,760	Not expected to occur. The site is located outside of the species' known elevation range and there is no suitable habitat present to support this species.
Calochortus palmeri var. *palmeri*	Palmer's mariposa-lily	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps; Mesic/ perennial bulbiferous herb/Apr–July/ 2,325–7,840	Not expected to occur. While the site is located within the species' known elevation range, there is no suitable habitat present to support this species.
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	None/None/1B.2	Chaparral, Meadows and seeps, Pebble (Pavement) plain, Riparian woodland, Upper montane coniferous forest; Mesic/annual herb (hemiparasitic)/ May–Aug/4,265–7,840	Not expected to occur. The site is located outside of the species' known elevation range and there is no suitable habitat present to support this species.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	None/None/1B.2	Coastal scrub, Mojavean desert scrub, Pinyon and juniper woodland; Gravelly (sometimes), Sandy (sometimes)/annual herb/Apr–June/985–3,935	Not expected to occur. The site is located within the species' known elevation range and contains suitable Mojavean desert scrub habitat. As such, this species was a target species for the May 2022 rare plant survey. This species was not observed during the focused May 2022 rare plant survey and is considered absent from the site.
Claytonia peirsonii ssp. *peirsonii*	Peirson's spring beauty	None/None/1B.2	Subalpine coniferous forest, Upper montane coniferous forest; Granitic, Metamorphic, Scree, Talus/perennial herb/(Mar)May–June/4,950–9,005	Not expected to occur. The site is located outside of the species' known elevation range and there is no suitable habitat present to support this species.
Deinandra mohavensis	Mojave tarplant	None/SE/1B.3	Chaparral, Coastal scrub, Riparian scrub; Mesic/annual herb/(Jan–May)June–Oct/ 2,095–5,245	Not expected to occur. The site is located within the species' known elevation range; however, suitable habitat (e.g., chaparral, coastal scrub, and riparian scrub) is not present.
Diplacus mohavensis	Mojave monkeyflower	None/None/1B.2	Joshua tree "woodland", Mojavean desert scrub; Gravelly (sometimes), Sandy (sometimes), Washes (often)/annual herb/Apr–June/1,965–3,935	Not expected to occur. The site is located within the species' known elevation range and the site contains suitable soils and Joshua tree woodland. As such, this species was a target species for the May 2022 rare plant survey. This species was not observed during the focused May 2022 rare plant survey and is considered absent from the site.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Eremothera boothii ssp. *boothii*	Booth's evening-primrose	None/None/2B.3	Joshua tree "woodland", Pinyon and juniper woodland/annual herb/Apr–Sep/ 2,670–7,870	Low potential to occur. The site is within the species' known elevation range and there is desert scrub habitat present with scattered Joshua trees. Based on locational records (Jepson Flora Project 2022) and the Consortium of California Herbaria (CCH 2022), the species is restricted to wash habitat (such as the Mojave River), which is absent from the BSA. Furthermore, while there are several documented occurrences along the Mojave River, morphology suggests introgression with E. boothii ssp. intermedia, and additional fieldwork is needed (CDFW 2022).
Helianthus nuttallii ssp. *parishii*	Los Angeles sunflower	None/None/1A	Marshes and swamps/perennial rhizomatous herb/Aug–Oct/35–5,000	Not expected to occur. The site is located outside of the species' known geographic range (CCH 2022) and suitable habitat (e.g., marshes and swamps) is not present.
Heuchera parishii	Parish's alumroot	None/None/1B.3	Alpine boulder and rock field, Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; Carbonate (sometimes), Rocky/perennial rhizomatous herb/June–Aug/ 4,920–12,465	Not expected to occur. The site is located outside of the species' known elevation range and there is no suitable habitat present to support this species.
Lilium parryi	lemon lily	None/None/1B.2	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest; Mesic/perennial bulbiferous herb/ July–Aug/4,000–9,005	Not expected to occur. The site is located outside of the species' known elevation range and there is no suitable habitat present to support this species.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Linanthus concinnus	San Gabriel linanthus	None/None/1B.2	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; Openings, Rocky/annual herb/Apr–July/ 4,985–9,185	Not expected to occur. The site is located outside of the species' known elevation range and there is no suitable habitat present to support this species.
Loeflingia squarrosa var. *artemisiarum*	sagebrush loeflingia	None/None/2B.2	Desert dunes, Great Basin scrub, Sonoran desert scrub; Sandy/annual herb/Apr–May/2,295–5,295	Not expected to occur. The site is located within the species' known elevation range and suitable desert scrub habitat is present. As such, this species was a target species for the May 2022 rare plant survey. This species was not observed during the focused May 2022 rare plant survey and is considered absent from the site.
Lycium parishii	Parish's desert-thorn	None/None/2B.3	Coastal scrub, Sonoran desert scrub/ perennial shrub/Mar–Apr/445–3,280	Not expected to occur. The site is located outside of the species' known elevation range.
Monardella australis ssp. *jokerstii*	Jokerst's monardella	None/None/1B.1	Chaparral, Lower montane coniferous forest; Alluvial Terraces, Drainages, Scree, Slopes, Talus, Washes/perennial rhizomatous herb/July–Sep/ 4,425–5,740	Not expected to occur. The site is located outside of the species' known elevation range and there is no suitable habitat present to support this species.
Opuntia basilaris var. *brachyclada*	short-joint beavertail	None/None/1B.2	Chaparral, Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland/perennial stem/ Apr–June(Aug)/1,390–5,905	Not expected to occur. The site contains suitable Joshua tree woodland and desert scrub habitat. As such, this species was a target species for the May 2022 rare plant survey. This species was not observed during the focused May 2022 rare plant survey and is considered absent from the site.
Oreonana vestita	woolly mountain-parsley	None/None/1B.3	Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest/perennial herb/Mar–Sep/5,295–11,480	Not expected to occur. The site is located outside of the species' known elevation range and there is no suitable habitat present to support this species.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Orobanche valida ssp. *valida*	Rock Creek broomrape	None/None/1B.2	Chaparral, Pinyon and juniper woodland/perennial herb (parasitic)/ May–Sep/3,375–6,560	Not expected to occur. The site is located outside of the species' known geographic range (CCH 2022) and there is no suitable habitat present to support this species.
Pediomelum castoreum	Beaver Dam breadroot	None/None/1B.2	Joshua tree "woodland", Mojavean desert scrub/perennial herb/Apr–May/ 2,000–5,000	Not expected to occur. The site is located within the species' known elevation range and contains suitable Joshua tree woodland is present. As such, this species was a target species for the May 2022 rare plant survey. This species was not observed during the focused May 2022 rare plant survey and is considered absent from the site.
Saltugilia latimeri	Latimer's woodland-gilia	None/None/1B.2	Chaparral, Mojavean desert scrub, Pinyon and juniper woodland/annual herb/ Mar–June/1,310–6,230	Not expected to occur. The site is located within the species' known elevation range and contains suitable desert scrub habitat. As such, this species was a target species for the May 2022 rare plant survey. This species was not observed during the focused May 2022 rare plant survey and is considered absent from the site.
Schoenus nigricans	black bog-rush	None/None/2B.2	Marshes and swamps/perennial herb/ Aug–Sep/490–6,560	Not expected to occur. The site is located within the species' known elevation range; however, there is no suitable habitat (i.e., marshes or swamps) are present to support this species.
Scutellaria bolanderi ssp. austromontana	southern mountains skullcap	None/None/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest/perennial rhizomatous herb/June–Aug/ 1,390–6,560	Not expected to occur. The site is located within the species' known elevation range; however, there is no suitable habitat present to support this species.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, Meadows and seeps, Valley and foothill grassland/ perennial rhizomatous herb/July–Nov/ 5–6,690	Not expected to occur. The site is located within the species' known elevation range; however, there is no suitable habitat present to support this species.
Symphyotrichum greatae	Greata's aster	None/None/1B.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland/ perennial rhizomatous herb/June–Oct/ 985–6,590	Not expected to occur. The site is located outside of the species' known geographic range (CCH 2022) and there is no suitable habitat present to support this species.
Yucca brevifolia	western Joshua tree	None/SC/CBR	Great Basin grassland, Great Basin scrub, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland, Sonoran desert scrub, Valley and foothill grassland/perennial leaf succulent/ Apr–May/1,310–6,560	Present. Western Joshua tree individuals were recorded within and adjacent to the limits of the site.

Status Legend:
FE: Federally listed as endangered
FT: Federally listed as threatened
FC: Federal Candidate for listing
DL: Delisted
SE: State listed as endangered
ST: State listed as threatened
SC: State Candidate for listing
SR: State Rare
CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3: Review List: Plants about which more information is needed
CRPR 4: Watch List: Plants of limited distribution
.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 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)
CBR: Considered but Rejected

Appendix G

Special-Status Wildlife Potentially Occurring within the BSA

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. Stream channels and riparian areas are not present.
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Not expected to occur. No suitable habitat present.
Rana muscosa	mountain yellow-legged frog	FE, BCC/SE, WL	Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral	Not expected to occur. No suitable habitat present.
Birds				
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tulles, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable habitat present.
Aquila chrysaetos (nesting and wintering)	golden eagle	None/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to occur. No suitable habitat present for nesting and wintering. The species may be a transient through the site when foraging and migrating.
Asio otus (nesting)	long-eared owl	BCC/SSC	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	Not expected to occur. No suitable habitat present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Moderate potential to occur. The BSA contains suitable habitat and burrows for this species. Focused surveys for burrowing owl conducted in 2022 were negative; however, burrowing owl is a transient species and may incidentally occur.
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. Nesting potential is present (Joshua trees), but the species' local records are all historic (>80 years) and the species is not currently nesting in the region.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable habitat present.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable habitat present.
Haliaeetus leucocephalus (nesting and wintering)	bald eagle	FPD/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	Not expected to occur. No suitable habitat present.
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. No suitable habitat present.
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Present. Site contains suitable Joshua tree woodland. Nearest occurrence recorded 1.75 miles north of site (CDFW 2022).
Piranga rubra (nesting)	summer tanager	None/SSC	Nests and forages in mature desert riparian habitats dominated by cottonwoods and willows	Not expected to occur. No suitable habitat present.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. No suitable habitat present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Toxostoma lecontei	LeConte's thrasher	BCC/SSC	Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and Joshua tree habitats; nests in spiny shrubs or cactus	Moderate potential to occur. Site contains suitable Joshua tree woodland. Nearest occurrence recorded 5.75 miles east of site (CDFW 2022).
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable habitat present.
Vireo vicinior (nesting)	gray vireo	None/SSC	Nests and forages in pinyon–juniper woodland, oak, and chamise and redshank chaparral	Not expected to occur. No suitable habitat present.
Fishes				
Rhinichthys osculus ssp. 8	Santa Ana speckled dace	None/SSC	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system	Not expected to occur. No suitable habitat present.
Siphateles bicolor mohavensis	Mohave tui chub	FE/FP, SE	Lacustrine ponds or pools; 4 feet min water depth; freshwater flow; mineralized and alkaline environment; habitat for aquatic invertebrate prey and egg attachment substrate; Ruppia maritima preferred for egg attachment and thermal refuge in summer months	Not expected to occur. No suitable habitat present.
Invertebrates				
Euphydryas editha quino	quino checkerspot butterfly	FE/SCE	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include Plantago erecta, Antirrhinum coulterianum, and Plantago patagonica (Silverado Occurrence Complex)	Not expected to occur. No suitable habitat present.
Bombus crotchii	Crotch bumble bee	None/SCT	Open grassland and scrub communities supporting suitable floral resources.	Low potential to occur. While the study area does contain floral resources during the spring blooming period, many of the flower patches are small and disjointed, forming marginal potential habitat for this species. Furthermore, documented occurrences of Crotch bumble bee within the high desert are

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				historical in nature, with the more recent occurrences located along the northern foothills of the San Bernardino Mountains (Richardson 2023); however, further study is needed to understand the full distribution of this species.
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Not expected to occur. Site does not contain suitable roosting habitat.
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	None/SSC	Desert wash, desert scrub, desert succulent scrub, and pinyon–juniper woodland	Low potential to occur. Site contains suitable substrate, but nearest occurrence recorded 11.25 miles northeast of site (CDFW 2022).
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Not expected to occur. Site does not contain suitable roosting habitat.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. Site does not contain suitable roosting habitat.
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None/SSC	Coniferous and deciduous forests, including riparian forests	Not expected to occur. No suitable habitat present.
Microtus californicus mohavensis	Mojave river vole	None/SSC	Wet, weedy, herbaceous areas along the Mojave River	Not expected to occur. No suitable habitat present.
Ovis canadensis nelsoni	Nelson's bighorn sheep	None/FP	Steep slopes and cliffs, rough and rocky topography, sparse vegetation; also canyons, washes, and alluvial fans	Not expected to occur. No suitable habitat present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Spermophilus (Xerospermophilus) mohavensis	Mohave ground squirrel	None/ST	Desert scrub habitats including those dominated by creosote bush and burrobush, desert sink scrub, and desert saltbush scrub	Not expected. Site contains suitable vegetation and substrate. As such, focused surveys for this species were conducted in 2022 and were negative within the project site.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Low potential to occur. One burrow detected on site during March 2022 survey; however, the shape may not be indicative of species. The project's proximity to State Route 395, which sustains high traffic volumes, and the developed nature of the region are expected to limit the potential of occurrence. Roadkill sighting recorded 7.5 miles from site (CDFW 2022).
Reptiles				
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Not expected to occur. No suitable habitat present and the project site is outside of the geographic range for this species.
Charina umbratica	southern rubber boa	None/ST	Montane oak–conifer and mixed-conifer forests, montane chaparral, wet meadows; usually in vicinity of streams or wet meadows	Not expected to occur. No suitable habitat present.
Emys marmorata	western pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. No suitable habitat present.
Gopherus agassizii	Mojave desert tortoise	FT/ST, SCE	Arid and semi-arid habitats in Mojave and Sonoran Deserts, including sandy or gravelly locations along riverbanks, washes, sandy dunes, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides	Not expected to occur. Site contains suitable Joshua tree woodland and nearest occurrence recorded 2.25 miles southwest of site (CDFW, 2022). One burrow detected on site during March 2022 survey; however, the shape may not be indicative of species. The project's proximity to State Route 395, which sustains high traffic volumes, and the

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				developed nature of the region are expected to limit the potential of occurrence. Focused surveys conducted for this species in 2022 were negative.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Not expected to occur. No suitable habitat present and the project site is outside of the geographic range for this species.
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No suitable habitat present.

Status Abbreviations
FE: Federally listed as endangered
FT: Federally listed as threatened
FPE: Federally proposed for listing as endangered
PFT: Federally proposed for listing as threatened
FC: Federal candidate species (former Category 1 candidates)
FPD: Federally proposed for delisting
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
BLM: Bureau of Land Management Sensitive Species
USFS: U.S. Forest Service Sensitive Species
SSC: California Species of Special Concern
FP: California Fully Protected Species
WL: California Watch List Species
SE: State listed as endangered
ST: State listed as threatened
SC: State candidate for listing as threatened or endangered
SCE: State candidate for listing as endangered
SCT: State candidate for listing as threatened
SCD: State candidate for delisting
CDF: California Department of Forestry Sensitive Species

Appendix H

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan

Kiss Logistics Center

JANUARY 2023

Prepared for:

KISS Hesperia Venture, LLC.
25 Harbor Park Drive
Port Washington, New York 11050
Contact: Jin Kim

Prepared by:

DUDEK
38 North Marengo Avenue
Pasadena, California 91101
Contact: Chris Kallstrand
ISA-Certified Arborist, No. WE-8208A

Printed on 30% post-consumer recycled material.

Table of Contents

SECTION **PAGE NO.**

Acronyms and Abbreviations iii

1 Introduction 1
- 1.1 Applicability 1
- 1.2 Project Location 2
- 1.3 Project Characteristics 2
- 1.4 Site Characteristics 2

2 Policy and Permits 11
- 2.1 City of Hesperia 11
  - 2.1.1 City Policy 11
  - 2.1.2 City Permits 12
  - 2.1.3 Findings for Removals 12
- 2.2 California Department of Fish and Wildlife 13
  - 2.2.1 CDFW Code Section 2073.3 13

3 Joshua Tree Survey 15
- 3.1 Joshua Tree Survey Methods 15
- 3.2 Joshua Tree Survey Findings 16
- 3.3 Project Impacts – Joshua Trees 16

4 City of Hesperia Requirements 19
- 4.1 Plot Plan Requirements 19
- 4.2 Relocation and Protection Trees 19
- 4.3 Relocation Specifications 19
  - 4.3.1 Salvage 20
  - 4.3.2 Contractor 20
  - 4.3.3 Pre-Salvage Meeting 20
  - 4.3.4 Salvage Timing 20
  - 4.3.5 Pre-Irrigation 20
  - 4.3.6 Equipment Sanitization 20
  - 4.3.7 Joshua Tree Digging 20
  - 4.3.8 Root Maintenance 21
- 4.4 Storage 21
  - 4.4.1 Storage 21
  - 4.4.2 Storage Direction 21
  - 4.4.3 Stabilization 21
  - 4.4.4 Irrigation 21
  - 4.4.5 Duration 22

4.4.6 Summer Salvage: Temporary Shade Structure 22
4.5 Transplant Planting 22
4.5.1 Site Preparation 22
4.5.2 Pre-Watering 23
4.5.3 Planting Direction 23
4.5.4 Planting 23
4.5.5 Post-Transplant Stabilization 23
4.6 Post-Relocation Care 23
4.6.1 Irrigation 23
4.6.2 Stabilization 24
4.6.3 Fertilization 24
4.7 Monitoring and Reporting 24
4.7.1 Monitoring 24
4.7.2 Reporting 24
4.8 Transplantation Success Criteria 25
5 California Department of Fish and Wildlife Mitigation 27
5.1 Proposed Measures to Minimize and Fully Mitigate the Impacts of the Proposed Taking 27
6 Tree Protection 29
6.1 Tree Protection Measures prior to Construction 29
6.2 Protection and Maintenance during Construction 29
6.3 Maintenance after Construction 30
7 Fees 33
8 Desert Native Plants 35
9 References 37

TABLE

1 Summary of Protected Tree Impact Determinations 17

FIGURES

1 Regional Map 5
2 Vicinity Map 7
3 Site Plan 9

APPENDICES

A Joshua Tree Locations
B Tree Information Matrix
C Site Photographs
D Joshua Tree Impacts

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
City	City of Hesperia
HMC	Hesperia Municipal Code
ISA	International Society of Arboriculture
MM	Mitigation Measure
project	Kiss Industrial Project

INTENTIONALLY LEFT BLANK

1 Introduction

The purpose of this Joshua Tree Preservation, Protection, and Relocation Plan (Joshua Tree Plan) for the proposed Kiss Logistics Center (project) is to provide detailed specifications for the CH Reality Partners CM, LLC. to meet the requirements of Chapter 16.24 of the City of Hesperia (City) Municipal Code (City of Hesperia 2020) and the evolving California Department of Fish and Wildlife (CDFW) requirements to protect, preserve, and mitigate impacts to Joshua trees (*Yucca brevifolia*) as a result of the proposed project. On October 21, 2019, the California Fish and Game Commission (Commission) received a petition from the Center for Biological Diversity to list western Joshua tree.[1] On November 1, 2019, the Commission referred the petition to the California Department of Fish and Wildlife (CDFW) for evaluation. CDFW evaluated the scientific information presented in the petition and other relevant information possessed by CDFW at the time of review and prepared a report for submittal to the Commission (CDFW 2020). The report states that CDFW recommended that the Commission accept the petition for further consideration of western Joshua tree under the California Endangered Species Act. On September 22, 2020, the Commission approved the petition to accept the candidacy proposal for western Joshua tree, effective October 9, 2020. When a plant or wildlife species is granted candidacy under the California Endangered Species Act, the species is given the same protection as a threatened or endangered species while the Commission evaluates whether formal listing as threatened or endangered under the California Endangered Species Act is warranted. For this project, take or removal of western Joshua tree would require a 2081 ITP from CDFW.

Furthermore, chapter 16.24 of the Hesperia Municipal Code (HMC) states 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." Furthermore, the City's Protected Plants policy (HMC 16.24) states the following for Tentative Tract, non-single-family residential (commercial, industrial, apartments):

- A protected plant plan shall be prepared by a certified arborist or registered botanist.
- An application and fee shall be completed and paid to the City.
- Healthy, transplantable plants shall be relocated on site or may be placed in an adoption program.

As such, this Joshua Tree Plan addresses the requirements of the City's Protected Plants policy and the proposed mitigation required by CDFW under the 2081 ITP and provides details regarding the site's Joshua trees, detailed specifications for the protection of trees to be preserved on site, and relocation/salvage requirements for those trees requiring removal and relocation.

1.1 Applicability

The provisions of this Joshua Tree Plan apply toward the protection and removal of Joshua trees located within the City of Hesperia, California, as defined in the City's Protected Plants policy (HMC 16.24).

[1] On October 21, 2019, the Commission received a petition to list the following as threatened under the California Endangered Species Act: (1) western Joshua tree (*Yucca brevifolia*) throughout its California range, or, in the event the Commission determines that listing of *Yucca brevifolia* throughout its California range is not warranted, then (2) the western Joshua tree population within the northern part of western Joshua tree's California range, or (3) the western Joshua tree population within the southern part of western Joshua tree's California range.

1.2 Project Location

The approximately 38.3-acre Project, including the 29.5-acre Project site and 8.9-acres of off-site improvements, is located in the City of Hesperia (City), which is located in San Bernardino County (Figure 1, Regional Map; Figure 2, Project Vicinity Map). The proposed project is located west of Highway 395 and north of Phelan Road, and south of Yucca Terrace Drive, within the City of Hesperia. The project site is identified by Assessor's Parcel Numbers 3064-401-03, -04, -05. Specifically, the Project is located in Sections 15, 16, 21, and 22, Township 4 North, and Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California 7.5-minute topographic quadrangle maps.

1.3 Project Characteristics

The proposed project will consist of constructing a new warehouse, ancillary office, and truck trailer parking. Specifically, the proposed project will consist of a new warehouse, office, and truck trailer parking with a total building area of 655,468 SF inclusive of a 11,000 SF of ground floor office space and 5,000 SF of mezzanine office space. The project also includes 30 dock high doors and will include a landscape coverage of 16.8% that will be located along street frontages and throughout parking areas. The Project will consist of off-site improvements that include new roadway and utility facilities. New roadways will consist of "A" Street and Yucca Terrace Drive. "A" Street's right-of-way (ROW) will be 70 feet in width with paving, curb, and gutter. Yucca Terrace Drive will also have a similar section as described above for 'A' Street. The conceptual site plan is provided as Figure 3, Site Plan.

1.4 Site Characteristics

The Project site is currently vacant undeveloped property generally located east of I-395 and north of Main St./ Phelan Road. The project site is zoned as Main Street and Freeway Corridor Specific Plan (MSFC SP) per the land use plan in the 2010 General Plan. The MSFC SP designates the two northerly parcels of the site (APN 3064-401-03, -04) Commercial/Industrial Park (CIBP). The MSFC SP states that the purpose of the CIBP zone in to provide service for commercial, light industrial, light manufacturing, and industrial support uses, mainly conducted in enclosed buildings. The MSFC SP designates the southerly parcel of the site (APN 3064-401-05) as Neighborhood Commercial (NC). NC is intended for immediate day-to-day convenience shopping and services for the residents of nearby neighborhoods. NC does not permit industrial and warehousing uses; therefore, a Specific Plan Amendment (SPA) is needed.

Land uses surrounding the Project site primarily consist of vacant land, along with some scattered residential and commercial uses. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Vacant land and scattered commercial uses
- **East:** Highway 395, vacant land, and residential uses
- **South:** Vacant land and scattered commercial uses
- **West:** Vacant land and residential uses

Climate

The Project is located in Victor Valley/High Desert region in western San Bernardino County. Average annual temperatures range from 44° Fahrenheit (°F) to 81°F. The average annual precipitation is 6.72 inches (Western Regional Climate Center 2021). Periods of extended drought are common throughout the region.

Topography and Soils

The project is composed of one vacant site (comprised of three individual parcels) along the western side of Highway 395 and between Yucca Terrace Drive and Phelan Road. The project site is subject to disturbance as a result of illegal dumping and trespassing. These unpermitted activities have led to areas of exposed bare soils (where trails and a dirt road, Caliente Road, have formed) and several debris piles. The project's surface elevation ranges between approximately 3,545 and 3,565 feet above mean sea level (AMSL). The project site and immediate surrounding area is relatively flat with a slight slope from the southwestern to northeastern corner. The project is located approximately nine miles north of Cleghorn Mountain, which occurs above Cajon Pass that divides the San Gabriel Mountains from the San Bernardino Mountains.

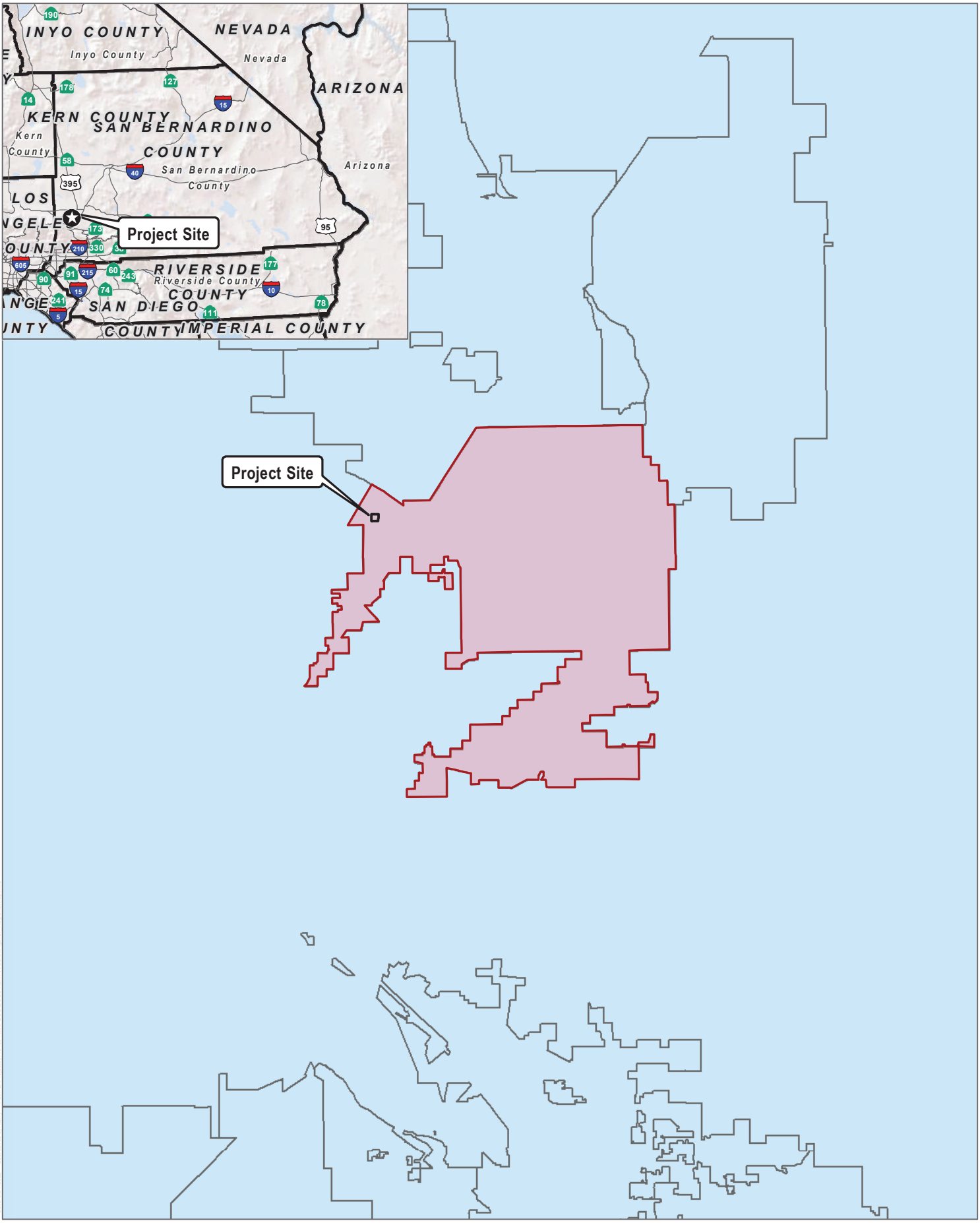
According to the U.S. Department of Agriculture - Natural Resource Conservation Service's Web Soil Survey (USDA 2022), the BSA occurs within the San Bernardino County, Mojave River Area (CA671). The BSA consists of four soil type: Cajon sand (0% to 2% slopes; 2% to 9% slopes; and 9% to 15% slopes) and Hesperia loamy fine sand (2% to 5% slopes). The Cajon Series consists of very deep, somewhat excessively drained soils that formed in sandy alluvium derived primarily from granite. Cajon soils occur on alluvial fans, fan aprons, fan skirts, inset fans, and river terraces at elevations of 200 to 4,300 feet AMSL. These soils have negligible to low runoff and rapid permeability. Creosote bush, Saltbush, Mormon-tea, Joshua trees, annual grasses and forbs are common vegetation found on these soils. The Hesperia Series consists of very deep, well drained soils that formed in alluvium derived primarily from granite and related rocks. Hesperia soils form on alluvial fans, valley plains, and stream terraces at elevations from 200 to 4,800 feet AMSL. These soils have negligible to low runoff and moderately rapid permeability. Creosote bush and sparse annuals are common vegetation found on these soils.

