

**APPENDIX B**

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**Biological Resources Assessment**

# Biological Resources Assessment

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Dutch Bros Coffee Project, Yucca Valley, San Bernardino  
County, California

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# Executive Summary

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**Introduction:** This report includes the findings of a Biological Resources Assessment (BRA) conducted by South Environmental where a development has been proposed (Project Site) in Yucca Valley, San Bernardino County, California.

**Proposed Development:** The Project proposes the construction and operation of an approximately 1,025-square-foot Dutch Bros Coffee shop with a dual-lane drive-through facility and associated site improvements. The drive-through is designed to accommodate 23 queued vehicles. In addition to on-site improvements, the Project also includes off-site roadway improvements consistent with the Town's circulation plans, including the future widening of Twentynine Palms Highway to an ultimate half-width of 67 feet along the Project frontage. The site plan is presented in Appendix D.

**Plant Communities/Habitat/Sensitive Natural Communities:** The project would permanently remove 0.88 acre of Joshua Tree Woodland. Joshua Tree Woodland is considered a sensitive natural community by California Department of Fish and Wildlife (CDFW) based on the state rarity ranking of 3.2. The Joshua Tree Woodland community is heavily disturbed by dirt roads/paths, illegal dumping, invasive plants, and adjacent developments; however, it still has some potential to support special status wildlife such as coast horned lizard and Le Conte's thrasher. Impacts to sensitive natural communities and habitat for special-status species can be considered significant according to CEQA but 0.88 acre is a minor amount of Joshua Tree Woodland and it is highly disturbed. The project must compensate for the loss of individual Joshua Trees per the Western Joshua Tree Conservation Act as described in Mitigation Measure 2 in Section 3.2.3. Paying into the fund and protecting adjacent Joshua trees and Joshua Tree Woodlands surrounding the project site would ensure there is compensation for the loss of 0.88 acre from the project footprint. The in lieu fee program described in Mitigation Measure BIO-2 would result in the conservation, restoration, or protection of Joshua trees and Joshua Tree Woodlands into perpetuity. With the implementation of that mitigation the project impacts to 0.88 acre of disturbed Joshua Tree Woodland would be reduced to a level that is considered less than significant per the thresholds of CEQA.

**Nesting Birds and Raptors:** The proposed development would require potential removal of trees, shrubs, and herbaceous plants in the landscaping that could provide potential nesting habitat for birds and raptors protected by the MBTA, MBPA, and the Fish and Game Code, including special-status birds such as Le Conte's thrashers. If present at the time of vegetation removal, active nests, eggs, or young could be destroyed or otherwise disturbed to a point at which the young do not survive, which would be a violation of the MBTA, MBPA, and the Fish and Game Code. In addition, indirect impacts from noise or vibration has the potential to disturb an active bird nest that may

occur in adjacent landscaping to the point of failure if the nest is within immediate proximity to project activities, and this would also be a violation of the MBTA and Fish and Game Code. To avoid impacts to active bird or raptor nests, eggs, or young, preconstruction nesting bird surveys and monitoring is required per the MBTA and Fish and Game Code as described in Mitigation Measure BIO-1.

**Special-Status Plants:** Western Joshua tree occurs in the project area, and no other special-status plants are expected to occur due to the level of disturbances in the plant community. There are 22 Joshua trees within 15-meters of the proposed project footprint and 8 of those would be removed by the project because they are within the development footprint. An additional 2 Joshua trees are within the project site but will remain within landscaping after the project is built, and these would be heavily encroached into the 15 meter buffer by development. As shown in the Site Plan in Appendix C, these Joshua trees will be fenced during construction of the project to protect them from potential inadvertent impacts. Another 12 Joshua trees are outside the project site but will be encroached within a 15 meter buffer by the project construction. Protective fencing shown in the Site Plan in Appendix C will be installed between these Joshua trees and the project site during construction to avoid inadvertent impacts to these trees.