Vegetation

The project site is primarily dominated by desert almond – Mexican bladdersage scrub. This community is dominated by Mexican bladdersage (*Scutellaria mexicana*), but also contains high cover of Cooper's goldenbush (*Ericameria cooperi* var. *cooperi*), Anderson's boxthorn (*Lycium andersonii*), and Nevada joint fir (*Ephedra nevadensis*), with lower cover of desert almond (*Prunus fasciculata*) and Joshua tree (Sawyer et al. 2009). The project site also contains high cover of Joshua tree woodland in the southeastern and northwestern corners, dominated in the tree strata by Joshua tree at greater than one percent cover (Sawyer et al. 2009) with a low cover in the shrub strata of Nevada joint fir and Anderson's boxthorn. A small amount of California buckwheat scrub dominated by California buckwheat (*Eriogonum fasciculatum*) was mapped adjacent to Highway 395 and is likely the result of landscaping associated with the highway. Much of the off-site improvement area is dominated by rubber rabbitbrush scrub.

Disturbed habitat areas consist of non-vegetated bare ground that have been cleared for dirt access roads which transverse the study area. Asphalt paved public rights-of-way (Highway 395) lie immediately adjacent to the eastern study area boundary. Off-road vehicle use and illegal dumping were noted throughout the study area.

INTENTIONALLY LEFT BLANK



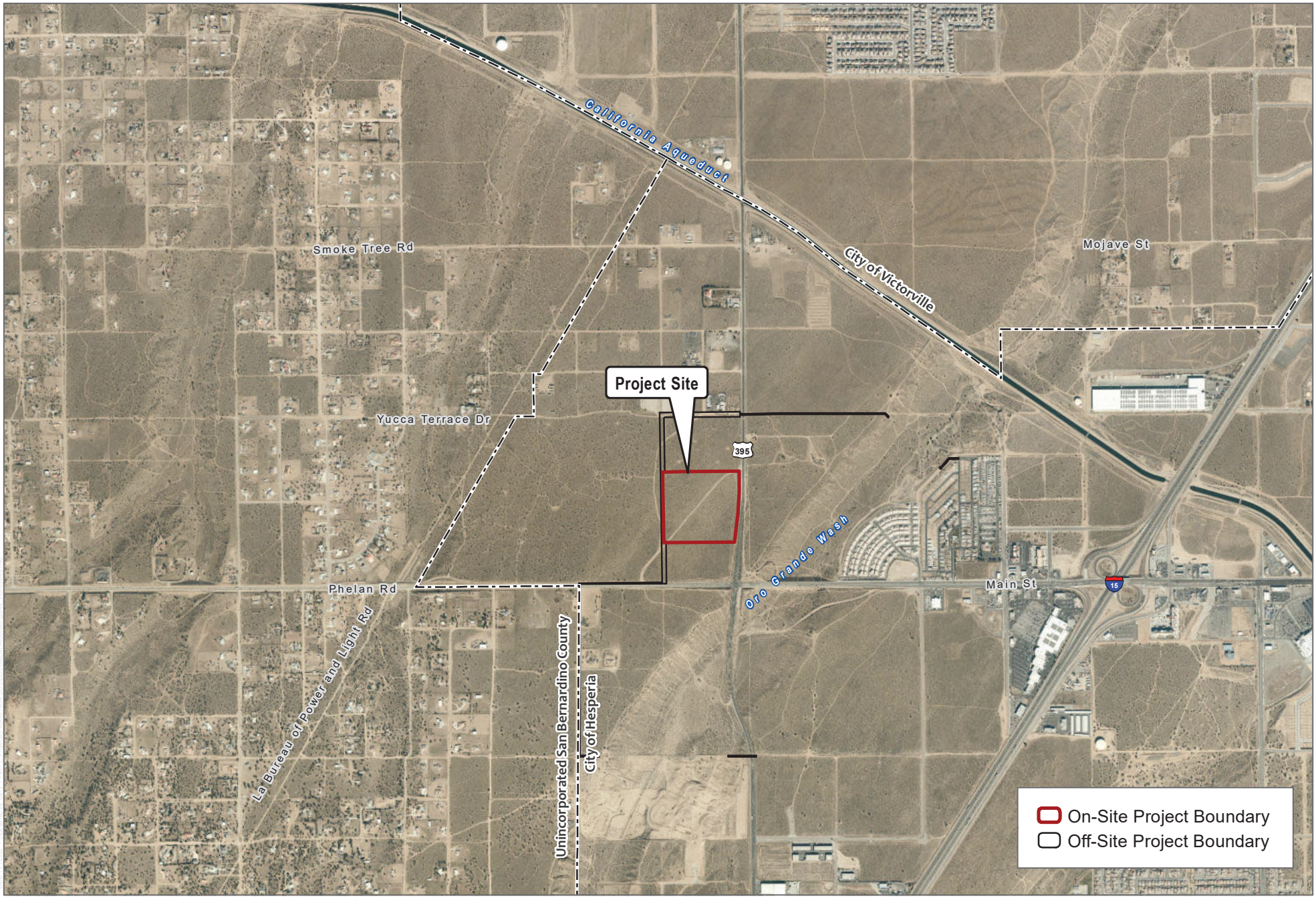
SOURCE: USGS US Topo 2018

0 2 4 Miles

Figure 1

Regional Map

INTENTIONALLY LEFT BLANK



SOURCE: Esri World Imagery 2019

DUDEK

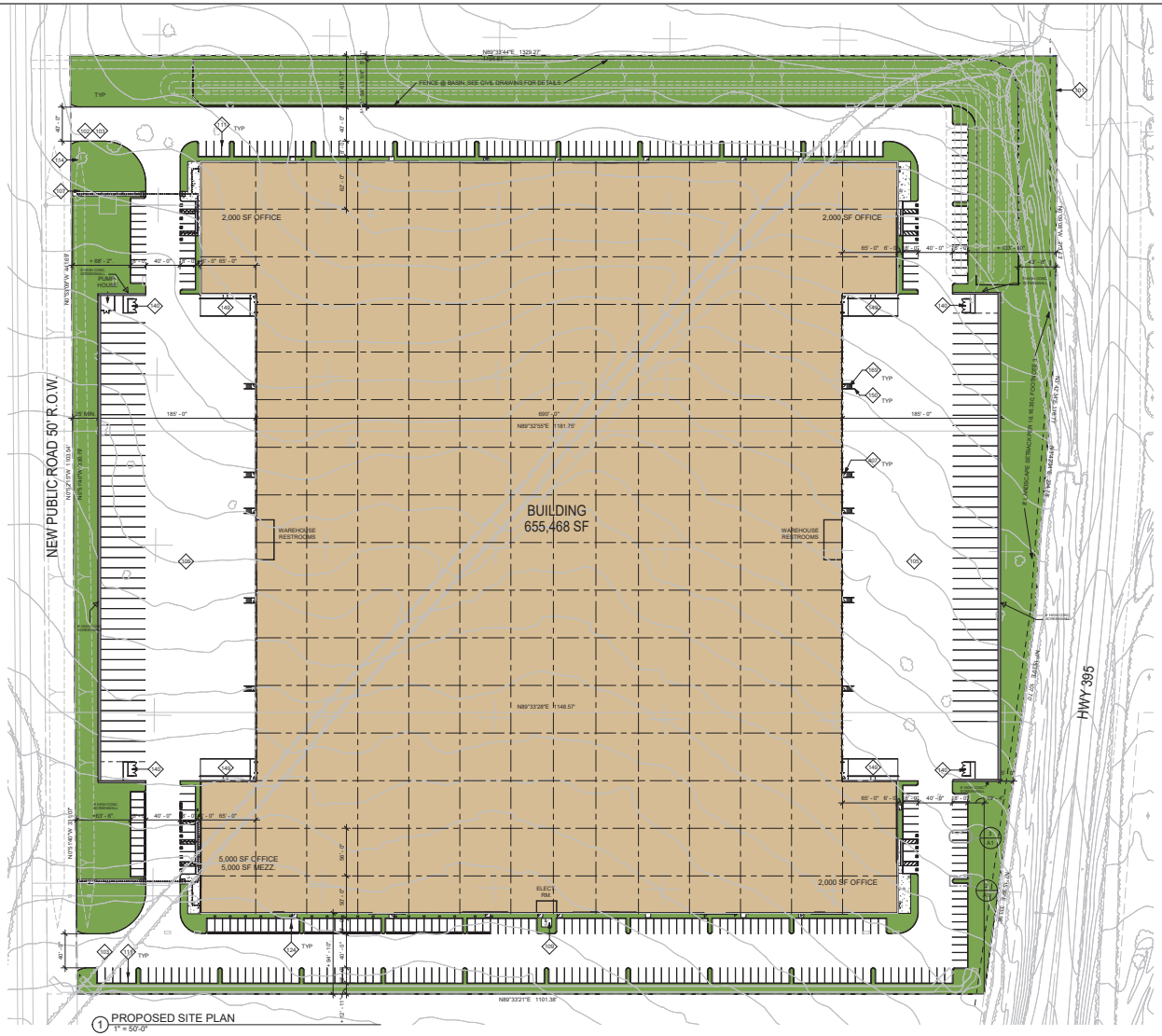
0 1,000 2,000 Feet

FIGURE 2

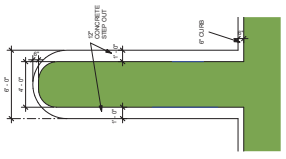
Vicinity Map

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project

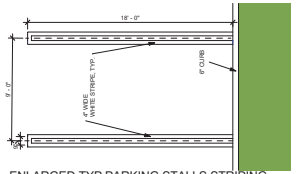
INTENTIONALLY LEFT BLANK



1 PROPOSED SITE PLAN
1" = 50'-0"



2 ENLARGED TYP LANDSCAPE FINGER PLAN
1/4" = 1'-0"



3 ENLARGED TYP PARKING STALLS STRIPING
1/4" = 1'-0"

DEVELOPER/OWNER

KISS HESPERIA VENTURE, LLC
25 HARBOR PARK DRIVE
PORT WASHINGTON, NEW YORK 11050
CONTACT: JIN KIM
EMAIL: JIN@KISSUSA.COM

APPLICANT'S REPRESENTATIVE/ARCHITECT

HERDMAN ARCHITECTURE & DESIGN, INC.
100 BAYVIEW CIRCLE SUITE 100
NEWPORT BEACH, CA 92660
CONTACT: BRIDGET HERDMAN
PHONE: 714.389.2800
EMAIL: PROJECTADMIN@HERDMAN-AD.COM

SCOPE OF WORK

CONSTRUCT NEW ONE STORY + MEZZANINE CONCRETE TILT-UP WAREHOUSE/DISTRIBUTION FACILITY WITH ELECTRICAL AND PLUMBING SERVICES, EXTERIOR LIGHTING, LANDCAPING & IRRIGATION AND TRASH ENCLOSURES. FIRE SPRINKLER AND GRADING PLANS TO BE A SEPARATE SUBMITTAL AND PERMIT

LEGAL DESCRIPTION & ZONING

LEGAL DESCRIPTION: THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF HESPERIA, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:
THE SOUTH 1/3 OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4, SECTION 16, TOWNSHIP 4 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

A. A.EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA IN FEE SIMPLE ABSOLUTE BY THAT CERTAIN FINAL ORDER OF CONDEMNATION DATED NOVEMBER 7, 2002 AND RECORDED NOVEMBER 7, 2002 AS INSTRUMENT NO. 2002-0679234 OFFICIAL RECORDS. **APN 3064-401-05-0-000**

PARCEL 2:
THE NORTH 1/2 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 16, TOWNSHIP 4 NORTH, RANGE 4 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

B. EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA IN FEE SIMPLE ABSOLUTE BY THAT CERTAIN FINAL ORDER OF CONDEMNATION DATED NOVEMBER 7, 2002 AND RECORDED NOVEMBER 7, 2002 AS INSTRUMENT NO. 2002-0679234 OFFICIAL RECORDS. **APN 3064-401-04-0-000**

PARCEL 3:
THE SOUTH 1/2 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 16, TOWNSHIP 4 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

C. EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA IN FEE SIMPLE ABSOLUTE BY THAT CERTAIN FINAL ORDER OF CONDEMNATION DATED NOVEMBER 7, 2002 AND RECORDED NOVEMBER 7, 2002 AS INSTRUMENT NO. 2002-0679234 OFFICIAL RECORDS. **APN 3064-401-05-0-000**

ASSESSOR'S PARCEL NO: APN:3064-401-03, APN 3064-401-04. APN 3064-401-05. THE THREE LOTS ARE TO BE MERGED

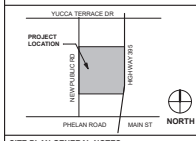
SPECIFIC PLAN LEGEND: N/A

ZONING: B-P BUSINESS PARK

SHEET INDEX

A0	TITLE SHEET
A1	SITE PLAN
A2	GROUND LEVEL FLOOR PLANS
A4	EXTERIOR ELEVATIONS
A4_1	COLOR BOARD
C1	PRELIMINARY GRADING/DRAINAGE PLAN

VICINITY MAP



SITE PLAN GENERAL NOTES

1. THE SITE PLAN SHALL MEET ALL ENGINEERING & NPDES REQUIREMENTS.
2. GENERAL CONTRACTOR TO REVIEW THE SOILS REPORT AND ALL AMENDMENTS LISTED ON THE TITLE SHEET AND FOLLOW ALL RECOMMENDATIONS.
3. U.O.N. ALL DIMENSIONS TO CONCRETE WALLS AND CURBS ARE EITHER TO THE CENTER (SHOWN WITH A CENTERLINE) OR FACE OF THE WALL OR CURB. ALL DIMENSIONS TO FRAMED WALLS ARE EITHER TO THE CENTER LINE OF THE WALL FRAMING (SHOWN WITH A CENTERLINE) OR THE FACE OF THE WALL FINISH.
4. REFER TO CIVIL AND MEP PLANS TO CONFIRM UTILITY INFORMATION SHOWN ON THE ARCHITECT'S SITE PLAN AND FOR ADDITIONAL UTILITY INFORMATION. GENERAL CONTRACTOR TO COORDINATE ALL POINTS OF CONNECTION.
5. REFER TO CIVIL DRAWINGS FOR ALL FINISHED GRADES AND SLOPES. ALL FINISHED GRADES TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING. GENERAL CONTRACTOR TO FIELD VERIFY.
6. ALL ACCESSIBLE ROUTES IDENTIFIED ON THE SITE PLAN DRAWINGS SHALL CONFORM TO THE FOLLOWING:
   a) SLOPES IN THE DIRECTION OF TRAVEL DO NOT EXCEED 5%. CROSS SLOPES DO NOT EXCEED 2%.
   b) THE CLEAR WIDTH OF ALL WALKWAYS IS 4'-0" MIN.
   c) CHANGES IN LEVEL UP TO 1/2" COMPLY w/ 11A0.2.1. CHANGES IN LEVEL GREATER THAN 1/2" IF THEY OCCUR ARE RAMPED. SEE PLANS.
   d) THE VERTICAL CLEARANCE ALONG THE ACCESSIBLE ROUTE IS 80" MIN.
7. ALL PAVED AND LANDSCAPED AREAS TO BE BOUND BY A MIN. 6" HIGH, 6" WIDE CONCRETE CURB U.O.N.
8. A CONCRETE MOW STRIP EXTENDING 12" BEYOND EA END OF THE OPENING SHALL BE PROVIDED @ ALL EXTERIOR GLAZING WHERE THE SILL IS WITHIN 3' VERTICAL OF THE FINISHED GRADE. SEE 3/AD1.1
9. PROVIDE PIPE BOLLARD PROTECTION POSTS AS REQUIRED BY THE FIRE AUTHORITY. LOCATIONS AT ALL EXTERIOR ELECTRICAL EQUIPMENT AND FIRE PREVENTION DEVICES. IF PIPE BOLLARD PROTECTION POST DETAILS ARE NOT PROVIDED BY UTILITY COMPANIES AND OR FIRE AUTHORITY SEE DETAIL 3/AD1.1
10. ALL EXPOSED BIORETENSION DEVICE COVERINGS SHALL BE PAINTED FOREST GREEN.
11. WHERE OCCURS, GENERAL CONTRACTOR TO PROVIDE FLUID APPLIED DAMP PROOFING AT ALL RETAINING AND PLANTER WALLS. WHERE THE SIDE OF THE WALL OPPOSITE THE SOIL SIDE IS EXPOSED TO VIEW AND ALL EXTERIOR WALLS WHERE THE ADJACENT FLOOR SLAB IS BELOW GRADE. SEE 9/AD1.2
12. PROVIDE A HOSE BIB NEAR THE MAIN ENTRANCE AND IN THE TRASH ENCLOSURE. SEE PLAN FOR LOCATION.

KEYNOTES

101	PROPERTY LINE.
102	PROPOSED DRIVEWAY, PER JURISDICTIONAL STANDARDS.
103	DECORATIVE PAVING. SEE LANDSCAPING DRAWINGS FOR ADDITIONAL INFORMATION.
105	CONCRETE PAVING.
107	(N) SIDEWALK.
109	(N) TRANSFORMER LOCATION.
111	TYP U.O.N., STANDARD PARKING STALL: 9'-0" WIDE x 18'-0" DEEP
114	ACCESSIBLE SITE ENTRANCE SIGN.
124	EXERIOR CONCRETE LANDING.
140	TRASH ENCLOSURE w/ ROOF COVERING.
149	CONCRETE TRUCK RAMP w/ 42" HIGH CONCRETE TILT-UP GUARD ON OPEN SIDE(S). PAINT ALL SIDES OF GUARD WALLS AND HANDRAILS.SEE ARCHITECTURAL DRAWINGS FOR COLOR SCHEDULE.
150	STEEL PIPE BOLLARD PROTECTION POST.
169	CONCRETE STAIRS ON GRADE.
407	PAINTED HOLLOW METAL PEDESTRIAN DOOR.

GROSS AND NET SITE AREA

	SQUARE FOOTAGE	ACRES
GROSS:	1288811 SF	29.61
NET:	1246195 SF	28.61

FLOOR AREA RATIO

BUILDING AREA	SITE AREA	FAR ALLOWABLE	FAR PROVIDED
655468 SF	1246203 SF	100%	52.6%

BUILDING AREA SUMMARY

NAME	AREA
GROUND FLOOR	
WAREHOUSE	639468 SF
OFFICE	11000 SF
	650468 SF
MEZZANINE	
OFFICE	5000 SF
	5000 SF
GROUND LEVEL + MEZZANINE	
WAREHOUSE	639468 SF
OFFICE	16000 SF
TOTAL BUILDING AREA	655468 SF

LANDSCAPE AREA SUMMARY

LOT AREA	% LANDSCAPING REQUIRED	AREA LANDSCAPING PROVIDED	% LANDSCAPING PROVIDED
1246203 SF	5%	209075 SF	16.8%

TOTAL PARKING REQUIRED

BUILDING USE	BUILDING AREA	PARKING RATIO 1/X	REQ. PARKING
OFFICE	16000 SF	300	54
WAREHOUSE	10000 SF	500	20
WAREHOUSE	629468 SF	2500	252
TOTAL	655468 SF		326

REQUIRED PARKING BREAKDOWN

SPACE TYPE	SPACES REQUIRED
FUTURE EV CHARGING ONLY AMBULATORY STALL	1
STANDARD STALLS	270
STANDARD ACCESSIBLE STALLS	4
VAN ACCESSIBLE STALLS	4
CLEAN AIR STALLS	10
FUTURE EV CHARGING ONLY STALLS	35
FUTURE EV CHARGING ONLY STANDARD ACCESSIBLE STALLS	1
FUTURE EV CHARGING ONLY VAN ACCESSIBLE STALLS	1
TOTAL	326

PARKING PROVIDED

SPACE TYPE	SPACES PROVIDED
STANDARD STALLS	309
STANDARD ACCESSIBLE STALLS	12
VAN ACCESSIBLE STALLS	4
CLEAN AIR STALLS	11
FUTURE EV CHARGING ONLY STALLS	35
FUTURE EV CHARGING ONLY STANDARD ACCESSIBLE STALLS	1
FUTURE EV CHARGING ONLY AMBULATORY STALL	1
FUTURE EV CHARGING ONLY VAN ACCESSIBLE STALLS	1
TOTAL	374

TRAILER PARKING REQUIRED NO. CITY REQ.	TRAILER PARKING PROVIDED
0	83

SITE LEGEND

- LANDSCAPE AREA
- CONCRETE PAVING. SEE CIVIL DRAWINGS FOR PAVING SECTIONS
- FIRE HYDRANT. PROVIDE PIPE BOLLARD PROTECTION POSTS AS REQUIRED BY THE FIRE AUTHORITY. SEE 3/AD1.1
- STREET LIGHT
- INDICATES AN ACCESSIBLE ROUTE. MUST COMPLY w/ SITE PLAN GENERAL NOTE #6
- PROPERTY LINE
- DOCK HIGH DOOR
- DRIVE THRU. DOOR

Path: Z:\Projects\10212101\MAP\DOCS\DOCUMENT\Vault\BoulderBrushMemo

FIGURE 3
Site Plan
Kiss Logistics Center Biological Resources Technical Report

DUDEK

INTENTIONALLY LEFT BLANK

2 Policy and Permits

2.1 City of Hesperia

2.1.1 City Policy

Per the City's Protected Plants policy (HMC 16.24), the City seeks to preserve the natural environment in the City while respecting the lawful development of private property. As such, native protected plants create a dilemma because of their high public appeal coupled with very limited transplant success and potential safety concerns for the public. Furthermore, HMC 16.24 states the following regarding Tentative Tract, non-single-family residential (commercial, industrial, apartments):

- A protected plant plan shall be prepared by a certified arborist or registered botanist.
- An application and fee shall be completed and paid to the City.
- Healthy, transplantable plants shall be relocated on site or may be placed in an adoption program.

In addition to the requirements previously stated, HMC 16.24 discusses approval of an adoption program, as follows:

1. Approved Adoption Program

   To qualify as an approved adoption program the developer shall provide a letter on company letterhead, describing the program and the community notification process. The program shall identify the following, as a minimum:

   A. A public notice process which may include publication in local newspapers, radio advertisement, hand distributed fliers, and other noticing techniques. Noticing must occur over a period of not less than three weeks.
   B. The location where the trees may be viewed by the public and a clearly identified period of at least two weeks (including weekends) when trees/plants are available for adoption.
   C. The person that will be available on-site to assist those adopting trees to find the actual trees/plants for removal. An on-site or cell phone number for that person is required.
   D. A note that a copy of the City Joshua Tree Transplanting Guidelines will be provided to each adopter.
   E. A log showing the name, address, and phone number of each adopter and the number and type of trees/plants they received.

Note: At least 50% of the transplantable trees and plants shall be adopted or the remaining number below 50% shall be purchased at $350 per transplantable tree. Purchased trees must be recycled at Advance Disposal.

2.1.2 City Permits

Per the City's Protected Plants policy (HMC 16.24), a Joshua tree relocation and removal application must be completed, and fee paid to the City prior to initiation of removal and/or relocation of Joshua trees. HMC Section 16.24.040, Removal Permit, states the following:

A. A removal permit shall be required for the removal of any native tree or plant that is subject to the provisions of this chapter.

B. A land use application, a building permit, and all other development permits (e.g., grading, mobile home set downs, etc.), shall consider and include a review of any proposed native tree or plant removal. Any approved land use application and/or development permit shall be a permit for the removal of native plants if such land use application or development permit specifically reviews and approves such removals. Such reviews shall consider and require compliance with the provisions of this chapter.

C. The reviewing authority may require certification from an appropriate tree expert or desert native plant expert that such tree removals are appropriate, supportive of a healthy environment and are in compliance with the provisions of this article.

D. Removals of native trees or plants that are not requested in conjunction with a land use application or development permit may be accomplished only under a permit issued by either the county agricultural commission or the fire marshal, subject to the provisions of this article.

E. The building official shall require a preconstruction inspection prior to approval of development permits.

F. The duration of a plant or tree removal permit when issued in conjunction with a land use application and/or a development permit shall be coterminous with the duration of the associated application or permit, unless otherwise specified. The reviewing authority shall specify the expiration date for all other tree and/or plant removal permits.

2.1.3 Findings for Removals

Per HMC Section 16.24.040, the reviewing authority must authorize the removal of a native tree or plant subject to the provisions of the HMC only if the following findings are made:

A. The removal of the native tree or plant does not have a significant adverse impact on any proposed mitigation measures, soil retention, soil erosion and sediment control measures, scenic routes, flood and surface water runoff and wildlife habitats (flora and fauna), especially those with limited habitats (e.g., eagles).

B. The removal of the native tree or plant is justified for one of the following reasons:

   1. The location of the native tree or plant and/or its drip line interferes with the reasonable improvement of the site with an allowed structure, sewage disposal area, paved area or other approved improvement or ground disturbing activity. Also, such improvements have been designed in such a manner as to save as many healthy native trees and/or plants as reasonably practicable in conjunction with the proposed improvements;

2. The location of the native tree or plant and/or its drip line interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property;
3. The location of the native tree or plant is hazardous to pedestrian or vehicular travel or safety as determined by the director of transportation, flood control and airports or other county reviewing authority;
4. The native tree or plant or its presence interferes with or is causing excessive damage to utility services or facilities, roadways, sidewalks, curbs, gutters, pavement, sewer line(s), drainage or flood control improvements, foundations, existing structures, or municipal improvements;
5. The condition or location of the native plant or tree is adjacent to and in such close proximity to existing or proposed structure that the native plant or tree has or will sustain significant damage.

C. Joshua trees that are proposed to be removed have been transplanted or stockpiled for future transplanting wherever possible. In the instance of stockpiling the permittee has posted a bond to ensure such Joshua trees are transplanted appropriately.