Overall the population of Joshua trees within the survey area is healthy, with very few dead trees and a mix of size classes and observations of fruits and flowers indicate that the Joshua trees are regenerating naturally on the site. The number of removals proposed by the project is 18% of the number surveyed, however, there are numerous other Joshua trees surrounding the survey area that are contiguous plant communities with that found on the site, and the relative number of removals to those in the region is very small. The removal of 8 Joshua trees is insignificant in relation to the number that are found in the immediate area. To reduce the potential impacts to a less than significant level per the thresholds of CEQA the project will implement Mitigation Measure BIO-2 below that includes permitting for the removal of the Joshua trees and protected the remaining trees.

**Special-Status Wildlife:** Based on the analysis in this report coast horned lizard and Le Conte's thrasher have the potential to occur within the Joshua Tree Woodland and Desert Willow Woodland habitats on the Project Site and Study Area.

Coast horned lizard have the potential to occur on the project site if it is present within the development area during construction activities they could be crushed and killed or injured. However, the habitat on the site is disturbed and of lower ecological value as a result, and coast horned lizard is more likely to occur in the desert wash outside of the project footprint. The potential for the species to be directly impacted by the project is low as it has a low potential to occur at this area relative to the desert wash and it is highly disturbed at the urban interface. Coast horned lizard direct impacts would be low as a result. In addition, the loss of 0.88 acre of disturbed Joshua Tree Woodland that is potential habitat for coast horned lizard is less than

significant as it is a very small area that is isolated and between existing developments at the urban interface. This small area is a minor fraction of the available habitat that would remain in the immediate area, including the much higher value habitat within the desert wash 200-feet away from the project as well as in the overall range of the species. In addition, the implementation of Mitigation Measure BIO-2 would ensure that the loss of Joshua trees and Joshua Tree Woodland habitat would be mitigated. For these reasons the project impacts to coast horned lizard would be considered less than significant per the thresholds of CEQA.

Le Conte's thrasher is a CDFW Species of Special Concern that has the potential to nest and forage on the project site. The potential impacts to 0.88 acre of disturbed habitat is less than significant as it is a minor fraction of what would remain available in the immediate area and within the entire species range. To avoid direct and indirect impacts to Le Conte's thrasher birds, Mitigation Measure BIO-1 regarding nesting bird and raptor surveys is recommended. With the implementation of the mitigation measure the project impacts to Le Conte's thrasher would be reduced to a level that is less than significant according to CEQA.

**Water Resources:** One jurisdictional feature, a desert wash, occurs in the Study Area approximately 200 feet southwest of the Project Site and outside of the project impact areas. Since project impacts are limited to the Project Site it is not expected for the proposed project to impact the wash directly. Temporary Impacts would not occur from the project as temporary staging and construction equipment will occur on the Project Site outside of the wash, at a distance greater than 200-feet. Considering the large distance between the project site and the wash, and the position of the project site between two existing large commercial development, the project would have no indirect impacts on the wash. Therefore, no impacts to water resources would result from the project.

**Protected Trees:** The study area contains mature western Joshua trees, which are all regulated trees that may require permits before removal under the Yucca Valley Code of Ordinances. The velvet mesquite trees are located outside of the project footprint and would not be impacted by the project as a result. The project will remove 8 Joshua trees as described previously and propose to permit the impacts with Mitigation Measure BIO-2. With the implementation of Mitigation Measure BIO-2 the project would be in compliance with the Ordinance.