2.2 California Department of Fish and Wildlife

2.2.1 CDFW Code Section 2073.3

Pursuant to the provisions of Section 2073.3 of the California Fish and Game Code, the Commission received a petition from the Center for Biological Diversity on October 21, 2019, to list western Joshua tree as a threatened species under the CESA. Pursuant to Section 2073 of the California Fish and Game Code, on November 1, 2019, Commission staff transmitted the petition to the CDFW for review pursuant to Section 2073.5 of said code. After reviewing the Petition and other relevant information, CDFW determined that the Petition provides sufficient information to indicate that the petitioned action may be warranted for western Joshua tree and CDFW recommended that the Commission accept the Petition for further consideration under CESA.

The Commission has the authority to list certain “species” or “subspecies” as threatened or endangered under CESA (California Fish and Game Code Sections 2062, 2067, and 2070). The listing process is the same for species and subspecies (California Fish and Game Code Sections 2070–2079.1). CESA sets forth a two-step process for listing a species as threatened or endangered. First, the Commission determines whether to designate a species as a candidate for listing by evaluating whether the petition provides “sufficient information to indicate that the petitioned action may be warranted” (California Fish and Game Code Section 2074.2[e][2]). If the petition is accepted for consideration, the second step requires CDFW to produce, within 12 months of the Commission’s acceptance of the petition, a peer reviewed report based upon the best scientific information available that indicates whether the petitioned action is warranted (California Fish and Game Code Section 2074.6). Finally, the Commission, based on that report and other information in the administrative record, determines whether the petitioned action to list the species as threatened or endangered is warranted (California Fish and Game Code Section 2075.5). A petition to list a species under CESA must include “information regarding the population trend, range, distribution, abundance, and life history of a species, the factors affecting the ability of the population to survive and reproduce, the degree and immediacy of the threat, the impact of existing management efforts, suggestions for future management, and the availability and sources of information. The petition shall also include information regarding the kind of habitat

necessary for species survival, a detailed distribution map, and any other factors that the petitioner deems relevant" (California Fish and Game Code Section 2072.3; see also 14 CCR 670.1[d][1]). The range of a species for CDFW's petition evaluation and recommendation is the species' California range (*California Forestry Association v. California Fish and Game Commission* [2007] 156 Cal.App.4th 1535, 1551).

CDFW must evaluate the petition on its face and in relation to other relevant information and submit to the Commission a written evaluation report with one of the following recommendations:

- Based upon the information contained in the petition, there is not sufficient information to indicate that the petitioned action may be warranted, and the petition should be rejected; or
- Based upon the information contained in the petition, there is sufficient information to indicate that the petitioned action may be warranted, and the petition should be accepted and considered.

CDFW's candidacy recommendation to the Commission is based on an evaluation of whether the petition provides sufficient scientific information relevant to the petition components set forth in California Fish and Game Code Section 2072.3 and the California Code of Regulations, Title 14, Section 670.1(d)(1).

At its June 2020 meeting, after conversations with the petitioner and other stakeholders, the Commission continued to its August 2020 meeting the consideration and potential action on the petition to determine whether listing western Joshua tree under the CESA may be warranted. The item was heard at the August 2020 Commission hearing, but once again continued to the September 2020 hearing. On September 22, 2020, the Commission approved the petition to accept the candidacy proposal for western Joshua tree, effective October 9, 2020. Western Joshua tree was made a candidate under CESA to determine whether the species should become listed. At that point, a second recommendation and vote will confer or deny final protection under the law. When a plant or wildlife species is granted candidacy under the CESA, the species is given the same protection as a threatened or endangered species while the Commission evaluates whether formal listing as threatened or endangered under the CESA is warranted.

3 Joshua Tree Survey

3.1 Joshua Tree Survey Methods

Per the City's Protected Plants policy, Dudek's International Society of Arboriculture (ISA)-certified arborists performed a Joshua tree survey to inventory and evaluate the health and relocation potential for each Joshua tree located on and within 186 feet of the proposed project site. The survey encompassed the entire proposed project site (Appendix A, Joshua Tree Locations). The inventory was conducted by ISA-certified arborists Katrina Burritt and Nate Faris and field assistant Kalie Ortiz on May 20, 2022, and by ISA-certified arborists Aida Castro and Sarah Tian on October 18, 2022. During the inventory, the GPS position of each Joshua tree found on site was recorded. Furthermore, the following attributes of each tree were collected:

- Species
- Diameter at standard height (4.5 feet above ground level)
- Height (feet)
- Spread (feet)
- Health (excellent, good, fair, poor, critical, and dead)[2]
- Number of branches
- Clonal status (clone or single trunk)

In addition to the general Joshua tree attributes that were collected, per the CDFW, Dudek collected the following phenological data for each Joshua tree found on-site1:

- Number of Panicles
- New Growth
- Leaves
- Flowers
- Open flowers
- Presence of fruit
- Fruit drop

[2] **Health Rating Descriptions:**
Excellent. Tree has excellent health and strong vigor. No damage. Flowering and fruiting expected. Typically, only given to large, high-quality specimens (taller than 15 feet in height). Transplanting generally not recommended due to size.
Good. Tree has good health and vigor. All branches are alive and healthy. Damage is very localized and minimal. Flowering and fruiting likely if tree is large enough. Tree is transplantable.
Fair. Tree health is average. Some stressors or damage possible, but any damage is minimal to moderate (e.g., rodent grazing, insect damage). No dead/broken branches. Tree is transplantable.
Poor. Tree is under stress, and overall health is in decline, or tree has taken significant damage. Mortality likely unless stressors relieved and/or conditions change. Broken/dead limbs likely present. Tree is generally not transplantable.
Critical. Tree is in extreme decline. One or more branches dead. One or more branches dying. Physical damage likely present. Damage is significant and extensive. Mortality expected within 2 to 4 years. Tree is not transplantable.
Dead. Tree is dead.

All inventoried and assessed protected trees were tagged with an aluminum tag bearing a unique identification number, which was placed on the main trunk on the north side of each Joshua tree. Tagging on the north side allows for proper orientation during relocation (each relocated Joshua tree will need to be oriented in the same direction as it was in its original location).

3.2 Joshua Tree Survey Findings

Dudek's arborists recorded 578 Joshua trees within and adjacent (within 186 feet) to the limits of the proposed project site plan (including off-site improvements), as presented in Appendix B, Tree Information Matrix. In total, 97 Joshua trees are located within the project site and an additional 481 trees are located within 186 feet of the project site. Trees in the tree survey area vary in size and stature according to age and location. In total, 435 single/multi-trunk Joshua trees and 143 clonal (those trees within six feet of an individual) were mapped throughout the proposed project site. Stem diameter for single and clonal trees range from 1 to 24 inches. Tree heights vary from 1 foot for younger trees to 20 feet for mature Joshua trees. Tree crown extents range from 1 foot to nearly 20 feet at their widest location for single stemmed trees. The total number of branches on the Joshua trees range from 0 (single trunk) to 38 for mature trees.

The health of the Joshua trees varies across the site, and ranges from poor to good. In total, 193 trees (33.4%) exhibit good health, 349 trees (60.4%) exhibit fair health, 31 trees (5.4%) exhibit poor health, and 5 trees (0.9%) are nearly dead. In addition to the general tree and health characteristics, Dudek collected baseline phenological data for each tree. In total, 167 trees were observed to have panicles, and the number of panicles observed on each tree ranged from 1 to 90. New growth and leaves were observed on 220 trees. Flowers were observed on 6 trees, with all 6 of those exhibiting open flowers. Lastly, fruit was observed on 14 trees, and fruit drop was observed on 90 trees. Individual attributes of each tree are presented in Appendix B and representative photographs are presented in Appendix C, Site Photographs.

3.3 Project Impacts – Joshua Trees

There is wide variation in tolerance to construction impacts among tree species, and the response of an individual tree to impacts also varies with age and condition. Impacts assessed for the proposed project include those trees with protected zones within 20 feet of proposed improvements and identified disturbance areas (as defined in the proposed project site plan). The impact discussion in this section identifies all impacts to protected Joshua trees that are anticipated to occur based on an evaluation of tree locations compared with the proposed project site plan. Trees identified for retention and removal are graphically presented in Appendix D, Tree Impacts.

Based on grading and development plans for the proposed project, it is estimated that 97 trees (16.8%) will require removal to accommodate the proposed project. The proposed project would preserve the remaining 481 trees (83.2%) that would remain in place. Table 1 summarizes impact determinations for Joshua trees within the tree survey area that are subject to regulation under Section 16.24.060, Plot Plan Requirements, of the HMC.

Table 1. Summary of Protected Tree Impact Determinations

Health	Impact Determination		Total (number)
	Removal (number)	No Impact (number)	
Good	63	130	193
Fair	31	318	349
Poor	3	28	31
Critical	0	5	5
Dead	0	0	0
Total	**97**	**481**	**578**

INTENTIONALLY LEFT BLANK

4 City of Hesperia Requirements

4.1 Plot Plan Requirements

Section 16.24.060 of the HMC states the following:

> Prior to the issuance of a native tree or plant removal permit in conjunction with a development permit and/or approval of a land use application which authorizes such removal, a plot plan or grading plan shall be approved by the appropriate City review authority for each site indicating exactly which trees or plants are authorized to be removed. The required information can be added to any other required site plan. Prior to issuance of development permits in areas with native trees or plants that are subject to the provisions of this chapter, a preconstruction inspection shall be conducted by the appropriate authority. Such preconstruction inspections may be combined with any other required inspection.

As such, Appendix D details the post-construction status of each mapped and evaluated Joshua tree found on the proposed project site.

4.2 Relocation and Protection Trees

Per Section 16.24.060 of the HMC, each tree was evaluated for its relocation potential. Due to the low success rate of mature Joshua tree relocation, only single-stemmed trees in good health and structure and less than 15 feet in height were selected. Based on project-related impacts, 97 Joshua trees would be directly impacted by the proposed project. Of the 97 direct impacts, 40 Joshua trees meet the defined criteria for improved likelihood of post-transplant success. As such, per the city ordinance relocation and/or mitigation is required for the 40 trees meeting the minimum requirements for relocation. Based upon a review of the project site plans, the project site can accommodate all 40 relocatable Joshua trees. However, should it be found that all of the transplantable trees cannot be accommodated on site, any remaining trees, shall be entered into an adoption program as described in Section 2.1.1 of this report (HMC 16.24).

Furthermore, based on the impact analysis, 481 Joshua trees would not be directly impacted by the proposed project. Of the 481 trees that would not be impacted, it is recommended that trees immediately adjacent to the project foot print, that will not be removed, be protected in place in accordance with the tree protection measures identified in this Joshua Tree Plan. The locations of the 40 Joshua trees recommended for relocation and 481 preservation are shown in Appendix D.

4.3 Relocation Specifications

The following sections identify the designated storage and relocation locations for the proposed transplanted/ salvaged trees. Details and specifications for the Joshua tree relocation, storage, and care in the post development landscape are also provided in this section.

4.3.1 Salvage

Joshua trees have fragile, shallow root systems that are easily damaged during the salvaging and relocation process. During the excavation of the rootball, it is important that as much of the existing root structure as possible be captured, so that an intact rootball is maintained during the salvaging and relocation process. The following sections include recommendations to help increase the chances of successful salvage/relocation.

4.3.2 Contractor

Joshua tree salvage and relocation shall be completed by an experienced Joshua tree relocation specialist.

4.3.3 Pre-Salvage Meeting

Prior to initiating Joshua tree salvage, all contractors involved in the salvage project shall attend a site meeting with the project arborist. The project arborist shall provide the contractor(s) with a copy of the Joshua Tree Plan and shall review all relevant components of the Joshua Tree Plan.

4.3.4 Salvage Timing

To increase the chances of a successful relocation, it is recommended that the trees be relocated from October through February. To increase Joshua tree survivability, the trees should not be dug out and/or salvaged in warmer months (April through September). However, should project limitations and timing require an earlier start date than the recommended October through February salvage period, it is recommended that the salvaged trees be stored in a temporary, on-site, location per the recommendations in Section 4.2, Storage.

4.3.5 Pre-Irrigation

Prior to Joshua tree digging, each identified Joshua tree relocation candidate shall be pre-watered. Specifically, each tree shall be pre-watered 24 hours prior to relocation. Pre-watering shall thoroughly soak the rootball of each tree.

4.3.6 Equipment Sanitization

Equipment shall be sterilized prior to digging up and transplanting each tree. Equipment sterilization will reduce the likelihood of pathogens being passed from tree to tree.

4.3.7 Joshua Tree Digging

Tree relocation is best completed through the use of machinery. A front-end loader or hydraulic tree spade is recommended. The hydraulic tree spade may be best used in instances where the soil type is sandy or silty. However, hand-digging of smaller Joshua trees (1 to 2 feet in height) is acceptable. The goal of relocation is to maintain a high root-to-shoot ratio. Joshua tree excavation shall capture as much of the rootball as possible; however, due to the trees' shallow root systems, holes do not need to be deep. In general, the digging holes may range from 12 to 18 inches in depth for smaller trees (1 to 2 feet tall) to 24 to 36 inches deep for larger trees. The entire rootball shall be removed intact, if possible.

4.3.8 Root Maintenance

All attempts shall be made to minimize exposure of the rootball to air; exposed roots shall be kept wet at all times during the relocation process. Damaged and exposed roots shall be cleaned and dusted with sulfur or a fungicide to decrease the likelihood of root pathogens.

4.4 Storage

All 40 Joshua trees recommended for relocation shall be transplanted to locations throughout the project site. All 40 trees will be stored within a temporary storage location approved by a qualified arborist. The temporary storage location will be based on the development schedule. The storage location will be determined at a later date once the final schedule is confirmed. Trees requiring storage or stockpiling in the short term (i.e., 1 to 4 weeks), will adhere to the storage recommendation provided in the following section.

4.4.1 Storage

Trees stockpiled for longer than two weeks shall be temporarily stored in shallow ditches, backfilled with native soils, and tamped down. The shallow ditches shall be dug prior to tree relocation, and the final depth shall be comparable to the depth at which each Joshua tree is dug. Temporary storage trench depths shall be approximately 12 to 24 inches deep, depending on the size of the trees' rootballs. The trench widths shall be 1 foot larger than the rootball of the trees and long enough to accommodate the trees, with enough room for equipment between each tree. Multiple trenches may be required to accommodate all salvaged trees.

4.4.2 Storage Direction

During storage all trees shall be oriented in the same direction that they were prior to removal. Each Joshua tree is tagged on its northern side and shall be reoriented with the tagged side facing north. Prior to tree relocation, each tag shall be inspected to ensure that it securely attached to the tree.

4.4.3 Stabilization

Larger plants, over 5 feet tall, may require stabilization until the roots have had the opportunity to become reestablished. To support larger trees, guy-wire staking may be necessary. Guywires shall be connected to the ground (i.e., preferably via a "dead-man" anchor below grade) and attached to the trunk or limbs with an expandable, non-abrasive connector. Multiple guywires may be required (i.e., recommended three equally spaced around the rootball for stability). Trees requiring stabilization are identified in Appendix B.

4.4.4 Irrigation

Stored trees shall be watered 1 to 2 times per week during the storage period to ensure tree health and increase relocation success. During the storage period, the trees shall be watered by hand or by temporary irrigation. Should temporary irrigation be installed, the use of drip emitters is recommended. Irrigation emitters shall be spaced according to the watering zone specified for each tree. The watering zone for each tree is identified in Appendix B. The total amount of water required for each tree will be dependent on the season and tree size. Irrigation needs may range from 2 to 20 gallons per watering cycle and will be dependent on ambient daytime temperatures and

rainfall totals. Additionally, persistent wet soil will cause mildew and root rot. As such, soil moisture levels should be routinely checked at the time of watering and allowed to dry out between watering cycles. The irrigation schedule should be adjusted to meet the conditions described above.

4.4.5 Duration

Trees shall not be stockpiled or stored for longer than 45 days.

4.4.6 Summer Salvage: Temporary Shade Structure

Per Section 4.1.3, Salvage Timing, should project limitations and timing require an earlier start date than the recommended October through February salvage period, it is recommended that the salvaged trees be stored as described in Section 4.1, Salvage. Furthermore, to reduce tree stress, and reduce the risk of post-transplant mortality it is recommended that the salvaged trees be stored underneath a temporary shade structure. The temporary shade structure should be sufficient in size to cover the salvaged trees and provide protection from the direct heat of the summer sun. The shade structure shall utilize a minimum 30% shade cloth to shade the trees during the warmer months. The shade structure should be attached to galvanized, steel, structural poles (or similar) to ensure the shade structure is structurally stable. It is recommended that the shade structures be installed per the manufacturer's recommendations. Due to the potential for high winds, it is recommended that the shade be attached to the ground using diagonal dead man cable supports as well as the concrete post footings. The shade structure shall be of adequate height to cover the trees. For trees that are greater than 10 feet in height (8 trees), individual shade structures may be established for each tree. The remaining trees, under 10 feet in height may be stored under a contiguous structure. In addition to the temporary shade structure, all salvaged trees shall be relocated and maintained per the recommendations specified throughout Joshua Tree Preservation, Protection, and Relocation Plan for the Project.

4.5 Transplant Planting

All 40 salvaged Joshua trees should be relocated into the post construction landscape. The 40 final planting locations will be finalized once the final landscape plan has been developed and approved. However, should it be found that all of the transplantable trees cannot be accommodated on site, any remaining trees, shall be entered into an adoption program as described in Section 2.1.1 of this report. The following sections detail transplanting guidelines for the salvaged Joshua trees.

4.5.1 Site Preparation

Prior to transplantation each receiver location shall be dug. The locations of the receiver sites are presented in Appendix E. Prior to digging, the sites shall be flagged for identification by the project arborist or registered botanist. In general, the digging hole may range from 12 to 18 inches in depth for smaller trees (1 to 2 feet tall) to 24 to 36 inches deep for larger trees. The width of the hole shall be approximately 1 foot larger than the rootball of the transplanted tree. Holes may require additional digging prior to Joshua tree installation.

4.5.2 Pre-Watering

A water and root hormone mixture shall be prepared prior to transplanting the trees. The mixture shall be composed of vitamin B1, which is commonly sold by nurseries. The mixture shall be mixed per the manufacturer's directions, which is typically 1:250 (B1-to-water ratio). The receiving hole shall be filled with the diluted mixture of rooting hormone and water and allowed to drain prior to placing the tree in the hole.

4.5.3 Planting Direction

Proper orientation of the relocated trees is important to the success of the salvaged trees. Improper planting can result in sunburn and growth distortion. As such, the north side of each tree shall be clearly marked/tagged prior to digging, and each tree shall be replanted (and stored) in the same orientation as it was in prior to removal.

4.5.4 Planting

Prior to final installation, the hole size shall be inspected by the project arborist to ensure that the planting hole is at minimum 1 foot wider than the rootball and is neither too deep nor too shallow. The hole may require minor adjustments prior to installation. The depth of the hole must be less than the height of the root ball. If the hole was inadvertently dug too deep, soil shall be added and compacted by hand or foot. Breaking up compacted soil in a large area around the tree (outside the drip line of the tree) provides the newly emerging roots room to expand into loose soil. This will hasten root growth, translating into quicker establishment. Once the size of the hole is finalized, the tree shall be lowered into the hole in the proper orientation, backfilled with native soil, and watered again. Following backfilling and placement, the rootball shall be tamped down into the hole to eliminate water pockets.

Following planting, a water basin shall be installed approximately 1 foot outside of the pre-determined watering zone. The watering basin shall be approximately 3 to 4 inches in height and shall surround the tree. The basin shall be left intact throughout the establishment period.

4.5.5 Post-Transplant Stabilization

Larger plants, over 5 feet tall, may require stabilization until the roots have had the opportunity to become reestablished. To support larger trees, guy-wire staking may be necessary. Guywires shall be connected to the ground (i.e., preferably via a "dead-man" anchor below grade) and attached to the trunk or limbs with an expandable, non-abrasive connector. Multiple guywires may be required (i.e., recommended three equally spaced around the rootball for stability). Guywires shall be removed once the tree is determined to be established by the project arborist. Trees requiring stabilization are identified in Appendix B.

4.6 Post-Relocation Care

4.6.1 Irrigation

Trees that have been relocated to their final planting location shall be watered 1 to 2 times per week for an initial 2 to 3 months, depending on the season, rainfall totals, tree size, and watering zone size. Irrigation shall be adjusted seasonally, with a goal of removing the transplanted trees from supplemental irrigation after 2 years have passed

and growth has resumed. The total amount of water required for each tree will be dependent on the season and tree size. Persistent wet soil will cause mildew and root rot. As such, soil moisture levels shall be routinely checked at the time of watering, and the soil shall be allowed to drain and dry out between watering cycles. Watering shall be accomplished by hand or by a temporary irrigation system. During irrigation, the tree basin shall be filled and allowed to fully drain. Irrigation needs may range from 2 to 20 gallons per watering. The watering cycle shall be adjusted based on tree health and season. The watering zone for each tree (distance from the trunk) is defined for each tree in Appendix B.

4.6.2 Stabilization

Trees that have been stabilized shall be routinely inspected by the project arborist to ensure that the guywires and straps are not damaging the trees. The expandable, non-abrasive connectors shall be adjusted, as needed, to minimize damage to the trees. The guywires can be removed once the project arborist has determined that the trees have become established. In general, little to no movement should be observed on the rootball when the tree is gently pushed. Once the roots are well established, it is important to remove the tree stakes. This will encourage a natural strengthening of the tree trunk so it can support the weight of the branches as they begin grow and spread.

4.6.3 Fertilization

Post-transplantation fertilization is not required.

4.7 Monitoring and Reporting

Tree relocation, stockpiling, maintenance, and watering will be monitored by a certified arborist or registered botanist.

4.7.1 Monitoring

The city does not define a minimum post-transplantation monitoring period. However, an annual inspection and report for 4 years is recommended. As such, for the initial 3 months following transplantation, weekly monitoring by a certified arborist or registered botanist shall occur to ensure that the watering needs of each relocated tree are being met. Following the initial 3-month monitoring period, the relocated trees shall be monitored on a monthly basis for 9 months. Following the first year of monitoring, the trees shall be monitored quarterly (every 3 months) for 3 years to ensure tree establishment. Monitoring may be adjusted based on tree health and observations by the project arborist. The monitoring period will begin once all 40 (or those that can be accommodated onsite) trees have been installed.

4.7.2 Reporting

Annual reports shall be prepared at the end of each calendar year to document the status of the transplantation program and the health/survivability of the relocated trees. Reports of all monitoring shall be submitted to the City. Monitoring will track the location, health, and status of each transplanted Joshua tree. The monitoring arborist or registered botanist shall include recommendations for maintenance and irrigation, should they be needed.

4.8 Transplantation Success Criteria

The city does not define a minimum success ratio for transplanted Joshua trees. Due to the low relocation success rate of Joshua trees, the transplantation program would be considered successful if after four growing seasons (4 years)—including two growing seasons with supplemental irrigation and two without—the transplanted trees maintain a minimum of 70% survivability. As such, based on 40 potential relocation trees, the relocation plan would be considered successful should 28 Joshua trees survive past the 4-year threshold. Should the surviving number of trees drop below 70%, it is recommended that trees be obtained from a local adoption program or from a local nursery to meet the 4-year, 70% threshold. It should be noted that the city may define an alternative minimum success criteria threshold.

INTENTIONALLY LEFT BLANK

5 California Department of Fish and Wildlife Mitigation

The following section details the proposed mitigation program described within the Incidental Take Permit Application for the Kiss Industrial Project (Item No. 9).

5.1 Proposed Measures to Minimize and Fully Mitigate the Impacts of the Proposed Taking

Conservation efforts for western Joshua tree should focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the project site.

Mitigation efforts should contribute to the conservation of large, interconnected Joshua tree woodlands. Larger preserves have several advantages over multiple smaller preserves, even if the total area preserved is the same. Larger preserves have a greater chance of preserving habitat diversity at all scales, supporting larger local populations, helping maintain functioning metapopulations (partially isolated subpopulations of the same species that support immigration and emigration and provide for recolonization following local extirpations), and supporting greater species genetic diversity, and are more likely to maintain intact watershed functions. Larger preserves also have less habitat fragmentation and provide greater protection from edge effects due to a larger area-to-perimeter ratio compared to smaller preserves. Additionally, large preserves usually facilitate more cost-effective land management.

Natural land covers preserved as habitat linkages connect larger habitat tracts that would otherwise be isolated to movement of wildlife and movement of plant species pollinators between preserves (i.e., movement corridors). Movement corridors should be as wide, continuous, natural, and vegetatively diverse as possible to accommodate as many species as possible and protect against adverse edge effects. Some smaller, less-mobile species may actually reside within a linkage, and larger and/or more mobile species may only use each linkage as a movement corridor.

Species populations with larger numbers of individuals are known to be more stable in the long term, less vulnerable to adverse demographic effects caused by environmental stochasticity (probabilistic events such as floods, fires, and disease), and less vulnerable to extirpation (extermination) compared to smaller populations. Larger populations tend to possess higher genetic diversity, which can reduce the chance of genetic bottlenecks, genetic drift, and inbreeding depression. Larger populations better cope with and/or adapt to changing environmental conditions and local stochastic effects due to their greater number of individuals and likely greater genetic heterogeneity.

Mitigation for Direct Impacts

Mitigation for direct impacts to western Joshua trees will be fulfilled through conservation of western Joshua trees at a 1:1 habitat replacement of equal or better functions and values to those impacted by the project. Mitigation can be through purchases of credits at a California Department of Fish and Wildlife-approved mitigation bank for western Joshua tree or through conservation lands that meet the functions and values criteria. If mitigation is not purchased through a mitigation bank and lands are conserved separately, a cost estimate will be prepared to estimate the initial start-up costs, and ongoing annual costs, of management activities for the management of the

conservation easement(s) area in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a project-specific Property Analysis Record (PAR) to calculate the costs of in perpetuity land management. The PAR will consider all of the management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

Furthermore, the ITP states that western Joshua trees will be relocated and planted on site, as feasible. Additional details related to CDFW requirements can be found within the proposed mitigation program described within the ITP Application for the Kiss Industrial Project.

6 Tree Protection

For Joshua trees that do not require relocation, the following measures are recommended to protect the remaining Joshua trees so that they have protected zones (crown/canopy width plus 6 feet) around each tree within and immediately adjacent to (within 25 feet of) all active construction areas. For protected trees on site that remain within undisturbed areas, similar tree protection measures are recommended to ensure against potential inadvertent disturbance.

6.1 Tree Protection Measures prior to Construction

Fencing: Orange polyethylene construction fencing, no less than 4 feet in height, with tree protection signs, shall be erected around all undisturbed trees (or tree groups). The protective fencing shall be installed at the protected zone boundary of each tree (or tree group), which is defined as 6 feet beyond the tree crown/canopy dripline. The intent of protective fencing is to prevent root damage and/or compaction of the soil by grading equipment. An ISA-certified arborist may be required on site if grading activities occur within a tree's protected zone. Fencing shall be secured to 6-foot-tall, heavy-gauge T-bar posts pounded into the ground a minimum of 18 inches and spaced a minimum of 8 feet on center. Fencing shall be attached to the T-bar posts, with minimum 14-gauge wire fastened to the top, middle, and bottom of each post. Tree protection signs shall be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities in the vicinity of the protected tree(s) are complete.

Pre-Construction Meeting: A pre-construction meeting shall be held between all contractors (including grading, tree removal/pruning, and builders) and an ISA-certified arborist or registered botanist. The meeting shall focus on instructing the contractors on tree protection practices and on answering any questions. All equipment operators and spotters, assistants, and those directing operators from the ground shall provide written acknowledgment of having received tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish these tasks.

6.2 Protection and Maintenance during Construction

Once construction activities have begun, the following protection measures shall be followed:

Equipment Operation and Storage: Contractors shall avoid heavy equipment operation around protected trees. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and consequently reduces water penetration into the soil. All heavy equipment and vehicles shall, at minimum, stay out of the fenced protected tree zone except where specifically approved in writing and under the supervision of a certified arborist or registered botanist.

Materials Storage and Disposal: Contractors shall not store or discard any supplies or materials, including paint, lumber, and concrete overflow, within the protected zone, and shall remove all foreign debris within the protected zone. However, the contractors shall leave the duff, mulch, chips, and other organic material around the retained trees for water retention and nutrient supply. In addition, the contractors shall avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline; diesel; oils; hydraulic, brake, and transmission fluids;

paint; paint thinners; and glycol (anti-freeze) shall be disposed of properly. Contractors shall ensure that equipment is parked at outside of the protected zone to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the trees could result in tree decline and mortality.

Grade Changes: Contractors shall ensure that grade changes, including adding fill, are not permitted within the protected zone without special written authorization and under supervision by an ISA-certified arborist or registered botanist. Lowering the grade within the protected zone would necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the trees. Adding soil, even temporarily, on top of the existing grade would compact the soil further and decrease water and air availability to the tree roots. Contractors shall ensure that grade changes made outside of the protected tree zone will not create conditions that allow water to pond at the base of the tree. Water trapped at the base of a tree could lead to root rot and other detrimental tree impacts.

Moving Construction Materials: Contractors shall ensure that care is exercised when moving construction equipment and supplies near undisturbed Joshua trees, especially overhead. Contractors shall ensure that damage to the trees is avoided when transporting or moving construction materials and working around trees (even outside of the fenced protected zone). Contractors shall flag aboveground tree parts that could be damaged (e.g., low limbs, scaffold branches, and trunks) with high-visibility flagging, such as fluorescent red or orange flagging.

Trenching: Except where specifically approved in writing beforehand, all trenching shall be outside the fenced protected zone. Where trenching is necessary in areas that contain roots from retained trees, contractors shall use trenching techniques that include the use of either a root pruner (Dosko root pruner or equivalent) or an Air-Spade to limit root impacts. An ISA-certified arborist or registered botanist shall ensure that all pruning cuts are clean and sharp to minimize ripping, tearing, and fracturing of the root system. Root damage caused by backhoes, earthmovers, dozers, or graders is severe and may result in tree mortality. Use of root-pruning and Air-Spade equipment shall be accompanied only by hand removal of soil from trench locations. The trench shall be made no deeper than necessary to accommodate the intended materials.

Irrigation/Hand Watering: Irrigation/hand watering of retained Joshua trees on site shall seek to mimic natural rainfall patterns in Southern California. As such, irrigation/hand watering is not required unless recommended by the monitoring ISA-certified arborist or registered botanist.

Inspection/Reporting: An ISA-certified arborist or registered botanist shall inspect the preserved trees adjacent to grading and construction activity on a monthly basis for the duration of the proposed project's construction period. A site observation report summarizing site conditions, observations, tree health, and recommendations for minimizing tree damage shall be submitted by the ISA-certified arborist or registered botanist following each inspection. Annual monitoring reports to document year-end conditions shall also be submitted.

6.3 Maintenance after Construction

Following completion of the construction activity within 20 feet of the protected zones of undisturbed Joshua trees,

the tree protection fencing may be removed, and the following measures may be performed to sustain and enhance the vigor of the trees:

Pruning: Regular pruning of the trees is not required.

Watering: The retained trees should not require regular irrigation/hand watering, other than during the 12 months following substantial root pruning, if applicable. Supplemental irrigation/hand watering for the retained trees that sustained root pruning and any newly planted trees may be necessary, especially in years with low winter rainfall.

Watering Adjacent Plant Material: All watering near retained Joshua trees and adjacent vegetation should mimic natural rainfall patterns. Supplemental irrigation of adjacent plant material should not be required.

Monitoring: For the initial 3 months, weekly monitoring by an ISA-certified arborist or registered botanist is recommended to ensure that the watering needs of each tree is being met. Following the initial 3-month monitoring period, it is recommended that the trees be monitored on a monthly basis for 9 months. Following the first year of monitoring, it is recommended that the trees be monitored quarterly (every 3 months) for 3 years. Following each monitoring visit, a site observation report summarizing site conditions, observations, tree health, and recommendations for promoting tree health should be submitted. Any tree mortality will be noted, and any tree dying during the monitoring period will be replaced with the same species as specified per City replacement standards.

INTENTIONALLY LEFT BLANK

7 Fees

Per HMC Section 16.24.080, where permits or reviews are required and they are not incorporated into other review or permit procedures, fees will be paid in accordance with the City's fee schedule.

INTENTIONALLY LEFT BLANK

8 Desert Native Plants

In addition to Joshua trees, the site contains other desert native plants that are protected by the City of Hesperia's Protected Plant Ordinance (City Ordinance Chapter 16.24 et seq.), the County of San Bernardino's Desert Native Plant Protection, and the state Desert Native Plants Act (i.e., Food and Agricultural Code 80001 et seq.). Plant species observed that would fall under the CDNPA include silver cholla (*Cylindropuntia echinocarpa*). The site also has the potential to support an additional seven special-status plants covered under CEQA and considered rare by California Native Plant Society (CNPS): Mojave milkweed (*Asclepias nyctaginifolia*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), Mojave monkeyflower (*Diplacus mohavensis*), Booth's evening-primrose (*Eremothera boothii* ssp. *boothii*), short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), Beaver Dam breadroot (*Pediomelum castoreum*), and Latimer's woodland-gilia (*Saltugilia latimeri*).

In accordance with the California Desert Native Plants Act and HMC Chapter 16.24.040 (Protected Plant Ordinance), a native plant removal permit must be obtained from the City of Hesperia prior to the removal of western honey mesquite. No further mitigation is required; however, permit conditions may require salvage or that the species be incorporated into the landscape plan of the project. Any approved land use application and/or development permit will be the permit for the removal of desert native plants once the city approves it.

INTENTIONALLY LEFT BLANK

9 References

City of Hesperia. 2020. Hesperia, California, Municipal Code: Chapter 16.24 – Protected Plants. Last updated January 24, 2020. https://library.municode.com/ca/hesperia/codes/code_of_ordinances?nodeId=TIT16DECO_CH16.24PRPL&showChanges=true.

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game. October 1986.

Sawyer, J. O., T. Keeler-Wolf, and J. Evens. 2009. *A Manual of California Vegetation*. 2nd edition. Sacramento, California: California Native Plant Society.

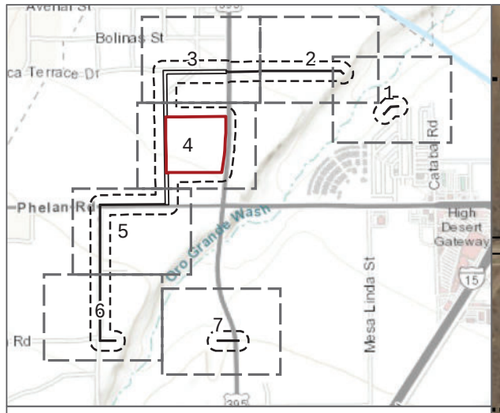
USDA (U.S. Department of Agriculture). 2022. "Web Soil Survey" USDA, Natural Resources Conservation Service. Accessed July 2022. http://websoilsurvey.nrcs.usda.gov/.

USGS (U.S. Geological Survey). 2007. Baldy Mesa, California, U.S. Geological Survey 7.5-Minute Topographic Quadrangle Map.

INTENTIONALLY LEFT BLANK

Appendix A

Joshua Tree Locations



On-Site Project Boundary

Off-Site Project Boundary

Joshua Tree Inventory Survey Area (186-ft Buffer)

Species

- *Yucca brevifolia*, Joshua

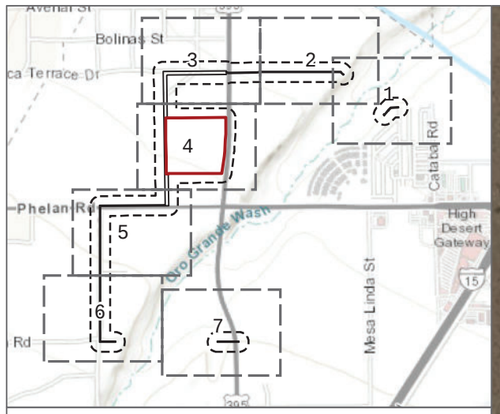
SOURCE: BING MAPPING SERVICE

DUDEK 0 90 180 Feet

APPENDIX A - VIEW 1

Joshua Tree Locations

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



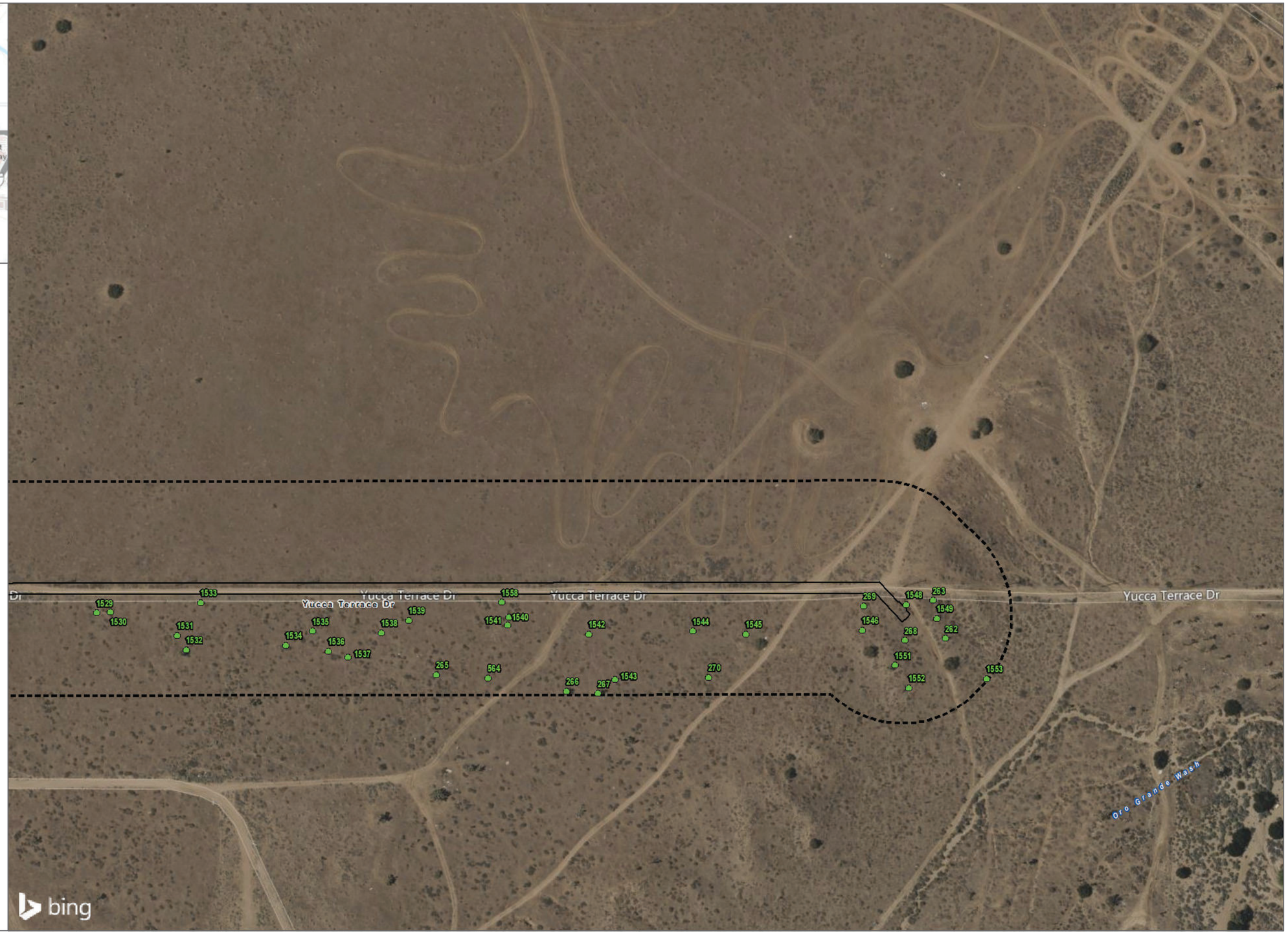
On-Site Project Boundary

Off-Site Project Boundary

Joshua Tree Inventory Survey Area (186-ft Buffer)

Species

- *Yucca brevifolia*, Joshua



SOURCE: BING MAPPING SERVICE

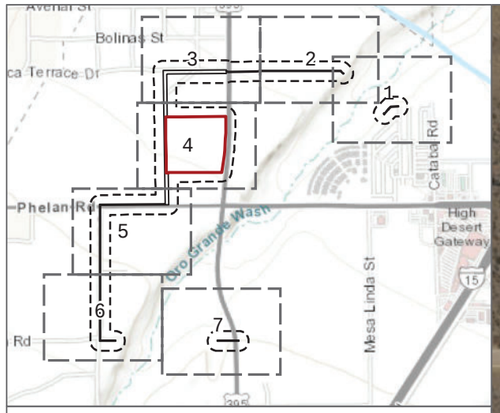
DUDEK

0 90 180 Feet

APPENDIX A - VIEW 2

Joshua Tree Locations

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



On-Site Project Boundary

Off-Site Project Boundary

Joshua Tree Inventory Survey Area (186-ft Buffer)

Species

- *Yucca brevifolia*, Joshua

SOURCE: BING MAPPING SERVICE

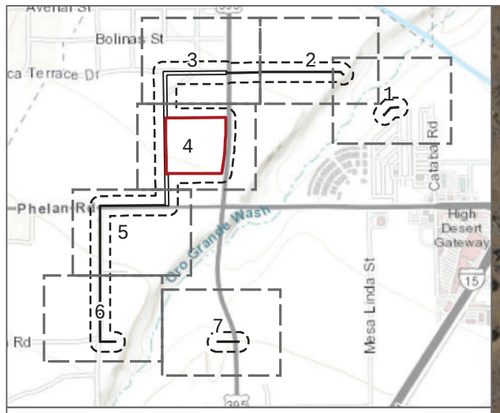
DUDEK

0 90 180 Feet

APPENDIX A - VIEW 3

Joshua Tree Locations

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



On-Site Project Boundary

Off-Site Project Boundary

Joshua Tree Inventory Survey Area (186-ft Buffer)

Species

- *Yucca brevifolia*, Joshua

US Highway 395

bing

SOURCE: BING MAPPING SERVICE

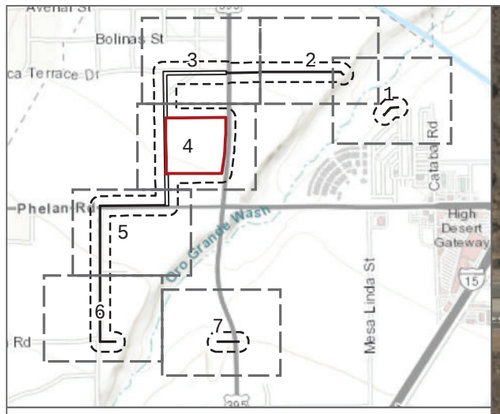
DUDEK

0 90 180 Feet

APPENDIX A - VIEW 4

Joshua Tree Locations

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



On-Site Project Boundary

Off-Site Project Boundary

Joshua Tree Inventory Survey Area (186-ft Buffer)

Species

- *Yucca brevifolia*, Joshua

SOURCE: BING MAPPING SERVICE

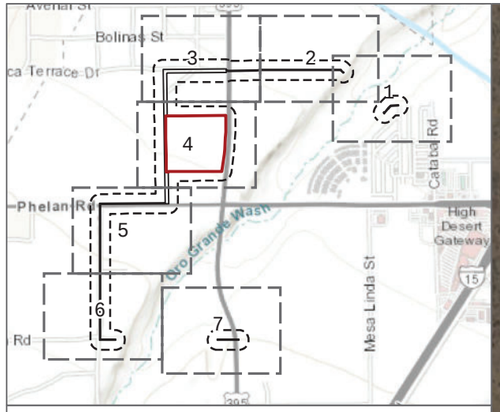
DUDEK

0 90 180 Feet

APPENDIX A - VIEW 5

Joshua Tree Locations

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



On-Site Project Boundary

Off-Site Project Boundary

Joshua Tree Inventory Survey Area (186-ft Buffer)

Species

- *Yucca brevifolia*, Joshua



SOURCE: BING MAPPING SERVICE

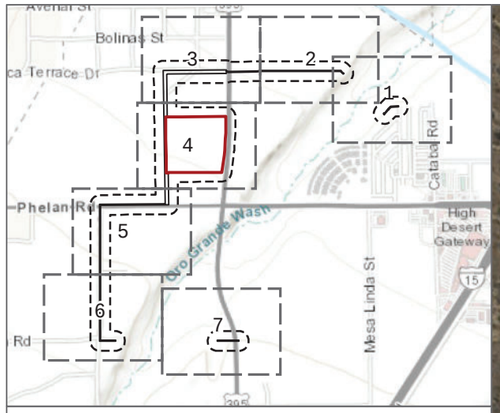
DUDEK

0 90 180 Feet

APPENDIX A - VIEW 6

Joshua Tree Locations

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



On-Site Project Boundary

Off-Site Project Boundary

Joshua Tree Inventory Survey Area (186-ft Buffer)

Species

- *Yucca brevifolia*, Joshua

SOURCE: BING MAPPING SERVICE

DUDEK

0 90 180 Feet

APPENDIX A - VIEW 7

Joshua Tree Locations

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project

Appendix B

Tree Information Matrix

Tree No.	Botanical Name	Common Name	Clonal	Clones	Stems	Individual Stem Diameters (in.)			Diameter (in.)	Branches	Height (ft.)	Crown width (ft.)	Health	Structure	Pannicles	New Growth	Leaves	Flowers	Open Flower	Fruit	Fruit Drop	Location	Disposition	Relocation Potential	X-Coordinate	Y-Coordinate
						D1	D2	D3																		
1	*Yucca brevifolia*	Joshua Tree	No	0	1	14	0	0	14	15	20	10	Fair (60)	80	10	Yes	Yes	No	No	No	Yes	On-Site Project Boundary	Direct	No	6741819.1711	1979519.7994
2	*Yucca brevifolia*	Joshua Tree	No	0	1	10	0	0	10	11	15	10	Good (80)	80	6	Yes	Yes	No	No	Yes	Yes	On-Site Project Boundary	Direct	Yes	6741680.7846	1979448.5210
3	*Yucca brevifolia*	Joshua Tree	No	0	2	6	6	0	8	8	10	5	Good (80)	80	2	Yes	Yes	No	No	No	Yes	On-Site Project Boundary	Direct	No	6741564.4105	1979365.5527
4	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6741551.9525	1979468.5364
5	*Yucca brevifolia*	Joshua Tree	No	0	1	8	0	0	8	5	10	5	Good (80)	80	4	Yes	Yes	No	No	No	Yes	On-Site Project Boundary	Direct	Yes	6741564.4482	1979497.8858
6	*Yucca brevifolia*	Joshua Tree	No	0	2	8	6	0	10	12	10	5	Good (80)	80	7	Yes	Yes	No	No	No	Yes	On-Site Project Boundary	Direct	No	6741526.4273	1979534.6085
7	*Yucca brevifolia*	Joshua Tree	No	0	1	8	0	0	8	8	10	5	Good (80)	80	5	Yes	Yes	No	No	No	Yes	On-Site Project Boundary	Direct	Yes	6741534.0782	1979534.0668
8	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	0	6	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6741525.4132	1979626.8288
9	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6741608.6098	1979602.0949
10	*Yucca brevifolia*	Joshua Tree	Clone	1	2	8	1	0	8	8	4	10	Good (80)	40	1	Yes	Yes	No	No	No	Yes	On-Site Project Boundary	Direct	No	6741630.0350	1979577.4683
11	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6741742.3097	1979704.4198
12	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6741714.3734	1979728.0300
13	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6741670.4194	1979809.1529
14	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6741616.6213	1979811.4655
17	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	2	8	2	Good (80)	80	1	Yes	Yes	No	No	No	Yes	On-Site Project Boundary	Direct	Yes	6741837.6520	1979827.0177
18	*Yucca brevifolia*	Joshua Tree	Clone	1	3	4	1	1	4	5	6	5	Good (80)	40	2	Yes	Yes	No	No	Yes	Yes	On-Site Project Boundary	Direct	No	6741845.4614	1979803.9006
19	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742576.1919	1979595.0221
20	*Yucca brevifolia*	Joshua Tree	Clone	1	1	12	0	0	12	25	12	10	Good (80)	80	10	Yes	Yes	No	No	Yes	Yes	On-Site Project Boundary	Direct	No	6742569.6165	1979462.2858
21	*Yucca brevifolia*	Joshua Tree	No	0	1	10	0	0	10	10	12	10	Good (80)	80	6	Yes	Yes	No	No	Yes	Yes	On-Site Project Boundary	Direct	Yes	6742618.4077	1979388.9601
22	*Yucca brevifolia*	Joshua Tree	No	0	2	10	10	0	14	23	12	10	Good (80)	80	6	Yes	Yes	No	No	Yes	Yes	On-Site Project Boundary	Direct	No	6742594.7594	1979337.5623
23	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742528.1047	1979348.1748
24	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	5	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742515.6408	1979353.7279
25	*Yucca brevifolia*	Joshua Tree	No	0	2	4	4	0	6	0	5	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6742416.3399	1979380.5766
26	*Yucca brevifolia*	Joshua Tree	Clone	1	2	1	1	0	1	0	2	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6742426.5718	1979381.3699
27	*Yucca brevifolia*	Joshua Tree	Clone	1	2	1	1	0	1	0	3	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6742418.0948	1979323.3402
28	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	3	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742389.8573	1979318.6365
29	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	3	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742350.3728	1979299.0778
30	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	5	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742419.2700	1979274.3872
31	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742376.8022	1979210.6633
32	*Yucca brevifolia*	Joshua Tree	Clone	1	2	1	1	0	1	0	5	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6742422.6144	1979205.8791
33	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	5	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742435.5990	1979200.9106
34	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742457.0675	1979172.6299
35	*Yucca brevifolia*	Joshua Tree	No	0	1	12	0	0	12	21	15	10	Good (80)	80	4	Yes	Yes	No	No	Yes	Yes	On-Site Project Boundary	Direct	Yes	6742479.6350	1979205.1944
36	*Yucca brevifolia*	Joshua Tree	No	0	1	12	0	0	12	26	15	10	Good (80)	80	14	Yes	Yes	No	No	Yes	Yes	On-Site Project Boundary	Direct	Yes	6742530.4341	1979222.0638
37	*Yucca brevifolia*	Joshua Tree	No	0	3	12	8	1	14	24	15	10	Good (80)	80	10	Yes	Yes	No	No	Yes	Yes	On-Site Project Boundary	Direct	No	6742474.0100	1979278.8518
38	*Yucca brevifolia*	Joshua Tree	Clone	1	1	1	0	0	1	0	5	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6742344.0972	1979138.3724
39	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	5	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742385.2828	1979124.7773
40	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742422.5288	1979112.4741
41	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	3	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742463.6252	1979123.1375
42	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	2	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742480.5376	1979113.7425
43	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	2	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742511.5733	1979118.4295
44	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	7	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742483.2488	1979086.8472
45	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	1	1	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742493.0438	1979067.7036
46	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	6	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742457.6505	1979058.6022
47	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742425.1299	1979072.6737
48	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742414.7431	1979073.9539
49	*Yucca brevifolia*	Joshua Tree	No	0	2	1	1	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6742407.1082	1979075.4493
50	*Yucca brevifolia*	Joshua Tree	Clone	1	1	1	0	0	1	0	6	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6742453.1262	1979019.9802
51	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	0	6	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742393.8986	1979003.4763
52	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	0	6	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742426.3201	1978934.0418
53	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	0	8	2	Good (80)	80	0	Yes	Yes	No	No	Yes	Yes	On-Site Project Boundary	Direct	Yes	6742489.8174	1978917.3472
54	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742484.8469	1978906.6839
55	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742291.9799	1978943.8206
56	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742304.4556	1978908.6268
57	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	7	2	Good (80)	80	0	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	Yes	6742293.0071	1978900.0717
58	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	11	12	5	Good (80)	80	0	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742252.8244	1978848.1436
59	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742257.2906	1978828.2208
60	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	5	2	Good (80)	80	0	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742294.4966	1978806.2034
61	*Yucca brevifolia*	Joshua Tree	Clone	1	2	1	1	0	1	0	4	2	Good (80)	80	0	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742370.2947	1978772.4879
62	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	0	6	2	Good (80)	80	0	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742383.5574	1978834.3546
63	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	2	2	Good (80)	80	0	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742447.5045	1978793.7491
64	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	2	2	Good (80)	80	0	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742496.0024	1978808.4912
65	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	0	6	2	Good (80)	80	0	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742500.7416	1978784.7891
66	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	4	8	2	Good (80)	80	0	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742469.3260	1978776.5394
67	*Yucca brevifolia*	Joshua Tree	Clone	1	3	1	1	1	2	0	4	2	Good (80)	80	0	Yes	yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742469.3942	1978762.9059
68	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	4	2	Good (80)	80	0	Yes	yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742543.9751	1978697.4546
69	*Yucca brevifolia*	Joshua Tree	No	0	2	4	1	0	4	3	8	2	Good (80)	80	1	Yes	yes	No	No	Yes	Yes	186-Ft Buffer	Preserve	N/A	6742526.3708	1978715.5045
70	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	3	2	Good (80)	80	0	Yes	yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742444.1384	1978737.0261
71	*Yucca brevifolia*	Joshua Tree	No	0	2	12	12	0	17	35	15	10	Good (80)	80	17	Yes	yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742428.1912	1978718.2144
72	*Yucca brevifolia*	Joshua Tree	Clone	1	1	6	0	0	6	2	8	5	Good (80)	80	0	Yes	yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742299.6042	1978766.0267
73	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	0	8	5	Good (80)	80	1	Yes	yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742333.4847	1978707.1321
76	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	4	10	5	Good (80)	80	1	Yes	yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742077.1926	1978691.9064
77	*Yucca brevifolia*	Joshua Tree	No	0	3	10	8	8	15	15	15	10	Good (80)	80	10	Yes	yes	No	No	Yes	Yes	186-Ft Buffer	Preserve	N/A	6742136.8486	1978750.3814
78	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	0	3	2	Good (80)	80	0	Yes	yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742142.2167	1978755.5401
79	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	2	6	2	Good (80)	80	0	Yes	yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741775.2020	1978820.6394
1504	*Yucca brevifolia*	Joshua Tree	No	0	1	13	0	0	13	12	12	10	Good (80)	40	8	Yes	yes	Yes	Yes	Yes	Yes	186-Ft Buffer	Preserve	N/A	6742765.3890	1979993.9671
1509	*Yucca brevifolia*	Joshua Tree	No	0	1	14	0	0	14	25	15	10	Good (80)	60	14	Yes	yes	Yes	Yes	Yes	Yes	186-Ft Buffer	Preserve	N/A	6742764.5974	1979887.2695
265	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	8	2	Fair (60)	80	1	Yes	Yes	Yes	No	No	No	186-Ft Buffer	Preserve	N/A	6744120.2902	1980723.8929
564	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	5	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6744214.7345	1980718.1636
266	*Yucca brevifolia*	Joshua Tree	No	0	1	22	0	0	22	12	20	15	Fair (60)	20	17	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6744358.8320	1980694.0317
267	*Yucca brevifolia*	Joshua Tree	No	0	1	16	0	0	16	21	20	12	Fair (60)	60	30	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6744416.9917	1980690.0387
270	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	4	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6744619.0534	1980719.8128
196	*Yucca brevifolia*	Joshua Tree	No	0	1	15	0	0	15	8	15	10	Fair (60)	40	10	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6741528.8550	1980652.0640
195	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	5	2	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741572.2142	1980588.5224
194	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	3	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741618.3950	1980600.7185
197	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	3	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741655.0705	1980632.8365
200	*Yucca brevifolia*	Joshua Tree	No	0	2	5	5	0	7	2	7	4	Good (80)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741670.4781	1980731.3611