**Wildlife Movement Corridors and Habitat Linkages:** The Joshua Tree Woodland on the study area extends west and southwest beyond the Study Area boundary between further developed areas. This large undeveloped Joshua Tree woodland is bordered on all sides by developments such as roads and businesses and does not have connectivity to other open spaces or habitats. The Project Site is an endpoint of this community that is highly disturbed and bordered by large-scale commercial developments and major paved roadways. Any large open spaces or habitats are east of the Project Site across several roads and lines of housing developments. Therefore, no

wildlife corridors were found in the Study Area as there is no linkage to large habitats. The lack of connectivity limits the potential for special status plants and wildlife to populate the site from areas of high quality habitats. Therefore, the Project Site is not considered a wildlife movement corridor or habitat linkage area. Based on the analysis in this report the Project Site was determined not to be within a wildlife movement area or habitat linkage due to the surrounding disturbances and isolated nature of the Joshua Tree Woodland. Therefore, the project would have no impact on wildlife movement corridors and habitat linkages

# 1. Introduction

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This report includes the findings of a Biological Resources Assessment (BRA) conducted by South Environmental for the Dutch Bros Coffee Project (Project Site) in Yucca Valley (Town), San Bernardino County, California. The purpose of this report is to identify and characterize biological resources that occur on the Project Site and a surrounding 500-foot buffer (Study Area), quantify and assess potential impacts to protected biological resources, and propose measures to reduce impacts to a less than significant level. The scope of this report includes a description of the proposed development, methods used to assess the biological resources, the environmental setting including technical characterizations and maps of vegetation communities, an assessment of the potential for special-status plants and animals to occur on the study area, a description of the regulatory setting, an analysis of the potential for the project to impact biological resources according to the thresholds of the California Environmental Quality Act (CEQA), and detailed recommendations for avoiding or mitigating impacts. Representative photographs of the study area are in Appendix A.