Tree No.	Botanical Name	Common Name	Clonal	Clones	Stems	Individual Stem Diameters (in.)			Diameter (in.)	Branches	Height (ft.)	Crown width (ft.)	Health	Structure	Pannicles	New Growth	Leaves	Flowers	Open Flower	Fruit	Fruit Drop	Location	Disposition	Relocation Potential	X-Coordinate	Y-Coordinate
						D1	D2	D3																		
199	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	6	2	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741702.8134	1980679.7116
198	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	1	5	4	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741698.0823	1980659.0518
193	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	5	2	Fair (60)	80	1	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6741879.7231	1980681.6911
206	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	4	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742028.8117	1980660.4672
208	*Yucca brevifolia*	Joshua Tree	No	0	2	5	4	0	6	2	5	2	Good (80)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742117.8742	1980685.7276
210	*Yucca brevifolia*	Joshua Tree	No	0	2	6	5	0	8	2	4	4	Good (80)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742199.3845	1980697.5767
209	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	10	2	Fair (60)	60	2	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742136.2989	1980738.2670
209	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	4	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742202.1842	1980754.9334
215	*Yucca brevifolia*	Joshua Tree	Clone	2	10	13	12	10	20	38	20	25	Good (80)	60	62	Yes	Yes	Yes	Yes	No	Yes	186-Ft Buffer	Preserve	N/A	6742266.5068	1980663.2667
213	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	2	10	5	Good (80)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742209.7358	1980663.0061
211	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	3	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742223.5381	1980692.0862
217	*Yucca brevifolia*	Joshua Tree	Clone	1	3	13	11	10	20	11	12	10	Fair (60)	60	21	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742315.5519	1980674.0741
219	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	5	2	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742353.5296	1980686.2269
221	*Yucca brevifolia*	Joshua Tree	No	0	2	5	5	0	7	2	5	3	Fair (60)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742369.8055	1980714.6557
227	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	1	4	1	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742479.3975	1980758.0584
225	*Yucca brevifolia*	Joshua Tree	No	0	3	4	4	4	7	3	5	3	Fair (60)	60	3	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742552.3143	1980687.5289
223	*Yucca brevifolia*	Joshua Tree	Clone	1	3	4	4	3	6	3	4	4	Good (80)	80	3	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742492.4298	1980689.7347
254	*Yucca brevifolia*	Joshua Tree	No	0	5	14	10	9	19	12	10	10	Poor (40)	40	22	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742983.6842	1980684.5481
252	*Yucca brevifolia*	Joshua Tree	No	0	1	17	0	0	17	29	25	15	Poor (40)	60	30	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742948.0940	1980716.3190
256	*Yucca brevifolia*	Joshua Tree	No	0	4	16	12	9	22	5	8	10	Poor (40)	40	5	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6743106.9480	1980705.9023
258	*Yucca brevifolia*	Joshua Tree	No	0	3	7	2	1	7	3	10	3	Fair (60)	80	4	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6743186.8960	1980704.6435
561	*Yucca brevifolia*	Joshua Tree	No	0	1	10	0	0	10	4	15	5	Fair (60)	60	7	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6743283.2502	1980733.0726
262	*Yucca brevifolia*	Joshua Tree	Clone	2	2	10	0	0	10	3	8	5	Fair (60)	60	7	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6745053.9641	1980790.6895
259	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	10	2	Good (80)	80	3	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742957.7837	1981056.6012
255	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	8	2	Good (80)	80	1	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742834.6067	1981029.6482
257	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	8	2	Fair (60)	80	2	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742836.8204	1981058.0337
202	*Yucca brevifolia*	Joshua Tree	No	0	1	16	0	0	16	14	20	10	Fair (60)	60	20	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6741701.7508	1980957.8274
233	*Yucca brevifolia*	Joshua Tree	No	0	3	6	4	4	8	3	7	3	Good (80)	60	4	Yes	Yes	Yes	Yes	No	Yes	186-Ft Buffer	Preserve	N/A	6741627.0110	1978126.9721
230	*Yucca brevifolia*	Joshua Tree	Clone	2	2	8	9	0	12	2	8	5	Fair (60)	60	3	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6741619.9800	1978085.4359
235	*Yucca brevifolia*	Joshua Tree	Clone	2	2	9	3	0	9	3	12	4	Fair (60)	60	5	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6741590.9436	1978098.5867
232	*Yucca brevifolia*	Joshua Tree	Clone	1	2	8	8	0	11	2	8	4	Fair (60)	60	3	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741585.4748	1978075.8005
237	*Yucca brevifolia*	Joshua Tree	No	0	1	8	0	0	8	2	10	3	Good (80)	80	4	Yes	Yes	Yes	Yes	No	Yes	186-Ft Buffer	Preserve	N/A	6741543.0267	1978081.2691
234	*Yucca brevifolia*	Joshua Tree	Clone	1	5	5	5	4	8	5	5	4	Fair (60)	60	5	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741493.6776	1978082.9618
239	*Yucca brevifolia*	Joshua Tree	No	0	2	9	5	0	10	4	10	5	Fair (60)	60	7	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6741258.1309	1978085.0450
341	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	8	3	Good (80)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741225.7091	1978098.3264
243	*Yucca brevifolia*	Joshua Tree	No	0	1	7	0	0	7	2	10	2	Good (80)	80	2	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6741092.8966	1978086.8680
245	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	6	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741052.5318	1978102.3631
240	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	1	4	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741011.1257	1978077.8838
247	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	8	2	Fair (60)	60	1	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740932.2195	1978097.1547
242	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	3	2	Fair (60)	60	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740899.0164	1978059.3944
249	*Yucca brevifolia*	Joshua Tree	Clone	1	1	24	0	0	24	30	30	17	Poor (40)	40	90	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740630.5268	1978075.6701
248	*Yucca brevifolia*	Joshua Tree	Clone	2	5	6	6	3	9	5	7	4	Fair (60)	60	5	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740547.9747	1978085.6964
244	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	5	3	Fair (60)	80	2	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740582.2195	1978077.7534
251	*Yucca brevifolia*	Joshua Tree	No	0	2	4	2	0	4	2	6	2	Good (80)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740544.3289	1978052.1025
247	*Yucca brevifolia*	Joshua Tree	Clone	1	2	6	6	0	8	2	4	4	Poor (40)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740547.9749	1978116.5557
253	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	2	1	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740558.9121	1978042.9877
181	*Yucca brevifolia*	Joshua Tree	No	0	1	22	0	0	22	36	30	20	Fair (60)	40	75	No	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740352.0330	1977145.1799
180	*Yucca brevifolia*	Joshua Tree	No	0	1	20	0	0	20	15	20	25	Fair (60)	80	30	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740357.5015	1977047.3934
183	*Yucca brevifolia*	Joshua Tree	Clone	1	3	5	5	5	9	3	5	4	Good (80)	80	3	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740337.3104	1976835.3883
185	*Yucca brevifolia*	Joshua Tree	No	0	1	7	0	0	7	3	15	3	Fair (60)	60	5	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740348.5086	1976821.5861
184	*Yucca brevifolia*	Joshua Tree	No	0	1	9	0	0	9	1	8	4	Fair (60)	80	3	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740330.2794	1976818.7215
182	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	3	2	Fair (60)	80	3	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740324.5502	1976859.0861
184	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	4	2	Poor (40)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740354.7588	1976766.2477
187	*Yucca brevifolia*	Joshua Tree	No	0	1	7	0	0	7	2	10	4	Fair (60)	60	3	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740326.8939	1976487.8621
184	*Yucca brevifolia*	Joshua Tree	No	0	1	17	0	0	17	14	15	10	Fair (60)	80	30	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740332.1021	1976290.4661
188	*Yucca brevifolia*	Joshua Tree	No	0	1	7	0	0	7	1	8	2	Good (80)	60	2	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740317.7795	1976226.4038
186	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	6	2	Fair (60)	80	1	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740331.9719	1976252.7056
189	*Yucca brevifolia*	Joshua Tree	No	0	2	6	5	0	8	2	5	3	Good (80)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740357.8836	1976247.2371
145	*Yucca brevifolia*	Joshua Tree	No	0	1	7	0	0	7	2	8	4	Good (80)	60	3	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740306.0607	1975852.4453
146	*Yucca brevifolia*	Joshua Tree	No	0	1	8	0	0	8	1	7	3	Fair (60)	80	2	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740325.9825	1975818.3309
143	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	9	2	Fair (60)	60	2	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740319.2114	1975911.5598
149	*Yucca brevifolia*	Joshua Tree	No	0	1	10	0	0	10	4	15	10	Fair (60)	40	10	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740344.8626	1975728.8775
148	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	6	2	Fair (60)	60	1	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740318.0400	1975725.1016
150	*Yucca brevifolia*	Joshua Tree	No	0	3	0	0	0	0	3	4	4	Fair (60)	60	3	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740350.2012	1975740.9872
151	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	8	2	Fair (60)	80	1	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740343.9511	1975691.2473
152	*Yucca brevifolia*	Joshua Tree	Clone	1	3	13	13	10	21	7	10	10	Fair (60)	60	13	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740440.7281	1975689.3088
153	*Yucca brevifolia*	Joshua Tree	No	0	1	8	0	0	8	1	13	4	Fair (60)	80	4	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740459.8249	1975710.4893
155	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	10	2	Fair (60)	60	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740481.8736	1975695.9060
154	*Yucca brevifolia*	Joshua Tree	No	0	4	0	0	0	0	1	4	3	Fair (60)	60	4	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740495.9362	1975699.7254
157	*Yucca brevifolia*	Joshua Tree	No	0	2	4	4	0	6	2	3	2	Good (80)	60	3	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740521.4572	1975698.5103
159	*Yucca brevifolia*	Joshua Tree	Clone	2	5	14	12	9	21	18	15	15	Poor (40)	40	20	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740399.7125	1975449.5952
163	*Yucca brevifolia*	Joshua Tree	No	0	3	15	15	15	26	37	15	15	Fair (60)	60	70	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740371.8475	1975414.1785
158	*Yucca brevifolia*	Joshua Tree	Clone	2	2	12	20	0	23	24	20	15	Fair (60)	60	40	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740359.0871	1975398.8140
165	*Yucca brevifolia*	Joshua Tree	Clone	1	7	12	13	8	19	20	15	15	Fair (60)	40	75	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740301.7955	1975411.5744
156	*Yucca brevifolia*	Joshua Tree	Clone	3	18	14	18	9	25	21	15	20	Poor (40)	40	70	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740466.3789	1975348.2932
167	*Yucca brevifolia*	Joshua Tree	No	0	2	22	17	0	28	34	15	15	Fair (60)	60	44	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740248.0631	1975406.5397
160	*Yucca brevifolia*	Joshua Tree	No	0	1	14	0	0	14	15	25	10	Fair (60)	80	28	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740166.6393	1975371.2965
169	*Yucca brevifolia*	Joshua Tree	No	0	1	15	0	0	15	9	20	10	Good (80)	60	14	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740028.0543	1975425.9843
164	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	2	8	3	Fair (60)	60	3	Yes	Yes	No	No	Yes	Yes	186-Ft Buffer	Preserve	N/A	6739976.5350	1975787.5728
166	*Yucca brevifolia*	Joshua Tree	No	0	1	23	0	0	23	21	20	20	Fair (60)	60	46	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6739973.3321	1976360.8224
168	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	1	4	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6739978.3668	1976425.7533
171	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	5	1	Fair (60)	60	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6739978.7138	1976451.4476
173	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	10	2	Good (80)	60	1	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6739989.8251	1976496.7603
170	*Yucca brevifolia*	Joshua Tree	Clone	2	2	3	0	0	3	1	5	3	Fair (60)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6739986.1794	1977015.8574
175	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	6	1	Good (80)	80	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6739984.0959	1977139.1211
179	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	10	2	Good (80)	80	3	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6739971.4223	1977432.1767
135	*Yucca brevifolia*	Joshua Tree	No	0	1	7	0	0	7	1	6	2	Fair (60)	60	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742831.6325	1979699.9292

Tree No.	Botanical Name	Common Name	Clonal	Clones	Stems	Individual Stem Diameters (in.)			Diameter (in.)	Branches	Height (ft.)	Crown width (ft.)	Health	Structure	Pannicles	New Growth	Leaves	Flowers	Open Flower	Fruit	Fruit Drop	Location	Disposition	Relocation Potential	X-Coordinate	Y-Coordinate
						D1	D2	D3																		
274	*Yucca brevifolia*	Joshua Tree	Clone	3	3	16	2	2	16	24	25	15	Fair (60)	40	43	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6745746.7138	1980247.7216
273	*Yucca brevifolia*	Joshua Tree	No	0	1	20	0	0	20	24	20	15	Fair (60)	40	42	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6745844.2830	1980209.8742
274	*Yucca brevifolia*	Joshua Tree	No	0	1	14	0	0	14	10	15	10	Fair (60)	60	20	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6745834.9082	1980264.3883
271	*Yucca brevifolia*	Joshua Tree	No	0	1	14	0	0	14	20	20	12	Fair (60)	40	31	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6745898.1026	1980340.0825
272	*Yucca brevifolia*	Joshua Tree	No	0	1	15	0	0	15	17	20	15	Fair (60)	60	40	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6745940.4637	1980317.8605
137	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	1	5	2	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742407.5537	1975704.1887
138	*Yucca brevifolia*	Joshua Tree	No	0	1	6	0	0	6	1	4	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742399.7411	1975701.0637
136	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	7	2	Fair (60)	80	1	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742486.3731	1975730.2304
139	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	1	2	2	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742359.4997	1975632.7538
140	*Yucca brevifolia*	Joshua Tree	Clone	2	2	8	7	0	11	7	10	10	Fair (60)	60	15	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742349.0468	1975675.8897
141	*Yucca brevifolia*	Joshua Tree	No	0	1	8	0	0	8	3	9	6	Fair (60)	60	6	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742340.0188	1975562.1744
201	*Yucca brevifolia*	Joshua Tree	No	0	2	5	3	0	6	2	5	2	Good (80)	60	2	Yes	Yes	No	No	No	No	Off-Site Project Boundary	Direct	No	6741715.6095	1980829.1461
203	*Yucca brevifolia*	Joshua Tree	No	0	2	4	4	0	6	2	3	2	Fair (60)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741916.9261	1980828.4226
204	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	1	3	1	Good (80)	80	1	Yes	Yes	No	No	No	No	Off-Site Project Boundary	Direct	No	6741954.8336	1980843.2225
222	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	3	2	Fair (60)	80	1	No	No	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742241.5462	1980823.3888
231	*Yucca brevifolia*	Joshua Tree	No	0	2	0	0	0	0	1	1	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741427.4177	1978712.4474
205	*Yucca brevifolia*	Joshua Tree	No	0	2	5	3	0	6	2	10	3	Good (80)	80	2	Yes	Yes	No	No	No	No	Off-Site Project Boundary	Direct	No	6741888.7179	1980891.7235
224	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	2	1	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742103.4527	1980826.3364
220	*Yucca brevifolia*	Joshua Tree	No	0	2	0	0	0	0	1	1	2	Fair (60)	60	2	Yes	No	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742249.6811	1980814.5611
190	*Yucca brevifolia*	Joshua Tree	No	0	1	15	0	0	15	16	20	10	Fair (60)	60	26	Yes	Yes	No	No	No	Yes	Off-Site Project Boundary	Direct	No	6742423.7600	1980853.2043
216	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	4	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742387.8372	1980827.6609
218	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	3	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742315.8999	1980800.9280
212	*Yucca brevifolia*	Joshua Tree	No	0	1	15	0	0	15	30	20	15	Poor (40)	40	60	Yes	Yes	No	No	No	No	Off-Site Project Boundary	Direct	No	6742635.2920	1980854.5660
226	*Yucca brevifolia*	Joshua Tree	No	0	1	1	0	0	1	1	1	1	Fair (60)	80	1	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6741694.3550	1978983.3861
228	*Yucca brevifolia*	Joshua Tree	No	0	1	9	0	0	9	3	15	5	Fair (60)	60	7	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6742256.9646	1978908.3832
229	*Yucca brevifolia*	Joshua Tree	No	0	1	3	0	0	3	1	2	1	Good (80)	80	1	Yes	Yes	No	No	No	No	On-Site Project Boundary	Direct	No	6742182.8146	1979449.9524
137	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	7	2	Fair (60)	80	5	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742493.3893	1975724.0733
142	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	1	1	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740271.5054	1975939.1190
147	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	2	1	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740310.4940	1975839.1586
161	*Yucca brevifolia*	Joshua Tree	Clone	4	15	14	9	9	19	32	15	15	Fair (60)	40	69	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740399.5383	1975456.5699
162	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	1	1	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6739987.3672	1975752.0597
172	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	3	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740081.3152	1976987.5979
174	*Yucca brevifolia*	Joshua Tree	No	0	1	2	0	0	2	1	1	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6739977.4831	1977116.2845
176	*Yucca brevifolia*	Joshua Tree	No	0	2	0	0	0	0	1	2	2	Fair (60)	60	2	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740016.5406	1977289.2590
178	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	1	1	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740028.7053	1977435.2036
207	*Yucca brevifolia*	Joshua Tree	No	0	2	14	9	0	17	22	15	15	Fair (60)	40	31	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6742066.7950	1980652.7740
236	*Yucca brevifolia*	Joshua Tree	No	0	1	4	0	0	4	1	3	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741425.9979	1978047.7459
238	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	2	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741311.7784	1978098.7821
246	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	3	2	Fair (60)	80	1	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6740549.3406	1978098.5849
263	*Yucca brevifolia*	Joshua Tree	No	0	1	3	0	0	3	1	3	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6745031.4761	1980860.4394
276	*Yucca brevifolia*	Joshua Tree	Clone	2	2	11	3	0	11	4	20	8	Fair (60)	80	8	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6745800.2068	1980306.1838
144	*Yucca brevifolia*	Joshua Tree	No	0	1	0	0	0	0	1	1	1	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6740283.4401	1975934.3434
177	*Yucca brevifolia*	Joshua Tree	No	0	1	2	0	0	2	1	1	1	Good (80)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6739987.4001	1977052.6051
214	*Yucca brevifolia*	Joshua Tree	Clone	1	2	7	0	0	7	1	8	3	Fair (60)	60	5	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6742558.1700	1980802.7694
250	*Yucca brevifolia*	Joshua Tree	No	0	1	3	0	0	3	1	2	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6741109.4075	1978324.1404
268	*Yucca brevifolia*	Joshua Tree	No	0	1	3	0	0	3	1	3	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6744979.7379	1980787.1574
269	*Yucca brevifolia*	Joshua Tree	No	0	1	3	0	0	3	1	3	2	Fair (60)	80	1	Yes	Yes	No	No	No	No	186-Ft Buffer	Preserve	N/A	6744904.0901	1980850.0205
275	*Yucca brevifolia*	Joshua Tree	No	0	1	11	0	0	11	7	15	10	Fair (60)	60	11	Yes	Yes	No	No	No	Yes	186-Ft Buffer	Preserve	N/A	6745723.6604	1980236.6848
1109	*Yucca brevifolia*	Joshua Tree	No	1	0	3	0	0	3	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741377.3942	1978911.2365
1110	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741365.5545	1978328.8684
1111	*Yucca brevifolia*	Joshua Tree	No	2	0	4	0	0	4	2	8	2	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741320.8803	1978326.7036
1112	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741319.7189	1978341.8623
1113	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741287.0963	1978339.1577
1114	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	2	5	4	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6741316.5788	1978444.3964
1115	*Yucca brevifolia*	Joshua Tree	No	0	0	12	0	0	12	2	20	10	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6741319.8530	1978471.8180
1116	*Yucca brevifolia*	Joshua Tree	No	0	0	7	0	0	7	2	10	3	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741301.6256	1978479.3996
1117	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741075.4257	1978340.4535
1118	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	7	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741068.0908	1978344.3478
1119	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741051.4597	1978384.3861
1123	*Yucca brevifolia*	Joshua Tree	No	1	0	15	0	0	15	2	12	8	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741274.9524	1978699.0501
1124	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741271.0680	1978728.1901
1125	*Yucca brevifolia*	Joshua Tree	No	1	0	3	0	0	3	1	5	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741272.7228	1978750.5951
1126	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	8	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741279.0348	1978813.2029
1127	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741312.4306	1978910.0606
1128	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741330.8922	1978903.0692
1129	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741333.4148	1978912.4639
1130	*Yucca brevifolia*	Joshua Tree	No	2	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741351.2702	1978970.3815
1131	*Yucca brevifolia*	Joshua Tree	No	3	0	2	0	0	2	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741298.2090	1979018.5858
1132	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741269.4270	1979092.1644
1133	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741341.7833	1979190.6826
1152	*Yucca brevifolia*	Joshua Tree	No	1	0	4	0	0	4	1	5	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740917.6647	1978318.7248
1153	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	2	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740837.2522	1978310.9925
1154	*Yucca brevifolia*	Joshua Tree	No	4	0	15	0	0	15	4	17	5	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740807.2144	1978301.1425
1155	*Yucca brevifolia*	Joshua Tree	No	1	0	4	0	0	4	1	6	2	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740746.6246	1978330.6044
1156	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740843.2767	1978361.2841
1157	*Yucca brevifolia*	Joshua Tree	No	2	0	2	0	0	2	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740870.4478	1978416.9829
1158	*Yucca brevifolia*	Joshua Tree	No	1	0	3	0	0	3	1	4	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740910.3878	1978434.2799
1159	*Yucca brevifolia*	Joshua Tree	No	1	0	4	0	0	4	1	4	3	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740934.2038	1978422.2748
1186	*Yucca brevifolia*	Joshua Tree	No	1	0	3	0	0	3	1	4	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740685.7241	1978345.5119
1187	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	3	2	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740662.6321	1978301.7639
1188	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740554.7282	1978272.7567
1189	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740527.0307	1978320.7441
1190	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740536.4587	1978353.3536
1223	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740292.2613	1978342.5288
1224	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740264.4175	1978354.3383
1225	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740318.0657	1978406.1737
1226	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740275.7916	1978425.5976

Tree No.	Botanical Name	Common Name	Clonal	Clones	Stems	Individual Stem Diameters (in.)			Diameter (in.)	Branches	Height (ft.)	Crown width (ft.)	Health	Structure	Pannicles	New Growth	Leaves	Flowers	Open Flower	Fruit	Fruit Drop	Location	Disposition	Relocation Potential	X-Coordinate	Y-Coordinate
						D1	D2	D3																		
1262	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740095.9474	1978395.1945
785	*Yucca brevifolia*	Joshua Tree	Clone	1	0	12	0	0	12	2	28	12	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741243.6910	1979940.9136
786	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741278.5526	1979921.8604
787	*Yucca brevifolia*	Joshua Tree	Clone	1	0	12	0	0	12	3	15	15	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741304.8520	1979918.2404
788	*Yucca brevifolia*	Joshua Tree	Clone	1	0	16	0	0	16	4	12	20	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741303.0802	1979971.3460
789	*Yucca brevifolia*	Joshua Tree	No	0	0	16	0	0	16	4	16	14	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741381.5102	1979951.8423
790	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741397.9996	1979875.9290
791	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	5	2	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741518.9641	1979948.5631
792	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							On-Site Project Boundary	Direct	No	6741483.1285	1979971.9721
793	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	3	6	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741408.0356	1980008.5035
794	*Yucca brevifolia*	Joshua Tree	No	0	0	23	0	0	23	2	15	15	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741390.5746	1980050.8831
795	*Yucca brevifolia*	Joshua Tree	No	0	0	22	0	0	22	5	12	15	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741362.2089	1980123.1429
796	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	6	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741404.4292	1980134.5412
797	*Yucca brevifolia*	Joshua Tree	Clone	1	0	16	0	0	16	4	16	20	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741486.2343	1980044.3774
798	*Yucca brevifolia*	Joshua Tree	No	0	0	13	0	0	13	3	14	10	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741607.1581	1980006.0797
799	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741654.3840	1980003.6386
800	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	4	3	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741719.9575	1979968.6276
801	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	6	3	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741682.1868	1979924.5950
802	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	2	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741680.6553	1979900.0197
803	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	2	7	3	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741667.1397	1979892.8967
804	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	2	Good (80)	0	0							On-Site Project Boundary	Direct	No	6741651.9672	1979895.5735
805	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	4	3	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741658.5555	1979869.6082
806	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	2	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741704.5934	1979849.3586
807	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741710.0066	1979887.7192
808	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	4	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741755.8238	1980042.9624
809	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	4	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741779.4042	1980042.3587
810	*Yucca brevifolia*	Joshua Tree	Clone	2	0	3	0	0	3	2	6	5	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741962.6657	1980021.6554
811	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6742034.5294	1980054.1379
812	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742103.4224	1980101.0409
813	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	1	8	4	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6742161.8519	1980103.1659
814	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742153.8719	1980145.5482
815	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6742183.1455	1980143.5546
852	*Yucca brevifolia*	Joshua Tree	Clone	3	0	12	0	0	12	3	10	5	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741672.2037	1980505.4370
854	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741584.4501	1980475.5806
855	*Yucca brevifolia*	Joshua Tree	Clone	2	0	9	0	0	9	2	12	7	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741601.8990	1980448.3083
856	*Yucca brevifolia*	Joshua Tree	Clone	3	0	6	0	0	6	1	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741619.8985	1980435.5044
857	*Yucca brevifolia*	Joshua Tree	Clone	1	0	10	0	0	10	4	15	7	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741636.8560	1980421.8876
858	*Yucca brevifolia*	Joshua Tree	Clone	3	0	14	0	0	14	4	15	10	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741626.1938	1980373.5256
859	*Yucca brevifolia*	Joshua Tree	No	0	0	12	0	0	12	2	10	12	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741620.6147	1980321.4023
863	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741869.7926	1980158.4968
864	*Yucca brevifolia*	Joshua Tree	Clone	2	0	13	0	0	13	2	11	10	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741578.8277	1980311.9876
865	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741590.4466	1980263.3283
866	*Yucca brevifolia*	Joshua Tree	No	0	0	7	0	0	7	1	8	2	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6741549.8989	1980213.9052
867	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741498.5211	1980170.7643
868	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741545.9118	1980139.8091
869	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	4	1	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741453.4878	1980280.7876
870	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741437.1359	1980368.5338
871	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	6	3	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741459.9761	1980372.9894
872	*Yucca brevifolia*	Joshua Tree	Clone	1	0	16	0	0	16	5	12	15	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741547.5653	1980345.9029
873	*Yucca brevifolia*	Joshua Tree	No	0	0	16	0	0	16	3	12	10	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741483.7421	1980484.0840
874	*Yucca brevifolia*	Joshua Tree	Clone	1	0	12	0	0	12	3	14	12	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741444.9588	1980467.0668
875	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741432.4826	1980439.8802
876	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741382.3341	1980414.1179
877	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741318.7647	1980426.1556
878	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741269.4334	1980550.3313
879	*Yucca brevifolia*	Joshua Tree	No	0	0	16	0	0	16	5	14	15	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741286.1685	1980558.1279
880	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741275.8952	1980595.0659
881	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741297.0961	1980638.6437
882	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	12	5	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741287.9271	1980653.0623
883	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741328.6747	1980653.4150
884	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741317.0214	1980693.1718
885	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741324.7351	1980708.2597
886	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	5	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741367.5012	1980724.3248
887	*Yucca brevifolia*	Joshua Tree	No	0	0	11	0	0	11	5	15	12	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6741349.0645	1980763.9959
888	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	3	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741432.0996	1980754.7989
889	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	5	1	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741471.7148	1980726.5388
890	*Yucca brevifolia*	Joshua Tree	No	0	0	15	0	0	15	3	15	12	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741478.9537	1980717.2375
891	*Yucca brevifolia*	Joshua Tree	No	0	0	6	0	0	6	3	10	4	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741432.2528	1980665.3399
892	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741406.0989	1980600.6598
893	*Yucca brevifolia*	Joshua Tree	Clone	1	0	9	0	0	9	1	7	3	Poor (40)	0	0							Off-Site Project Boundary	Direct	No	6741479.4383	1980619.0812
894	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741476.7078	1980572.8237
895	*Yucca brevifolia*	Joshua Tree	Clone	5	0	12	0	0	12	3	10	5	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741338.6402	1980856.4066
909	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741291.2140	1980343.3888
910	*Yucca brevifolia*	Joshua Tree	Clone	1	0	12	0	0	12	3	15	5	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741309.9247	1980322.3638
911	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741339.7995	1980224.0891
912	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	2	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741298.4104	1980244.3295
913	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741238.9767	1980138.4621
915	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741325.8790	1980055.5120
1063	*Yucca brevifolia*	Joshua Tree	Clone	3	0	10	0	0	10	3	14	8	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741313.5328	1979422.0506
1064	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741421.2378	1979470.6616
1065	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6741423.3517	1979581.4552
1066	*Yucca brevifolia*	Joshua Tree	Clone	3	0	14	0	0	14	3	16	8	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6741367.7938	1979584.9750
1067	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741351.6155	1979569.2673
1068	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741425.0362	1979652.2798
1069	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741402.1070	1979676.5562
1070	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741384.0549	1979689.3949
1071	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741399.2976	1979769.2108

Tree No.	Botanical Name	Common Name	Clonal	Clones	Stems	Individual Stem Diameters (in.)			Diameter (in.)	Branches	Height (ft.)	Crown width (ft.)	Health	Structure	Pannicles	New Growth	Leaves	Flowers	Open Flower	Fruit	Fruit Drop	Location	Disposition	Relocation Potential	X-Coordinate	Y-Coordinate
						D1	D2	D3																		
1072	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741386.4174	1979783.1848
1073	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741398.0447	1979815.7892
1074	*Yucca brevifolia*	Joshua Tree	No	0	0	16	0	0	16	2	14	8	Good (80)	0	0							On-Site Project Boundary	Direct	No	6741509.1351	1979856.4469
1075	*Yucca brevifolia*	Joshua Tree	No	0	0	20	0	0	20	3	14	12	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741542.8607	1979874.0917
1076	*Yucca brevifolia*	Joshua Tree	Clone	2	0	16	0	0	16	4	14	10	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741575.8698	1979886.6464
1077	*Yucca brevifolia*	Joshua Tree	Clone	1	0	11	0	0	11	2	11	6	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741600.2397	1979874.5500
1078	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	6	2	Fair (60)	0	0							On-Site Project Boundary	Direct	No	6741520.4925	1979944.1133
1079	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741254.8042	1979844.7509
1080	*Yucca brevifolia*	Joshua Tree	Clone	2	0	8	0	0	8	2	12	8	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741299.5905	1979764.4289
1081	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741259.5970	1979732.6135
1082	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741250.6604	1979769.3131
1467	*Yucca brevifolia*	Joshua Tree	Clone	1	2	16	0	0	16	2	16	10	Poor (40)	40	0							186-Ft Buffer	Preserve	N/A	6740507.4572	1975483.0707
1443	*Yucca brevifolia*	Joshua Tree	No	0	5	22	0	0	22	5	15	12	Poor (40)	40	0							186-Ft Buffer	Preserve	N/A	6740268.4954	1975514.6808
1470	*Yucca brevifolia*	Joshua Tree	Clone	1	3	8	0	0	8	3	10	8	Fair (60)	60	0							186-Ft Buffer	Preserve	N/A	6740381.9099	1975495.1694
1392	*Yucca brevifolia*	Joshua Tree	No	0	6	24	0	0	24	6	18	15	Fair (60)	60	0							186-Ft Buffer	Preserve	N/A	6740207.9102	1977208.4803
1469	*Yucca brevifolia*	Joshua Tree	No	0	4	8	0	0	8	4	8	6	Fair (60)	60	0							186-Ft Buffer	Preserve	N/A	6740450.4041	1975493.2544
1468	*Yucca brevifolia*	Joshua Tree	No	0	3	9	0	0	9	3	15	8	Fair (60)	60	0							186-Ft Buffer	Preserve	N/A	6740466.6617	1975491.4594
84	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	2	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742937.2259	1975678.8672
85	*Yucca brevifolia*	Joshua Tree	Clone	3	0	11	0	0	11	3	12	10	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742880.2251	1975687.7140
86	*Yucca brevifolia*	Joshua Tree	Clone	2	0	3	0	0	3	1	4	2	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6742773.4156	1975710.1053
87	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742763.8057	1975640.8929
88	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742801.9562	1975615.0369
89	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742741.0331	1975580.8920
91	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	2	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6742632.2469	1975626.4848
92	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742621.7561	1975576.1197
93	*Yucca brevifolia*	Joshua Tree	Clone	1	0	5	0	0	5	1	7	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742569.9724	1975579.5160
1382	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740023.2482	1977536.4823
1383	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740010.6586	1977413.7112
1384	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740030.6465	1977388.8523
1385	*Yucca brevifolia*	Joshua Tree	Clone	1	0	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740037.7544	1977292.6579
1386	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740029.6976	1977231.4238
1387	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	4	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740028.0733	1977207.2099
1388	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740021.4559	1977195.3087
1389	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	5	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740031.1268	1977100.1514
1390	*Yucca brevifolia*	Joshua Tree	Clone	2	0	4	0	0	4	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740046.0306	1977096.7879
1391	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740039.8341	1977075.6590
1393	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	2	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740100.7034	1976587.9385
1394	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740061.1973	1976601.5488
1395	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	7	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740003.4136	1976592.8165
1396	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740003.1928	1976649.4896
1397	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740009.1718	1976712.9901
1398	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740020.8519	1976732.3641
1399	*Yucca brevifolia*	Joshua Tree	Clone	2	0	2	0	0	2	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740070.0211	1976674.7140
1400	*Yucca brevifolia*	Joshua Tree	Clone	2	0	3	0	0	3	2	6	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740102.8946	1976718.2347
1401	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740055.9115	1976776.4241
1402	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	3	8	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740078.9164	1976852.3481
1403	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	3	1	1	arly Dead (2	0	0							186-Ft Buffer	Preserve	N/A	6740084.1926	1976867.0361
1404	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	3	10	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740095.3911	1976867.0115
1405	*Yucca brevifolia*	Joshua Tree	Clone	2	0	6	0	0	6	2	8	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740216.7327	1976794.2186
1406	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	3	8	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740238.3144	1976798.5388
1407	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	7	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740237.4331	1976747.4760
1408	*Yucca brevifolia*	Joshua Tree	Clone	2	0	22	0	0	22	6	20	15	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740144.7820	1976742.5270
1409	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740221.7353	1976702.9846
1410	*Yucca brevifolia*	Joshua Tree	Clone	1	0	19	0	0	19	2	8	12	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6740304.3979	1976677.0666
1411	*Yucca brevifolia*	Joshua Tree	Clone	2	0	3	0	0	3	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740225.2760	1976615.3020
1412	*Yucca brevifolia*	Joshua Tree	Clone	5	0	4	0	0	4	2	6	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740250.8215	1976484.2921
1413	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	2	7	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740306.1292	1976499.5211
1414	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740313.6003	1976445.9119
1415	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740303.7148	1976422.2338
1416	*Yucca brevifolia*	Joshua Tree	No	0	0	7	0	0	7	2	10	5	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740309.4825	1976393.4097
1417	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740214.6789	1976365.4393
1418	*Yucca brevifolia*	Joshua Tree	Clone	4	0	5	0	0	5	1	6	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740213.6280	1976361.7490
1419	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	2	1	arly Dead (2	0	0							186-Ft Buffer	Preserve	N/A	6740232.4807	1976309.2977
1420	*Yucca brevifolia*	Joshua Tree	Clone	2	0	3	0	0	3	1	5	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740266.4642	1976285.3607
1421	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740265.5738	1976257.7476
1422	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740234.7389	1976260.0494
1423	*Yucca brevifolia*	Joshua Tree	Clone	2	0	3	0	0	3	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740229.9778	1976249.6000
1424	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	2	6	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740198.4427	1976208.4137
1425	*Yucca brevifolia*	Joshua Tree	Clone	2	0	2	0	0	2	1	3	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740247.7805	1976187.4449
1426	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740299.3710	1976194.0637
1427	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740300.8047	1976189.8908
1428	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740245.2228	1976163.0778
1429	*Yucca brevifolia*	Joshua Tree	No	0	0	6	0	0	6	2	12	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740240.3901	1976136.4372
1430	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740206.6727	1976153.1717
1431	*Yucca brevifolia*	Joshua Tree	Clone	1	0	5	0	0	5	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740221.1802	1976027.0007
1432	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	2	2	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6740257.0771	1975948.9090
1433	*Yucca brevifolia*	Joshua Tree	No	0	0	17	0	0	17	4	7	12	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6740249.2658	1975914.9842
1434	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740207.0414	1975917.8536
1435	*Yucca brevifolia*	Joshua Tree	No	0	0	7	0	0	7	2	9	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740282.3658	1975841.1074
1436	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	6	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740259.3202	1975795.3450
1437	*Yucca brevifolia*	Joshua Tree	Clone	3	0	8	0	0	8	3	8	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740277.2473	1975776.2082
1438	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	2	8	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740264.4619	1975680.9279
1439	*Yucca brevifolia*	Joshua Tree	Clone	1	0	7	0	0	7	3	8	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740264.3494	1975671.3600
1440	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740232.6057	1975683.0230
1441	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740187.3633	1975709.8215
1442	*Yucca brevifolia*	Joshua Tree	Clone	1	0	22	0	0	22	5	20	15	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6740225.2445	1975577.4537
1444	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740285.5013	1975667.1668

Tree No.	Botanical Name	Common Name	Clonal	Clones	Stems	Individual Stem Diameters (in.)			Diameter (in.)	Branches	Height (ft.)	Crown width (ft.)	Health	Structure	Pannicles	New Growth	Leaves	Flowers	Open Flower	Fruit	Fruit Drop	Location	Disposition	Relocation Potential	X-Coordinate	Y-Coordinate
						D1	D2	D3																		
1445	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740311.8939	1975677.5401
1446	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740351.0408	1975668.0076
1447	*Yucca brevifolia*	Joshua Tree	No	0	0	6	0	0	6	3	9	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740304.2240	1975636.0277
1448	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740345.3237	1975603.6265
1449	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740347.8797	1975626.7308
1450	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	3	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740360.8449	1975635.4798
1451	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	3	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740366.1760	1975652.7905
1452	*Yucca brevifolia*	Joshua Tree	Clone	2	0	16	0	0	16	3	22	8	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740410.0407	1975630.4677
1453	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740447.4832	1975644.4162
1454	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740428.5577	1975679.4092
1455	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740466.6246	1975669.8167
1456	*Yucca brevifolia*	Joshua Tree	Clone	3	0	2	0	0	2	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740451.1013	1975646.1314
1457	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740461.0774	1975618.8535
1458	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740475.6406	1975625.3105
1459	*Yucca brevifolia*	Joshua Tree	Clone	1	0	14	0	0	14	3	14	10	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740514.2564	1975643.0592
1460	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740498.7390	1975668.8928
1461	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740501.8939	1975674.7107
1462	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740509.6786	1975680.1087
1463	*Yucca brevifolia*	Joshua Tree	Clone	12	0	12	0	0	12	4	12	8	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740611.4895	1975665.5926
1466	*Yucca brevifolia*	Joshua Tree	Clone	2	0	15	0	0	15	4	20	10	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6740611.8625	1975546.7480
1471	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740067.2674	1975662.8630
1472	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740102.0531	1975675.2776
1473	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	6	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740094.0436	1975704.8192
1474	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740102.9291	1975722.4242
1475	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740089.2920	1975725.8835
1476	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	2	7	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740082.4416	1975925.8720
1477	*Yucca brevifolia*	Joshua Tree	Clone	1	0	7	0	0	7	2	9	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740097.0318	1975960.5727
1478	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	2	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740101.4452	1975973.8581
1479	*Yucca brevifolia*	Joshua Tree	No	0	0	6	0	0	6	2	10	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740018.3066	1975956.3653
1480	*Yucca brevifolia*	Joshua Tree	Clone	1	0	12	0	0	12	4	10	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740087.2736	1976051.9088
1481	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740051.1077	1976291.0202
1482	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740110.5017	1976305.1972
1483	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740053.6841	1976386.1010
1484	*Yucca brevifolia*	Joshua Tree	Clone	1	0	6	0	0	6	2	8	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740073.0758	1976429.8729
1485	*Yucca brevifolia*	Joshua Tree	Clone	2	0	4	0	0	4	2	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740094.9354	1976408.3247
1486	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740103.0699	1976447.1885
1487	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	2	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6740079.7553	1976535.9751
1517	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742831.9194	1980832.3703
1518	*Yucca brevifolia*	Joshua Tree	Clone	2	0	4	0	0	4	1	3	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742867.0424	1980792.9823
1519	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742864.4052	1980765.3515
1520	*Yucca brevifolia*	Joshua Tree	No	0	0	10	0	0	10	3	12	10	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742905.2952	1980801.5748
1521	*Yucca brevifolia*	Joshua Tree	Clone	1	0	12	0	0	12	4	15	10	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743190.0250	1980773.8744
1522	*Yucca brevifolia*	Joshua Tree	Clone	2	0	6	0	0	6	2	8	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743225.1368	1980776.5778
1523	*Yucca brevifolia*	Joshua Tree	Clone	1	0	7	0	0	7	2	7	4	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6743215.9944	1980855.9182
1524	*Yucca brevifolia*	Joshua Tree	Clone	2	0	12	0	0	12	4	12	10	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743254.1731	1980820.2263
1525	*Yucca brevifolia*	Joshua Tree	Clone	1	0	10	0	0	10	3	2	3	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6743267.8270	1980790.7024
1526	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	1	7	3	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6743287.9556	1980788.5801
1527	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	4	2	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6743291.6931	1980784.4800
1528	*Yucca brevifolia*	Joshua Tree	Clone	1	0	5	0	0	5	1	7	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743310.7797	1980820.9097
1529	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743496.9519	1980837.4602
1530	*Yucca brevifolia*	Joshua Tree	No	0	0	7	0	0	7	2	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743522.8681	1980839.4356
1531	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	1	4	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743644.5441	1980796.1509
1532	*Yucca brevifolia*	Joshua Tree	No	0	0	17	0	0	17	4	18	12	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6743661.2196	1980769.6602
1533	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743688.5404	1980856.3628
1534	*Yucca brevifolia*	Joshua Tree	No	0	0	9	0	0	9	2	12	5	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743844.4649	1980778.3153
1535	*Yucca brevifolia*	Joshua Tree	Clone	1	0	9	0	0	9	3	3	5	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743892.7883	1980804.1178
1536	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	7	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743922.4635	1980767.5552
1537	*Yucca brevifolia*	Joshua Tree	Clone	2	0	4	0	0	4	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743958.5733	1980756.3068
1538	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744019.8117	1980801.0696
1539	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744069.9008	1980823.9232
1540	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	6	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744250.8290	1980815.1345
1541	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744253.3135	1980829.6870
1542	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	2	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6744400.1171	1980798.9705
1543	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	6	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744447.3732	1980716.1232
1544	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	1	1	1	arly Dead (2	0	0							186-Ft Buffer	Preserve	N/A	6744590.2968	1980804.1765
1545	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744687.3599	1980798.5131
1546	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	5	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744901.1859	1980805.4911
1548	*Yucca brevifolia*	Joshua Tree	Clone	3	0	4	0	0	4	2	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744981.3242	1980852.5117
1549	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	2	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745038.6752	1980827.0708
1551	*Yucca brevifolia*	Joshua Tree	Clone	2	0	7	0	0	7	4	10	6	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744961.7170	1980741.7078
1552	*Yucca brevifolia*	Joshua Tree	Clone	3	0	4	0	0	4	3	8	5	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6744986.2973	1980699.8860
1553	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745129.5864	1980717.3496
1558	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6744239.5432	1980856.6810
1559	*Yucca brevifolia*	Joshua Tree	No	0	0	6	0	0	6	3	10	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743274.3309	1980903.9624
1560	*Yucca brevifolia*	Joshua Tree	No	0	0	7	0	0	7	1	8	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743241.4415	1980997.1741
1561	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	8	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743218.8127	1980996.5209
1562	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743179.3190	1981006.9602
1563	*Yucca brevifolia*	Joshua Tree	Clone	2	0	6	0	0	6	3	8	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743088.0931	1980913.1947
1564	*Yucca brevifolia*	Joshua Tree	Clone	1	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743086.4556	1980918.5076
1565	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743079.8907	1980920.1861
1566	*Yucca brevifolia*	Joshua Tree	No	0	0	6	0	0	6	3	9	5	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6743089.6531	1980975.8602
1567	*Yucca brevifolia*	Joshua Tree	Clone	2	0	6	0	0	6	1	5	2	Poor (40)	0	0							186-Ft Buffer	Preserve	N/A	6743107.8040	1981008.0967
1568	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	2	9	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742996.2094	1981013.0166
1569	*Yucca brevifolia*	Joshua Tree	Clone	3	0	5	0	0	5	2	7	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742991.0956	1980955.4393
1570	*Yucca brevifolia*	Joshua Tree	Clone	2	0	5	0	0	5	1	1	1	arly Dead (2	0	0							186-Ft Buffer	Preserve	N/A	6742948.0314	1980960.0968
1571	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	1	7	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742913.3156	1980952.5486
1572	*Yucca brevifolia*	Joshua Tree	Clone	1	0	4	0	0	4	1	6	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742908.5567	1980989.1115

Tree No.	Botanical Name	Common Name	Clonal	Clones	Stems	Individual Stem Diameters (in.)			Diameter (in.)	Branches	Height (ft.)	Crown width (ft.)	Health	Structure	Pannicles	New Growth	Leaves	Flowers	Open Flower	Fruit	Fruit Drop	Location	Disposition	Relocation Potential	X-Coordinate	Y-Coordinate
						D1	D2	D3																		
1573	*Yucca brevifolia*	Joshua Tree	Clone	2	0	4	0	0	4	1	5	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742860.8363	1980969.9278
1574	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	6	2	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6742866.1296	1980961.2129
1575	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742898.7103	1980936.2520
1576	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742916.5731	1980900.3305
1577	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742046.7448	1980970.8143
1578	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742016.4988	1980950.9259
1579	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741982.0576	1980983.9691
1580	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741970.7804	1980966.0315
1581	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	3	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741956.6105	1981003.8815
1582	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741936.4501	1980944.4859
1583	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	4	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741924.9074	1980942.5995
1584	*Yucca brevifolia*	Joshua Tree	No	0	0	5	0	0	5	1	7	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741916.8120	1980933.3364
1585	*Yucca brevifolia*	Joshua Tree	No	0	0	18	0	0	18	4	4	10	arly Dead (2	0	0							186-Ft Buffer	Preserve	N/A	6741810.7938	1980937.6415
1586	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	3	1	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741533.5125	1980835.8631
1587	*Yucca brevifolia*	Joshua Tree	Clone	1	0	14	0	0	14	4	16	10	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6741578.1653	1980842.1197
1588	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741565.1962	1980823.4081
1589	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741640.0629	1980798.6657
1590	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	5	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741725.0548	1980796.3284
1592	*Yucca brevifolia*	Joshua Tree	No	0	0	11	0	0	11	2	14	12	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741757.1624	1980768.9203
1593	*Yucca brevifolia*	Joshua Tree	Clone	1	0	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741827.1317	1980796.3750
1594	*Yucca brevifolia*	Joshua Tree	Clone	1	0	3	0	0	3	1	5	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6741838.8968	1980741.6615
1635	*Yucca brevifolia*	Joshua Tree	No	0	0	14	0	0	14	3	15	10	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6745620.1310	1980065.8876
1636	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6745663.3432	1980062.0041
1637	*Yucca brevifolia*	Joshua Tree	No	0	0	12	0	0	12	3	20	13	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6745722.5229	1980132.9646
1638	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	2	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6745758.2029	1980144.0945
1639	*Yucca brevifolia*	Joshua Tree	No	3	0	5	0	0	5	1	5	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6745886.1347	1980091.3210
1645	*Yucca brevifolia*	Joshua Tree	No	1	0	10	0	0	10	2	15	10	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745659.9941	1979985.9632
1646	*Yucca brevifolia*	Joshua Tree	No	4	0	10	0	0	10	4	20	12	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6745675.8753	1979991.8379
1647	*Yucca brevifolia*	Joshua Tree	No	0	0	7	0	0	7	2	11	3	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745616.8006	1980005.5387
1648	*Yucca brevifolia*	Joshua Tree	No	0	0	7	0	0	7	2	25	9	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6745617.9260	1980027.9487
1649	*Yucca brevifolia*	Joshua Tree	No	0	0	6	0	0	6	2	15	4	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745637.2232	1980138.2704
1651	*Yucca brevifolia*	Joshua Tree	No	2	0	9	0	0	9	2	30	16	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742168.2508	1980778.0079
1655	*Yucca brevifolia*	Joshua Tree	No	0	0	6	0	0	6	2	13	2	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742368.9958	1980775.3035
1656	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	2	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6742367.3009	1980760.8144
1657	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6742410.6529	1980784.5184
1660	*Yucca brevifolia*	Joshua Tree	No	1	0	10	0	0	10	4	20	14	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6742455.5963	1980785.7802
1661	*Yucca brevifolia*	Joshua Tree	No	0	0	14	0	0	14	3	25	15	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742525.9367	1980801.4012
1664	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6742621.5228	1980783.4452
1687	*Yucca brevifolia*	Joshua Tree	No	1	0	3	0	0	3	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740702.4470	1978131.4332
1688	*Yucca brevifolia*	Joshua Tree	No	0	0	6	0	0	6	1	8	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740752.0988	1978124.3600
1689	*Yucca brevifolia*	Joshua Tree	No	0	0	7	0	0	7	1	8	2	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740745.3150	1978113.6947
1690	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	3	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6740985.4848	1978131.2081
1691	*Yucca brevifolia*	Joshua Tree	No	0	0	1	0	0	1	1	1	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741046.6477	1978126.0713
1692	*Yucca brevifolia*	Joshua Tree	No	2	0	4	0	0	4	1	4	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741153.1206	1978132.4879
1693	*Yucca brevifolia*	Joshua Tree	No	0	0	4	0	0	4	1	5	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741294.3336	1978129.3764
1694	*Yucca brevifolia*	Joshua Tree	No	1	0	4	0	0	4	1	5	1	Good (80)	0	0							186-Ft Buffer	Preserve	N/A	6741403.4305	1978129.9007
1723	*Yucca brevifolia*	Joshua Tree	No	0	0	2	0	0	2	1	2	1	Poor (40)	0	0							On-Site Project Boundary	Direct	No	6741994.7059	1979964.1021
1724	*Yucca brevifolia*	Joshua Tree	No	0	0	3	0	0	3	1	4	1	Good (80)	0	0							On-Site Project Boundary	Direct	No	6741517.0618	1979647.5013
1640	*Yucca brevifolia*	Joshua Tree	Clone	1	1	5	0	0	5	1	9	0	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745943.2085	1980101.1999
1643	*Yucca brevifolia*	Joshua Tree	Clone	2	1	1	0	0	1	1	1	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745719.8211	1979889.3978
1665	*Yucca brevifolia*	Joshua Tree	No	0	1	15	0	0	15	1	30	20	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6742600.4048	1980925.0296
1641	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	9	0	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745800.5057	1979977.0246
1642	*Yucca brevifolia*	Joshua Tree	Clone	12	1	4	0	0	4	1	9	0	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745810.1940	1979946.9669
1644	*Yucca brevifolia*	Joshua Tree	No	0	1	5	0	0	5	1	8	1	Fair (60)	0	0							186-Ft Buffer	Preserve	N/A	6745736.5862	1979881.3138
1666	*Yucca brevifolia*	Joshua Tree	Clone	1	1	12	0	0	12	1	25	15	Good (80)	0	0							Off-Site Project Boundary	Direct	No	6742237.7054	1980904.0536
90	*Yucca brevifolia*	Joshua Tree	No	0	0	13	0	0	13	3	9	5	Fair (60)	0	0							Off-Site Project Boundary	Direct	No	6742717.7019	1975545.6964

Appendix C
Site Photographs

Appendix C

Representative Site Photographs



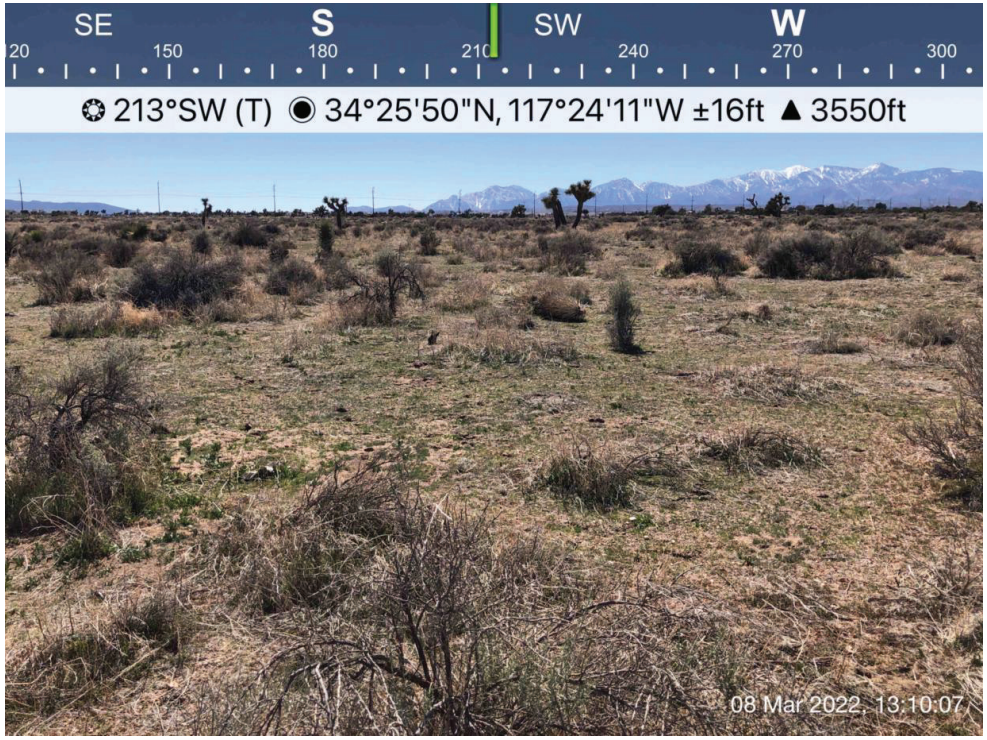
Photograph 1 – Representative view of the site's Joshua trees.