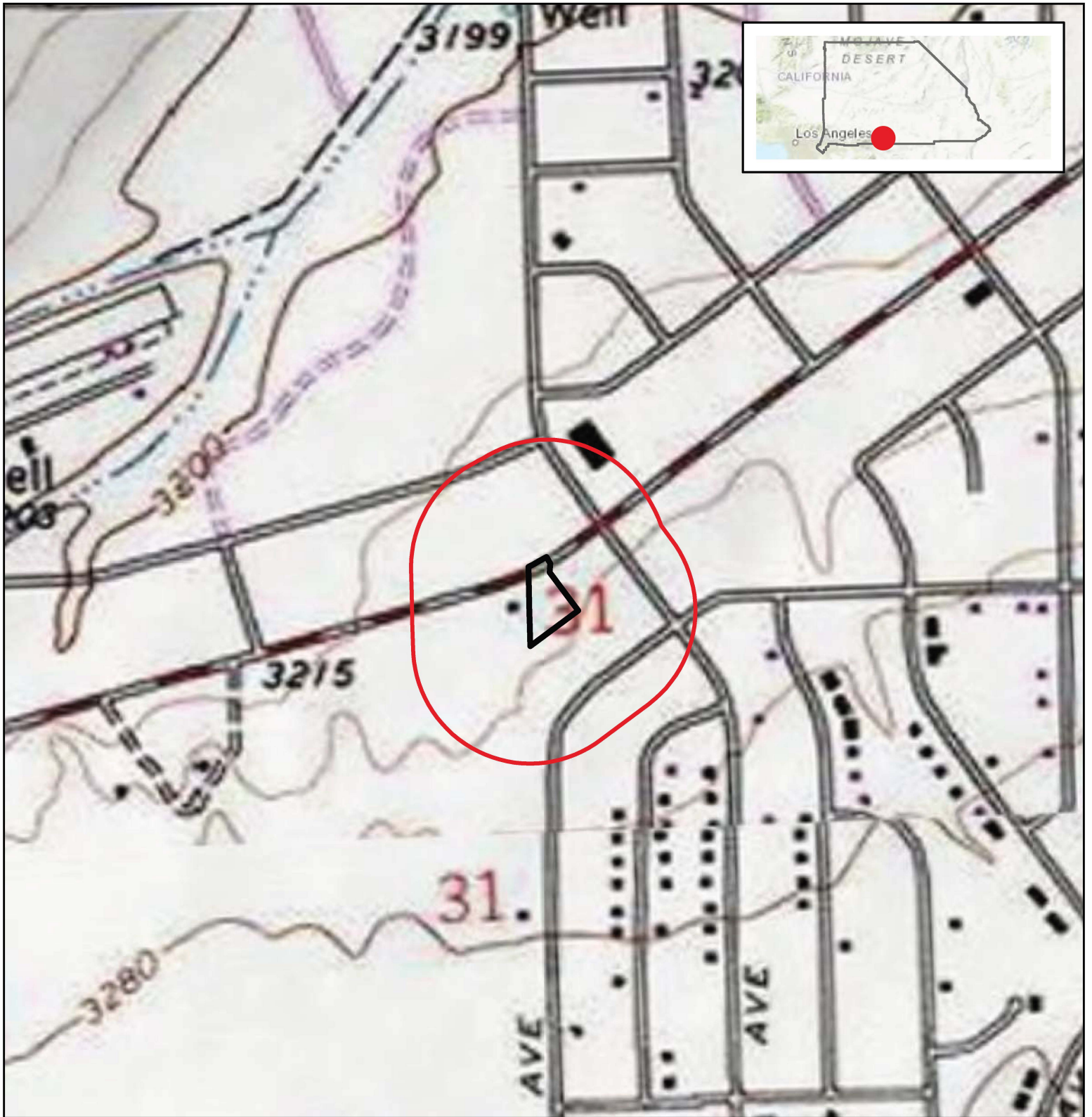
## 1.1 Project Description

### 1.1.1 Location and Setting

The Project Site is in the Town of Yucca Valley in San Bernardino County at 58121 Twentynine Palms Highway (State Route 62) (Assessor Parcel Number 0601-416-05). The Project Site is within the U.S. Geological Survey (USGS) Yucca Valley North 7.5 Minute Topographical Quadrangle, and within Section 31 of Township 01 North (01N) and Range 06 East (06E). The Project Site is set within the east side of Yucca Valley, between two large commercial developments. The entire parcel for the Project Site is 1.01-acres in size and on the south of Twentynine Palms Highway (State Route 62) between Big 5 Sporting Goods and Walgreens. The Project Site is approximately 1.02-mile east of State Route 247 and 17.31-mile northeast of Interstate 10. More broadly, the Project Site is within the Morongo Basin region of the High Desert in San Bernardino County, California (attached Figure 1 and Figure 2). The Project Site is currently designated by the Town's General Plan as Mixed Use (MU).

The Project Site is bordered by commercial development to the north, east, and west, and residential development to the south about 100-feet south of the development. Undeveloped land occurs in the southwest Study Area. The Project Site is largely undeveloped with some disturbed dirt road areas from off road vehicles and some areas of illegal dumping of garbage. One area in the extreme north of the Project Site is developed with a sidewalk, ornamental plants, a concrete wall, and a paved roadway that divides the project site from Twentynine Palms Highway and connects the east and west commercial developments.



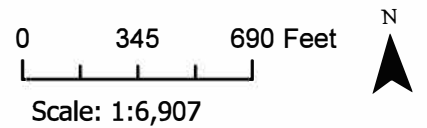


Source: ESRI USA Topo Maps and World Topo Map 2025

Yucca Valley Dutch Bros Coffee Project

## Figure 1. Project Location Map

-  parcel
-  500-foot buffer



Project Site is within Yucca Valley, California, in San Bernardino County on the USGS North Yucca Valley 7.5-minute quadrangle map in Section 31 of Township 01 North and Range 06 East

Center Coordinate (Decimal Degrees):  
 Latitude: 34.1276048°N Longitude: -116.3958401°W