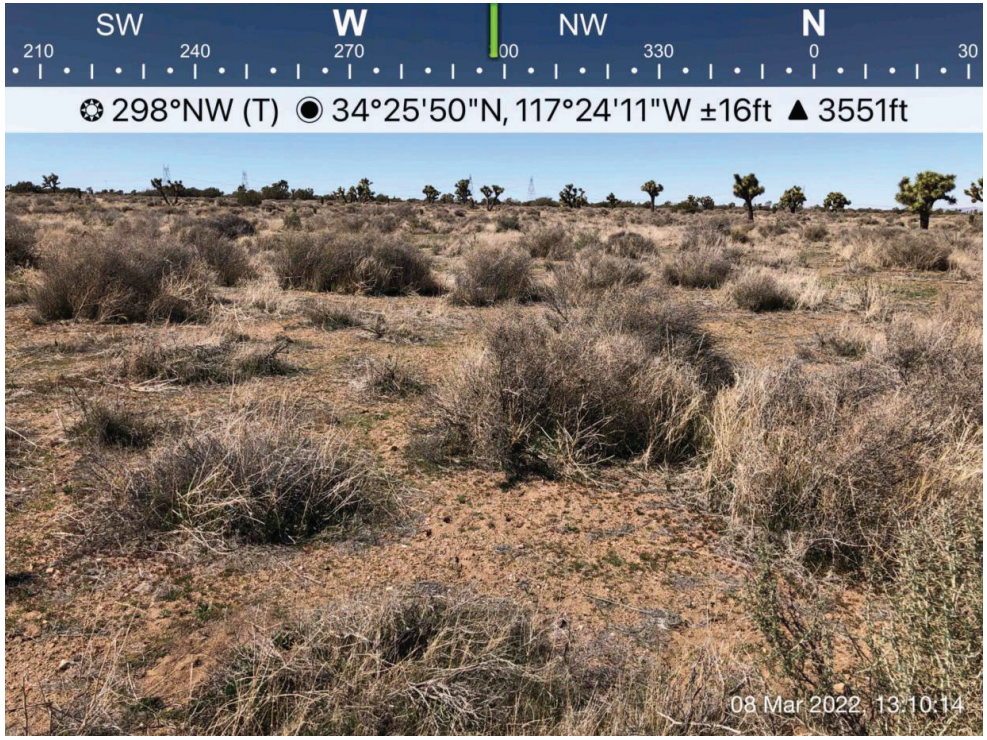
Photograph 2 – Representative view of the site's Joshua trees.



Photograph 3 – Representative view of the site's Joshua trees.



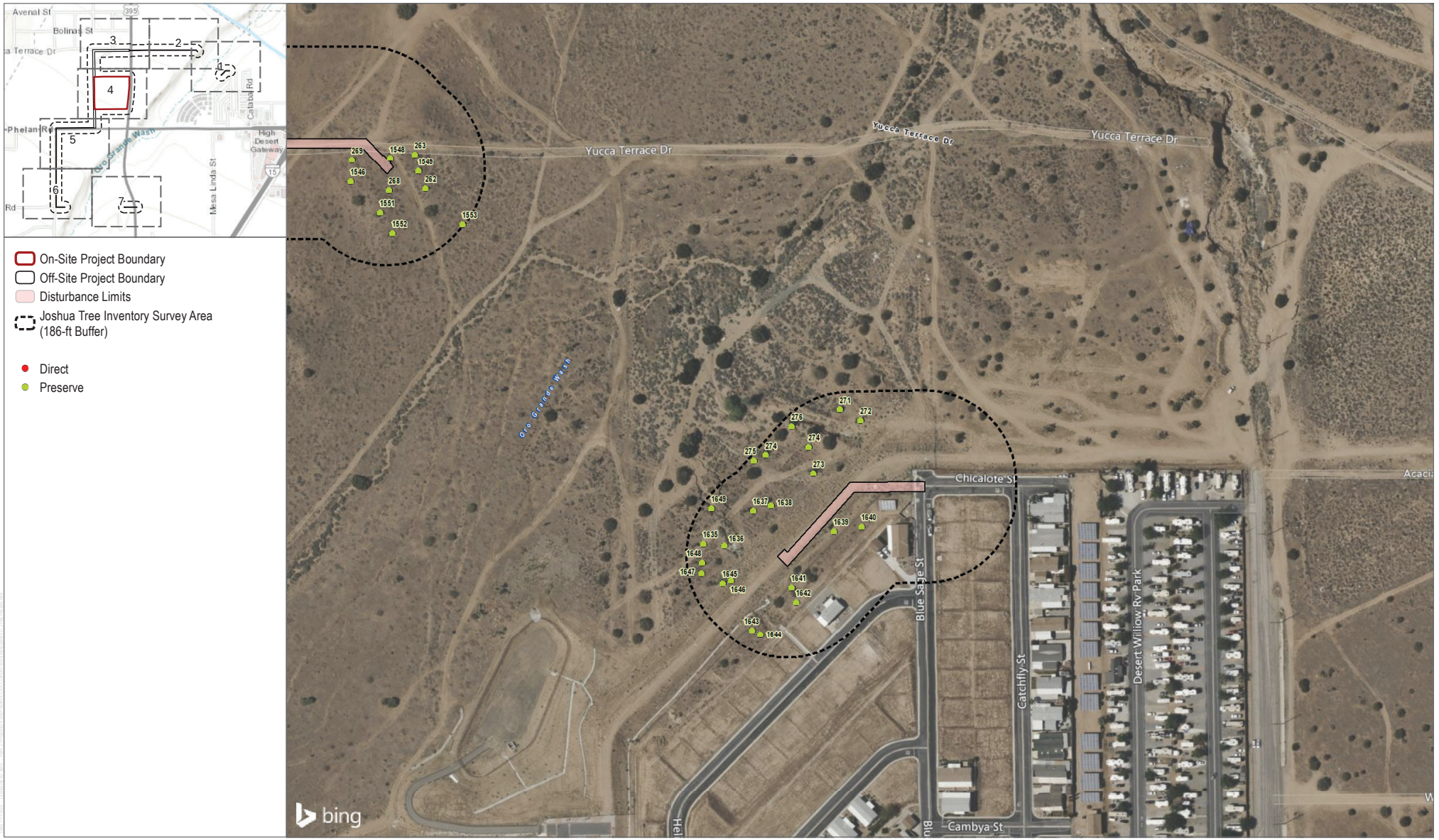
Photograph 4 – Representative view of the site's Joshua trees



Photograph 5 – Representative view of the site's Joshua trees

Appendix D

Joshua Tree Impacts



SOURCE: BING MAPPING SERVICE

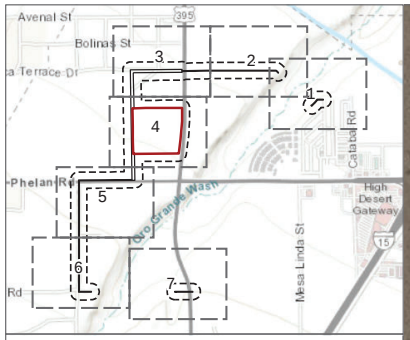
DUDEK

0 90 180 Feet

APPENDIX D - VIEW 1

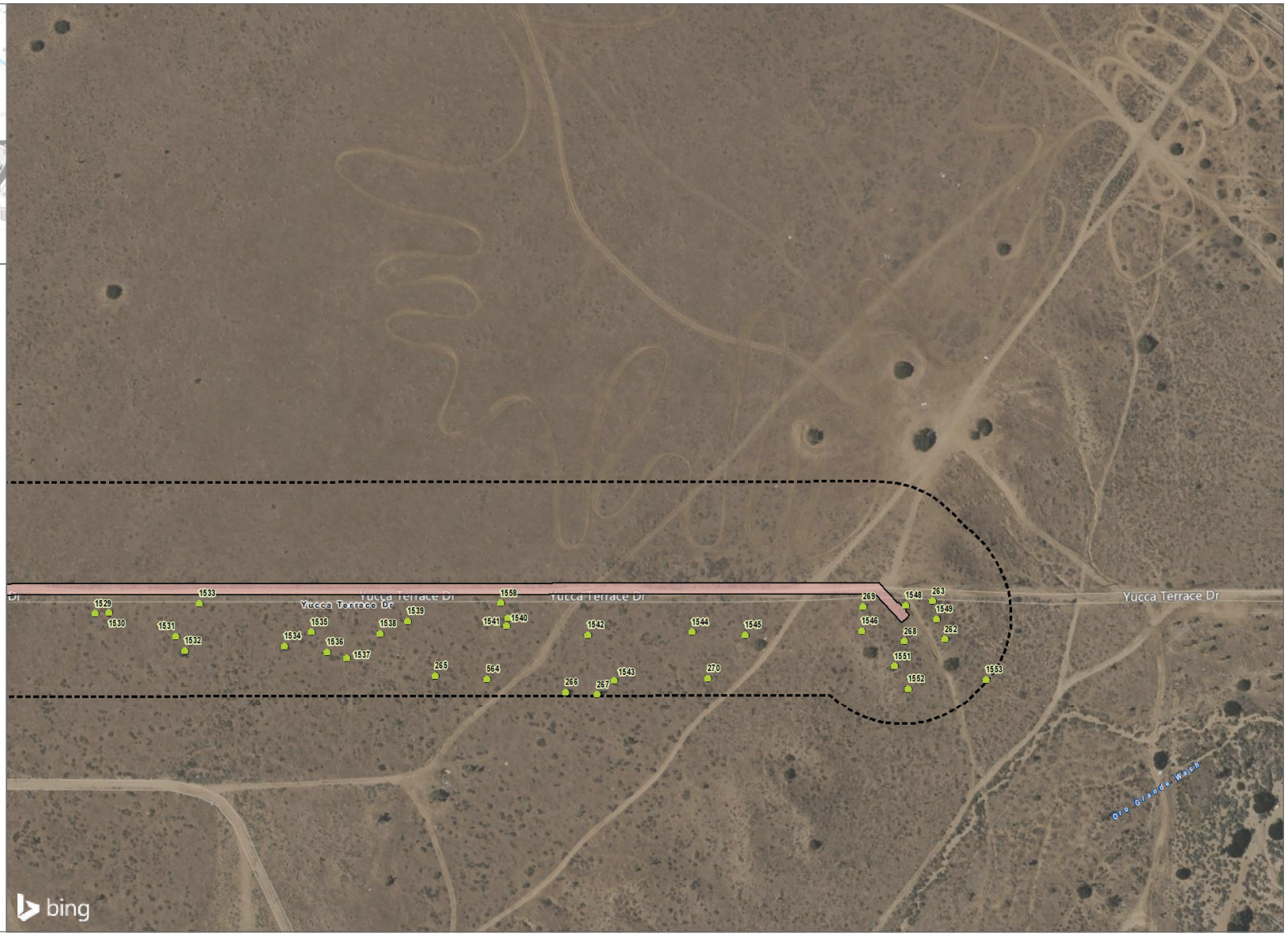
Joshua Tree Impacts

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



On-Site Project Boundary
Off-Site Project Boundary
Disturbance Limits
Joshua Tree Inventory Survey Area (186-ft Buffer)

Direct
Preserve



SOURCE: BING MAPPING SERVICE

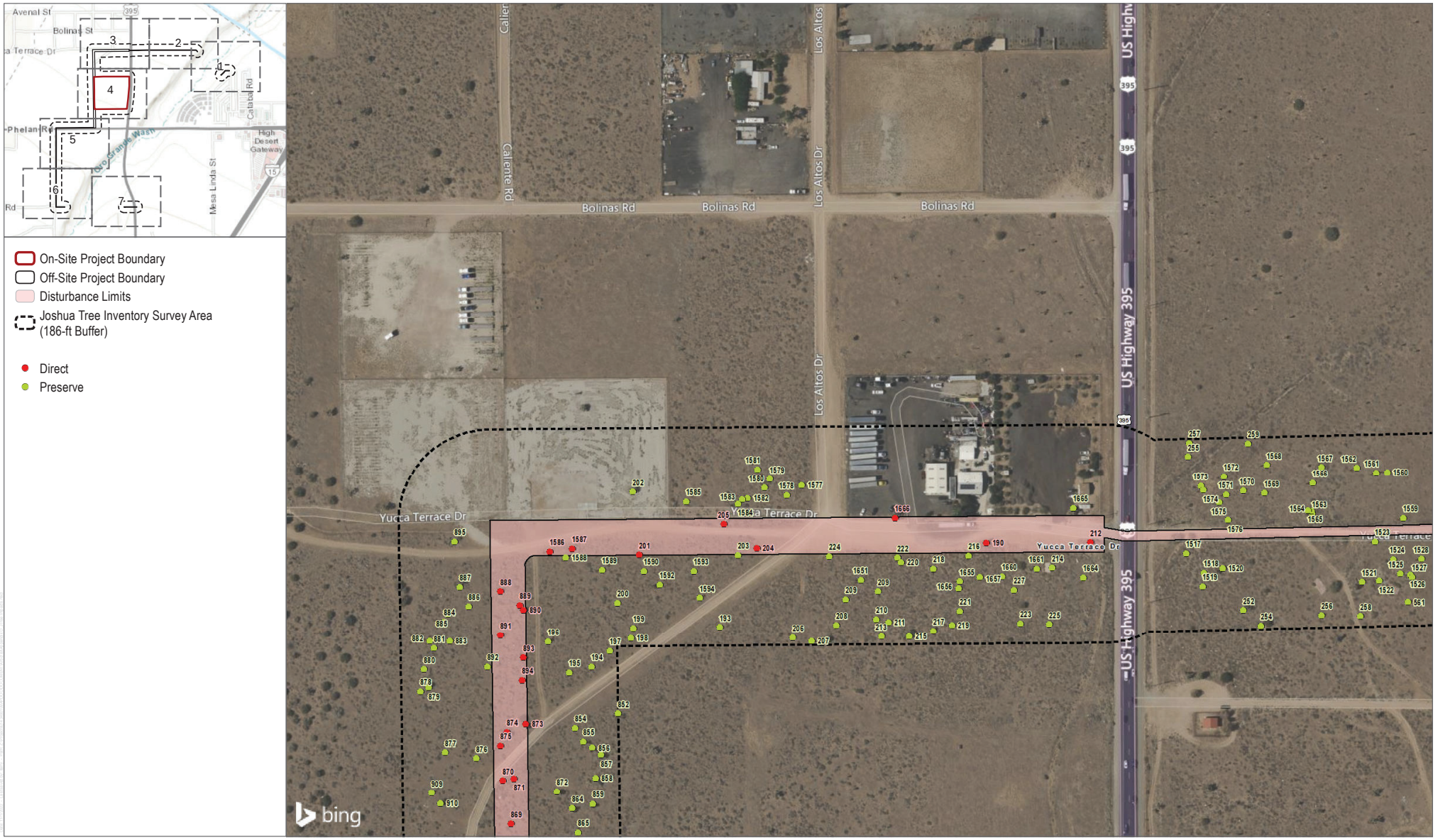
DUDEK

0 90 180 Feet

APPENDIX D - VIEW 2

Joshua Tree Impacts

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



SOURCE: BING MAPPING SERVICE

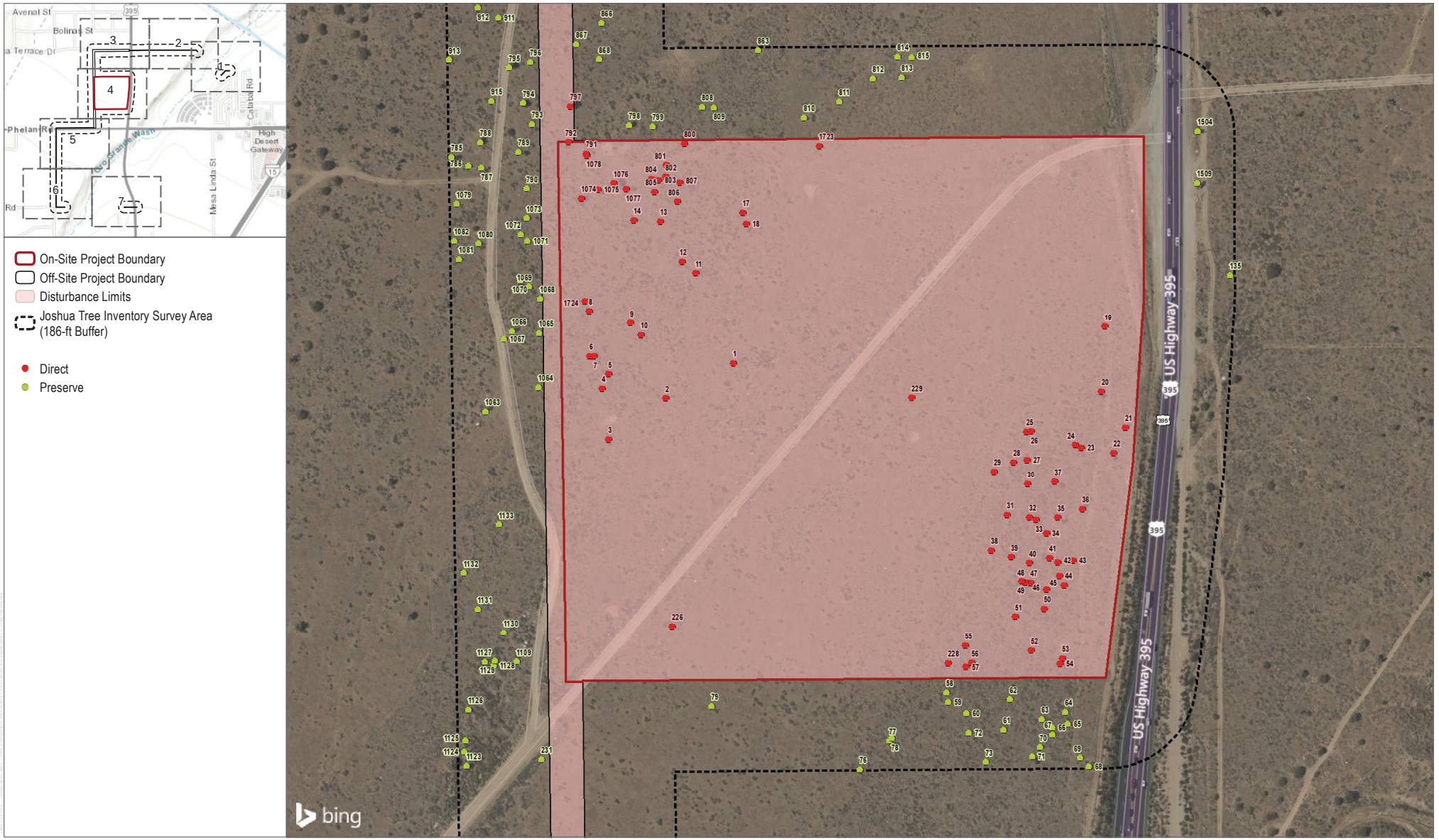
DUDEK

0 90 180 Feet

APPENDIX D - VIEW 3

Joshua Tree Impacts

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



SOURCE: BING MAPPING SERVICE

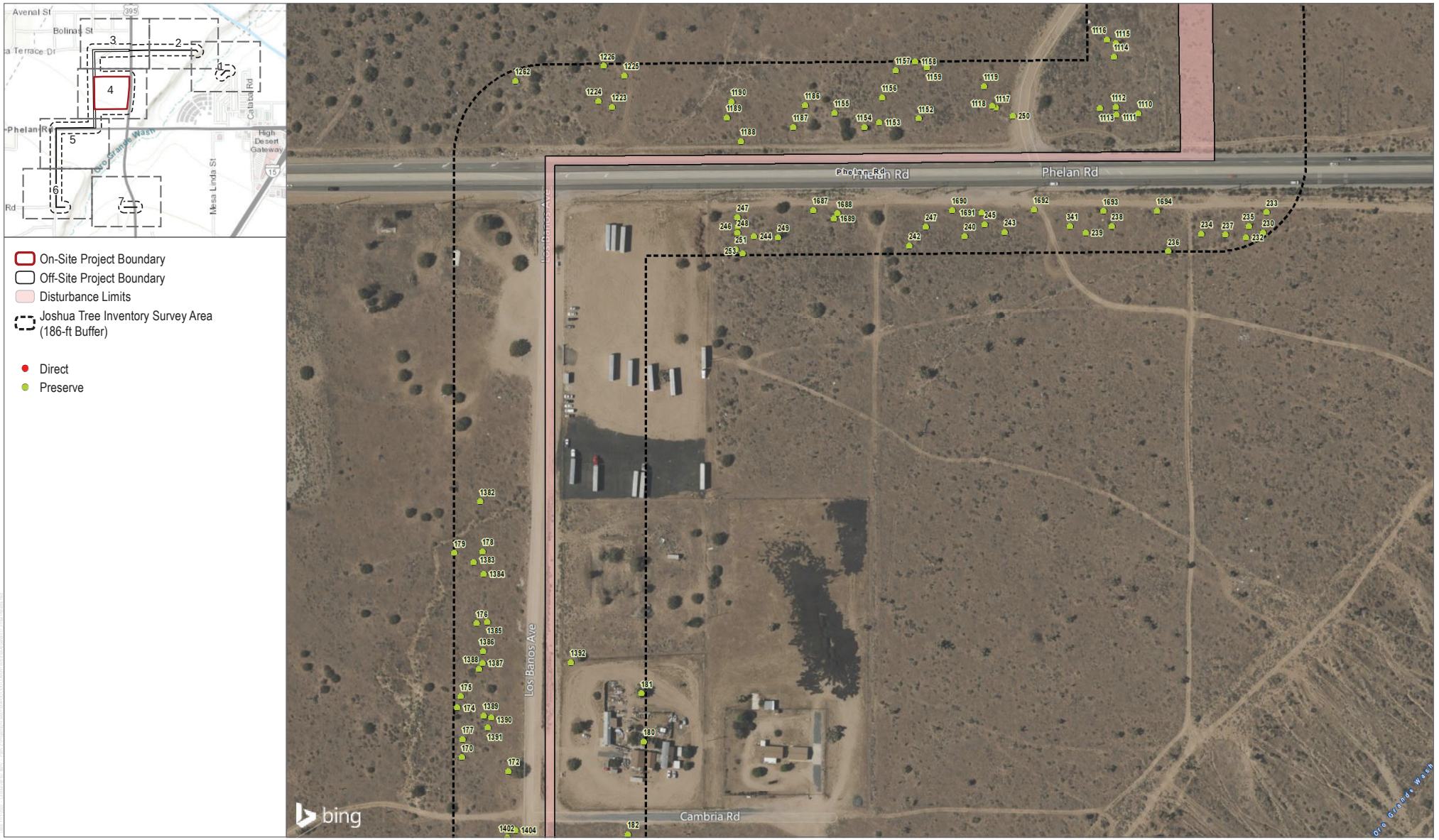
DUDEK

0 90 180 Feet

APPENDIX D - VIEW 4

Joshua Tree Impacts

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



SOURCE: BING MAPPING SERVICE

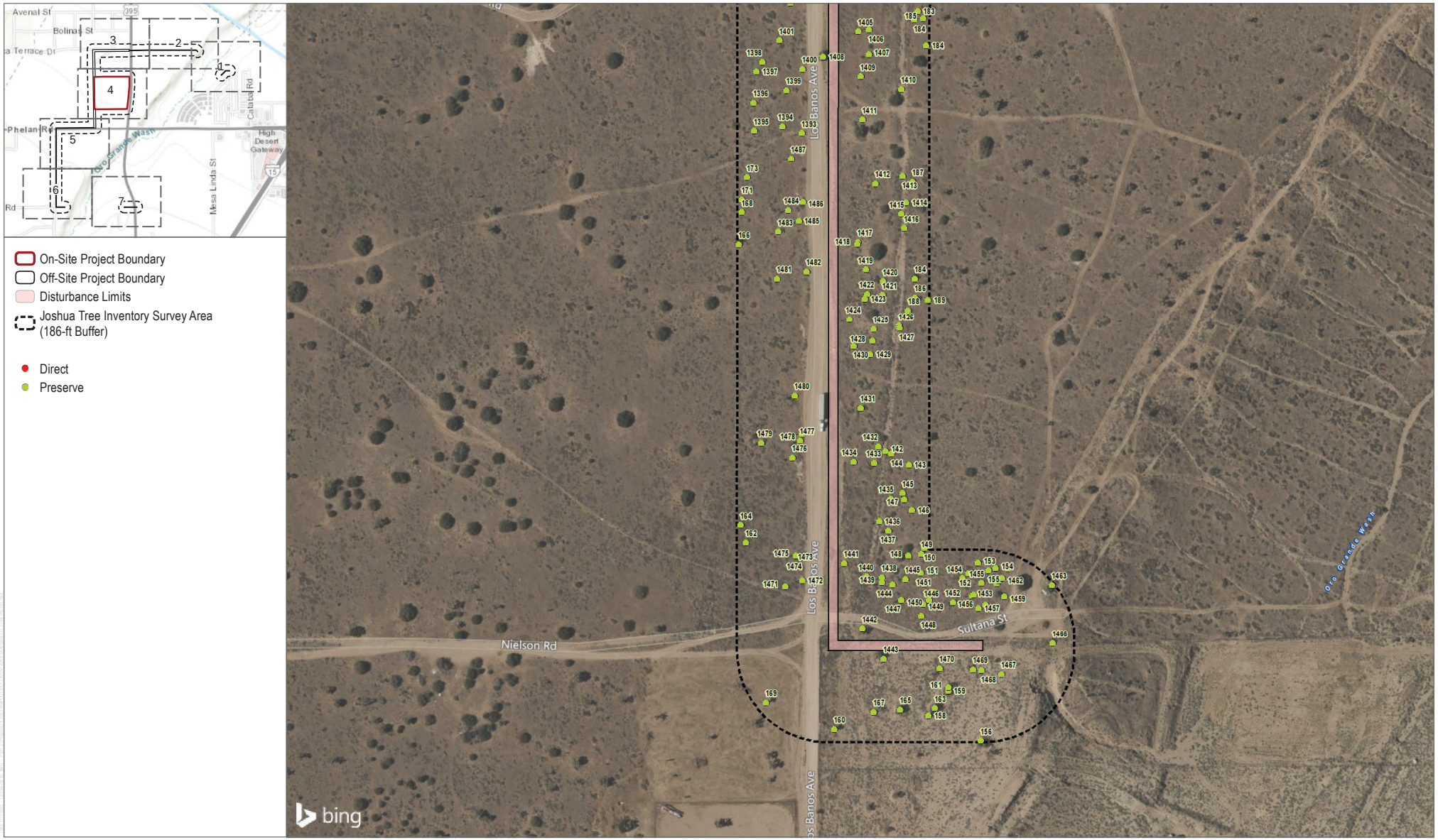
DUDEK

0 90 180 Feet

APPENDIX D - VIEW 5

Joshua Tree Impacts

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



SOURCE: BING MAPPING SERVICE

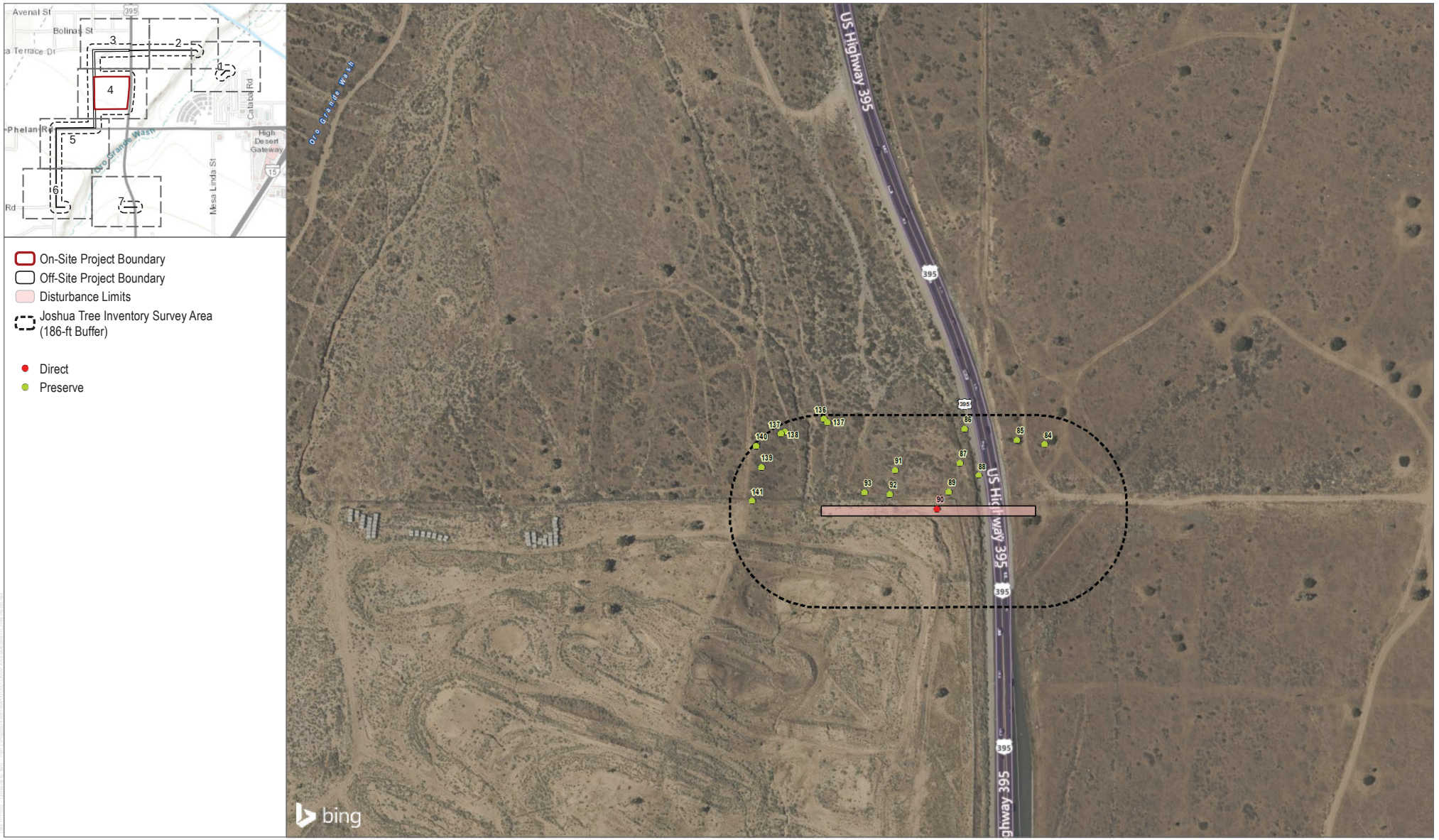
DUDEK

0 90 180 Feet

APPENDIX D - VIEW 6

Joshua Tree Impacts

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project



SOURCE: BING MAPPING SERVICE

DUDEK

0 90 180 Feet

APPENDIX D - VIEW 7

Joshua Tree Impacts

Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the Hesperia Commerce Center Project

Appendix I

Burrowing Owl Relocation Plan

Burrowing Owl Relocation Plan

Kiss Logistics Center

JANUARY 2023

Prepared for:

KISS Hesperia Venture, LLC.
25 Harbor Park Drive
Port Washington, New York 11050
Contact: Jin Kim

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Anna Cassady

Printed on 30% post-consumer recycled material.

Table of Contents

SECTION **PAGE NO.**

Acronyms and Abbreviations iii

1 Purpose and Objectives 1
- 1.1 Mitigation Measure BIO-11 1

2 Background 3
- 2.1 Project Overview 3
- 2.2 Protocol Survey Results 3
- 2.3 Mitigation Measures 3
- 2.4 Qualified Biologist 4

3 Avoidance and Minimization Measures 5
- 3.1 Pre-Construction Burrowing Owl Surveys 5
- 3.2 Buffer Distances 5
- 3.3 Burrow Screening 5
- 3.4 Excavation of Inactive Burrows 6

4 Passive Displacement 7
- 4.1 Determining Vacancy 7
- 4.2 Excavation of Active Burrows 7

5 Monitoring and Reporting 9
- 5.1 Relocation Monitoring 9
- 5.2 Reporting Requirements 9

6 References 11

FIGURES

1 Regional Map 13

2 Project Vicinity 15

INTENTIONALLY LEFT BLANK

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CDFW	California Department of Fish and Wildlife
Project	Kiss Logistics Center
2012 Staff Report	2012 California Department of Fish and Wildlife Staff Report on Burrowing Owl Mitigation

INTENTIONALLY LEFT BLANK

1 Purpose and Objectives

The following burrowing owl relocation plan describes the burrowing owl (*Athene cunicularia*) monitoring and reporting requirements during construction of the Kiss Logistics Center (Project) as recommended in the biological resources technical report prepared for the project by Dudek (2022). This plan was prepared in accordance with **Mitigation Measure (MM) BIO-11** included in the biological resources technical report. The full text of **MM-BIO-11** is provided in Section 1.1 for ease of reference.

This burrowing owl relocation plan is intended to identify when passive displacement of burrowing owls will be used, the methods that will be implemented to perform passive displacement, and the monitoring and reporting that will be required if passive displacement is performed. More specifically this plan includes descriptions of the following requirements for passive displacement procedures:

1. Methods to confirm a burrow is active
2. Measures that could be used to avoid and minimize impacts
3. Methods to be used to determine vacancy and excavation timing
4. Methods for burrow excavation
5. Removal of other potential owl burrow surrogates or refugia
6. Reporting methods of the excavation and closure of burrows
7. Monitoring to evaluate success
8. Reporting methods of long-term burrowing owl deterrence of the impacted site

1.1 Mitigation Measure BIO-11

This plan was prepared in accordance with **MM-BIO-11** included in the biological technical report (Dudek 2022). The full text of **MM-BIO-11** is provided below.

MM-BIO-11 Pre-Construction Surveys for Burrowing Owl and Avoidance. One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the Project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife] in 2012) or current version.

If burrowing owls are detected, the Burrowing Owl Relocation Plan shall be implemented in consultation with the California Department of Fish and Wildlife (CDFW). As required by the Burrowing Owl Relocation Plan, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers will be established around occupied burrows in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation or current version. No Project activities shall be allowed to encroach into established buffers without the consent of a

monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.

Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate Project area and within a buffer zone by installing one-way doors in burrow entrances. These doors will be placed at least 48 hours prior to ground-disturbing activities. The Project area shall be monitored daily for one week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat will be provided following the guidance in the Staff Report on Burrowing Owl Mitigation or current version.

Where possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow.

2 Background

2.1 Project Overview

The Project is located in the western portion of the City of Hesperia within San Bernardino County (Figure 1, Regional Map; Figure 2, Project Vicinity Map). The Project is located along the western side of U.S. Highway 395, just north of Phelan Road, and Caliente Road (a dirt road) runs diagonally the site. The Project site is currently vacant land that is surrounded by vacant lands as well as varying levels of development and disturbance.

The proposed Project will consist of constructing a new warehouse building, as well as landscaping, sidewalks, utility connections, implementation of stormwater facilities, and pavement of parking areas and drive aisles. Off-site improvements are required for roadway and utility improvements.

2.2 Protocol Survey Results

An initial habitat assessment for burrowing owl was conducted by Dudek in March 2022. Potentially suitable habitat for burrowing owl was detected within the Project site, including shrub habitat with openings and burrow resources with openings 4 inches or greater in diameter. Due to the presence of suitable habitat, Dudek conducted focused burrowing owl surveys within suitable habitat of the Project site to determine the presence or absence of burrowing owl within the Project site. These surveys were conducted in accordance with the California Department of Fish and Wildlife's 2012 Staff Report on Burrowing Owl Mitigation (2012 Staff Report) (CDFG 2012). Dudek biologists walked a combination of parallel and meandering transects spaced no more than 20 meters (49 feet) apart. If observed, any burrowing owl sightings, occupied burrows, and burrows with burrowing owl sign were mapped and recorded. The surveys were conducted when conditions were suitable for detecting owls (no rain, high winds [>20 mph], dense fog, or temperatures over 90°F).

During protocol burrowing owl surveys, burrowing owl was not detected within the Project site; however, suitable habitat exists on site, and the species could occupy the Project site prior to construction.

Focused surveys were not conducted within the off-site improvement areas; however, suitable habitat for burrowing owl is present.

Pursuant to the California Fish and Game Code and the federal Migratory Bird Treaty Act, a pre-construction survey in compliance with the 2012 Staff Report (CDFG 2012) would be necessary to re-evaluate the locations of potential burrowing owl burrows located within the project limits so that impacts to owls or active owl nests can be avoided or minimized. Consistent with **MM-BIO-11**, a pre-construction survey for burrowing owl shall be conducted in areas supporting potentially suitable habitat no more than 14 days prior to the start of construction activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities.

2.3 Mitigation Measures

The project would result in the permanent loss of 37.5 acres of suitable habitat for burrowing owl. As required by **MM-BIO-1** of the Biological Resources Technical Report**,** mitigation for direct impacts to western Joshua trees will be fulfilled through the purchase of credits at a California Department of Fish and Wildlife (CDFW)-approved mitigation bank or other conservation mechanism approved by the City of Hesperia and CDFW. Conservation efforts for western

Joshua tree associated with the Western Joshua Tree Mitigation Fund will focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the project site. Thus, mitigation for impacts to western Joshua tree will also mitigate for impacts to loss of suitable habitat for burrowing owl.

If passive displacement of burrowing owl is implemented, the abovementioned purchase of credits at a CDFW-approved mitigation bank or other conservation mechanism approved by the City of Hesperia and CDFW will mitigate for direct impacts to displaced burrow owls.

2.4 Qualified Biologist

In accordance with the 2012 Staff Report, a Qualified Biologist meets the following minimum qualifications:

1. Familiarity with the species and its local ecology
2. Experience conducting habitat assessments and non-breeding and breeding season surveys, or experience with these surveys conducted under the direction of an experienced surveyor
3. Familiarity with the appropriate state and federal statuses related to burrowing owls, scientific research, and conservation
4. Experience with analyzing impacts of development on burrowing owls and their habitat

In accordance with the 2012 Staff Report, a Qualified Biologist will perform the burrowing owl surveys as outlined in **MM-BIO-11**. Occupied burrows shall not be disturbed during the nesting season. Occupied burrows shall not be disturbed during the non-nesting season until a Qualified Biologist verifies that either: (1) nesting has not begun; or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival.

3 Avoidance and Minimization Measures

3.1 Pre-Construction Burrowing Owl Surveys

In accordance with **MM-BIO-11,** a Qualified Biologist (see Section 2.4) will conduct the surveys of both permanent and temporary impact areas as well as within a 150-meter buffer no more than 14 days prior to the start of the construction activities and again within 24 hours of the start of site preparation or grading. The surveys will identify active wintering or breeding burrowing owls within these areas.

The survey methods are detailed in the 2012 Staff Report and will consist of walking parallel transects 7–20 meters apart over the entire survey area and noting all burrowing owls present and any suitably sized burrows (i.e., 4 inches or greater in diameter) with burrowing owl sign (whitewash, feathers, pellets, etc.). The results of the surveys will be submitted to CDFW.

If burrowing owls or active burrowing owl sign are detected during pre-construction surveys, the Qualified Biologist or monitoring biologist will coordinate with the contractor to avoid and minimize impacts to burrowing owl by implementing the measures described below.

3.2 Buffer Distances

If occupied burrowing owl burrows are detected during the pre-construction surveys, the active burrow will be flagged to include a 160-foot buffer during the non-breeding season and a 250-foot buffer during the breeding season or as otherwise determined by a Qualified Biologist. The buffer will be staked and flagged. Ground disturbing activities during the breeding season will be restricted within the buffer. Depending on the level of disturbance, a smaller buffer may be established in consultation with CDFW.

The active burrows will be monitored to ensure that the buffer distance is an effective. Effective buffers minimize direct impacts by providing space between the bird and the construction activity. In addition, effective buffers minimize indirect impacts by decreasing sound and visual disturbance for the animal. A monitoring biologist will be present during all initial activities adjacent to burrowing owl buffers to monitor the birds' behavior. In any case where a burrowing owl shows signs of stress or disturbance due to construction activities, all activities in the immediate vicinity will be halted and the buffer distance and construction activities will be re-evaluated. In accordance with **MM-BIO-11**, no project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that any nesting activity has ended and/or occupied burrows have been vacated.

3.3 Burrow Screening

In cases where it is infeasible to maintain a 160-foot buffer during non-breeding season or a 250-foot buffer during the breeding season due to environmental, topographic, or construction constraints, etc., the buffer may be reduced by screening burrows as a means of minimizing potential impacts to burrowing owls where appropriate and feasible. This strategy involves screening burrows by installing hay bales, plywood, and/or other fencing material to create a visual and auditory barrier between construction activities and the active burrows. Biological monitors will need to

determine if the topography of a specific site is appropriate for the use of this technique, and whether this technique will be effective at reducing disturbance.

During the breeding season, hay bales should be stacked three bales high and 50 feet wide. During the non-breeding season, hay bales should be stacked two bales high and 50 feet wide. All hay bales used on the project site will be certified as weed-free. Perches near the burrow should remain within the sheltered area of the bales, and the bales should not be closer than two or three feet from the occupied burrow and should be placed as far from the active burrow as possible, outside the nearest work area. During and following installation of the shelter, biological monitors will be present for all ground-disturbing activities within the area between the recommended buffer and the edge of the reduced buffer. Biological monitors will evaluate and make adjustments to the buffer and/or shelter to ensure impacts to burrowing owl are minimized and the birds are not showing signs of stress or disturbance.

When determining an appropriate buffer setback distance, the Qualified Biologist will take into consideration any data collected on the individual sensitivities of the burrowing owl present at the project site. This data will be used as a baseline to compare the behavior of burrowing owls within no-disturbance buffers that are smaller than the recommended distances. Biological monitors will have the authority to stop construction or sheltering activities that are disturbing sensitive species and make changes to the shelters and buffers in accordance with these guidelines to increase protection of the burrowing owl if necessary.

Documentation of the installation of a shelter will include the following: where and when the shelter was installed, how long it will be required, anticipated level of construction activity, pictures of the shelter, pictures of installation, a description of the installation, and a description of site conditions. The site conditions that should be included are surrounding vegetation, topography of the area, animals present at the burrow, and line-of-sight conditions between the burrow and construction activities. This information and a status of the shelters in place will be described in the monthly reports (Section 5.2, Reporting Requirements).

3.4 Excavation of Inactive Burrows

Excavation of inactive burrows, confirmed inactive based on wildlife camera monitoring, will help deter burrowing owls from occupying the construction areas. Pre-construction surveys (described above) will be conducted within the project site to determine if burrows are actively being used. If burrows are suitably sized (i.e., 4 inches or greater in diameter), game cameras will be installed at the entrance for 3 days to confirm lack of presence. Inactive burrows will be excavated and refilled by a Qualified Biologist. To prevent injury to wildlife that might be inside the burrow, all excavation of inactive burrows will be performed using hand tools, escape routes will be installed (flexible plastic pipe), and a mirror or camera will be used to scope during the excavation of all burrows. The excavation of inactive burrows will occur prior to clearing or grading activities.

4 Passive Displacement

If an active burrow is identified in an area where there is potential for it or the tunnel structure to be destroyed or irreversibly affected by construction, and the owl would be in danger, and shelter in place, setback distances, and avoidance will not be effective or possible, then passive displacement will be implemented. To the extent feasible, passive displacement will take place such that it is in synch with the owls' natural dispersal cycle (i.e., early in the non-breeding season, when owls are less site-faithful) (Le Gouar et al. 2012; Hennessy et al. 2020).

4.1 Determining Vacancy

Passive displacement will only occur outside of the breeding season (September 1 through January 31) after a Qualified Biologist verifies that juveniles from the burrow are foraging independently and capable of independent survival or the owls have not begun nesting. If exclusion will occur immediately (within 1 week) after the end of the breeding season (August 31), daily monitoring will be conducted for 1 week to confirm that young have fledged prior to exclusion. Similar to the excavation of inactive burrows, a mirror or camera will be used to scope all previously active burrows to ensure burrows are not occupied by eggs or young.

4.2 Excavation of Active Burrows

Burrowing owls will be excluded from currently occupied burrows by installation of a one-way door in the original burrow, and all connected legally accessible surrounding potentially active burrows within 160 feet. One-way doors will remain in place at least 72 hours before excavation. The one-way doors will be monitored for exiting or trapped animals via a game camera. Once a Qualified Biologist can determine by site surveillance that the old burrow is vacant (i.e., 3 days of negative game camera results), with no sign of fresh use by wildlife, including tracks, scat, or recent excavation, they will be checked with an endoscope immediately prior to excavation to verify status. Sections of flexible plastic pipe will be inserted into the tunnels during excavation to maintain an escape route for any animals that could be located inside the burrow. Each burrow will be refilled with dirt and/or rocks to prevent reoccupation of the burrows. Photographs will be taken of the excavation and closure of the burrow to demonstrate success and sufficiency. Construction will occur as soon as possible following passive relocation and burrow collapse to discourage burrowing owls from re-occupying the disturbance area.

Prior to burrow collapse, the Qualified Biologist will be required to obtain confirmation that the burrows are empty of wildlife, document the installation of one-way doors 72 hours in advance of burrow excavation, and remove other potential burrow surrogates or refugia on the project site. Burrows that are not threatened by collapse due to the project (i.e., burrows outside the construction area) will not be passively excluded or dismantled.

INTENTIONALLY LEFT BLANK

5 Monitoring and Reporting

5.1 Relocation Monitoring

In accordance with the 2012 Staff Report, monitoring will occur before, during, and after exclusion of burrowing owls. In accordance with **MM-BIO-11**, if exclusion occurs, a Qualified Biologist will conduct daily monitoring for 3 days to confirm owls have vacated the burrows. Monitoring will be performed between 2 hours before sunset to 2 hours following sunset, or one 1 before sunrise to 2 hours following sunrise, corresponding with the time when burrowing owls are most active; this monitoring time will be extended if owls are active longer. Biologists will examine the collapsed burrow and survey for owl-related impacts and new burrows in the surrounding area. The results of these monitoring efforts and an evaluation of the success of the passive displacement efforts will be included in the monthly compliance reports along with any needed remedial measures to avoid and/or minimize impacts.

5.2 Reporting Requirements

Pre-construction Clearance Survey Reports

A report will be submitted to the City of Hesperia documenting the results of the pre-construction surveys. The report will describe the methods and results of the clearance surveys and will serve as notification as to whether owl passive relocation is necessary.

Monthly Reports

If avoidance or passive relocation is implemented, monthly reports will be prepared for submittal to the City of Hesperia and CDFW. The reports will summarize the construction activities that occurred with the potential to impact burrowing owls, any injuries or fatalities of burrowing owls, the effectiveness and practicality of the avoidance and minimization measures implemented, and recommendations for modifying the protection measures. If passive relocation of burrowing owls is performed, the monthly reports will also include the following: the total number and locations of burrows collapsed, a map of those locations, photographs of the excavation and closure of the burrows, the number and activity of the owls observed leaving the burrows to be excavated, and the methods used to continually make the site inhospitable to burrowing owls and fossorial mammals.

Final Compliance Report

A final compliance report will be submitted to the City of Hesperia and CDFW summarizing the effectiveness of the mitigation measures and the level of burrowing owl take associated with the project.

INTENTIONALLY LEFT BLANK

6 References

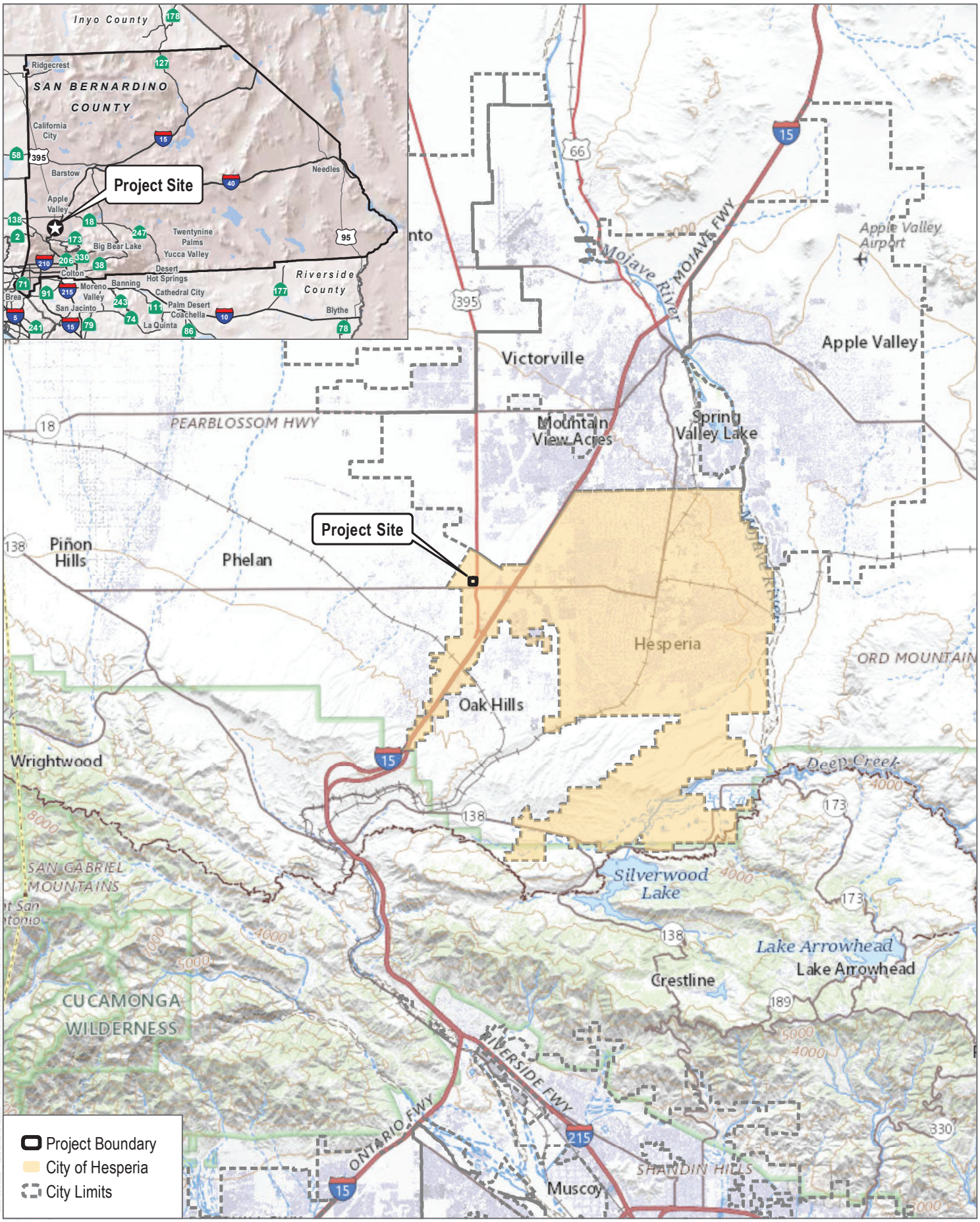
California Department of Fish and Game (CDFG). 2012. Staff report on burrowing owl mitigation. State of California, Natural Resources Agency. Retrieved from: http://www.dfg.ca.gov/wildlife /nongame/survey_monitor.html

Dudek. 2022. Biological Resources Technical Report for the Kiss Logistics Center. November 2022.

Hennessy, S., C. Wisinski, N. Ronan, C. Gregory, R. Swaisgood, and L. Nordstrom. 2020. *Assessing California's Relocation Guidelines for Burrowing Owls Impacted by Renewable Energy Development*. California Energy Commission. Publication Number: CEC-500-2020-051. August 2020.

Le Gouar, P., Mihoub, J.-B., and Sarrazin, F. 2012. "Dispersal and Habitat Selection: Behavioural and Spatial Constraints for Animal Translocations." In *Reintroduction Biology: Integrating Science and Management*, edited by J.G. Ewen, D.P. Armstrong, K.A. Parker, and P.J. Seddon, 138–164.

INTENTIONALLY LEFT BLANK



SOURCE: USGS Topo Maps 2022; County of San Bernadino 2022

DUDEK

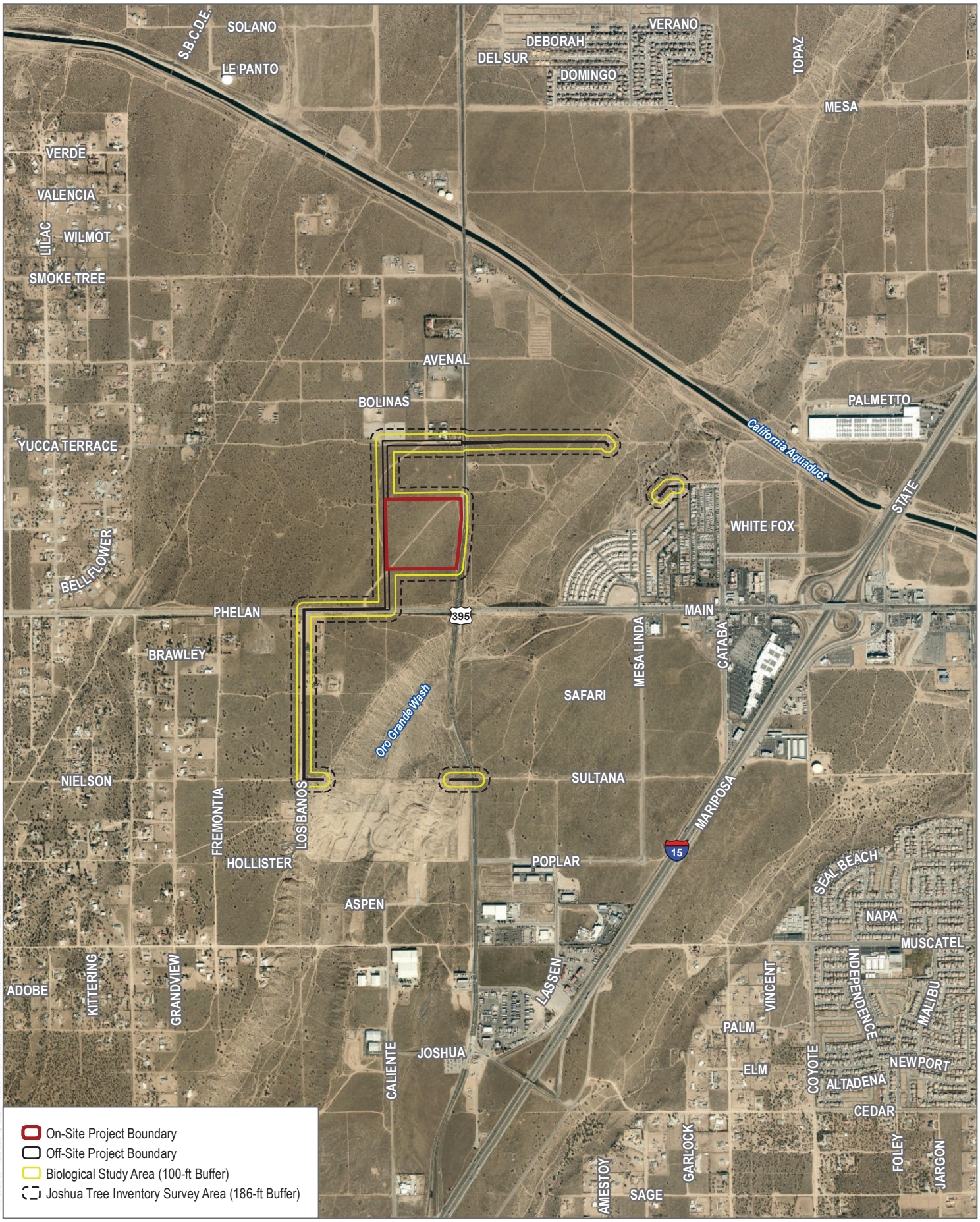
0 10,500 21,000 Feet

FIGURE 1

Regional Map

Kiss Logistics Center Burrowing Owl Relocation Plan

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; County of San Bernadino 2017

DUDEK

0 1,000 2,000 Feet

FIGURE 2

Project Vicinity

Kiss Logistics Center Burrowing Owl Relocation Plan

INTENTIONALLY LEFT BLANK