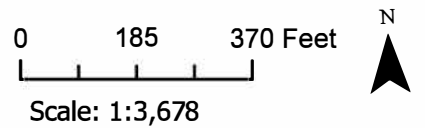


Source: ESRI Aerial Map 2025

Yucca Valley Dutch Bros Project

Figure 2. Project Vicinity

-  parcel
-  500-foot buffer



## 1.1.2 Proposed Development

The Project proposes the construction and operation of an approximately 1,025-square-foot Dutch Bros Coffee restaurant with a dual-lane drive-through facility and associated site improvements. The drive-through is designed to accommodate 23 queued vehicles. In addition to on-site improvements, the Project also includes off-site roadway improvements consistent with the Town's circulation plans, including the future widening of Twentynine Palms Highway to an ultimate half-width of 67 feet along the Project frontage. The Project would incorporate approximately 10,350 square feet of landscaping and would retain 2,808 square feet of existing landscaping near Twentynine Palms Highway. All equipment and construction staging would occur within the boundaries of the Project Site. Current project plans are attached within Appendix D.

## 1.2 Methodology

This biological resource assessment is based on information compiled through a reconnaissance survey and a literature review involving an assessment of appropriate reference materials and literature regarding the biological resources of the region.

### 1.2.1 Literature Review

The assessment of the project began with a review of literature relating to the natural resources — flora, fauna, and water resources — that are possibly within the study area and project site. The following were consulted:

#### **Flora and Fauna**

- The California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) was reviewed to identify special-status plants and animals that have previously recorded in the United States Geological Survey (USGS) North Yucca Valley 7.5" quad in which the proposed development footprint is located, and the eight surrounding USGS 7.5" quads: Joshua Tree North, Joshua Tree South, Yucca Valley South, Bighorn Canyon, Goat Mountain, Rimrock, Morongo Valley, and Landers (CDFW 2025a).
- CDFW California Wildlife Habitat Relationships (CWHHR) life history accounts and range maps (CDFW 2025b)
- United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS) Information for Planning and Consultation (IPaC) (USFWS 2025a)
- USFWS Designated and Proposed Critical Habitat GIS data (USFWS 2025b)
- California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants of California (CNPS 2025a)

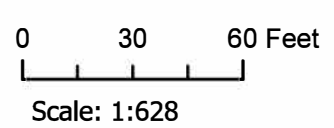


Source: ESRI Aerial Map 2025

Yucca Valley Dutch Bros Project

### Figure 3. Proposed Development

-  Project Site
-  Project Footprint



## **Water Resources**

- National Hydrography Dataset (USGS 2025a)
- National Wetlands Inventory (USFWS 2025c)
- California Protected Areas Database (CPAD 2025)

## **Soil Resources**

- US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soils Database (USDA 2025)

### **1.2.2 Field Reconnaissance and Focused Joshua Tree Survey**

South Environmental biologist Lucas South conducted a field reconnaissance on October 28, 2025 to record plants and animals observed on the site, characterize and map plant communities, and assess the potential for special-status species to occur. The findings described in the reports are cited in the Literature Review, and results are referenced throughout the analysis in this report. A focused survey for Joshua Trees was also conducted concurrently with the field reconnaissance and the survey report is attached in Appendix E.

## 2. Environmental Setting

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### 2.1 Topography and Climate

The project site is within the Morongo Basin just south of the Little San Bernardino Mountains of the Transverse Ranges in southern California. Due to being within the High Desert of the Mojave, the region is arid with desert plains, rocky outcrops, and rugged hills with landmarks such as Bartlett Mountains to the northeast, Burnt Mountain to the south, Joshua Tree National Park to the east, and Water Canyon to the west. The Project Site is very flat, though a deep wash occurs in the west Study Area approximately 150-feet to the southwest. The highest elevation for the project site is approximately 3,248 ft. (990 m.) above mean sea level (amsl) near the southeast border. The lowest elevation for the project site is approximately 3,234 ft. (986 m.) amsl near the north border (USGS 2025). The climate in the region is hot and dry, with average summer high temperatures in the mid-90s and average winter lows in the mid 30s. Average yearly rainfall is approximately 4.8-inches, and the wettest months are December - January. There is almost no precipitation between April - July.

### 2.2 Soils and Surface Geology

Soils in the Study Area from the Online Web Soil Survey Mapper (USDA/NRCS 2025) are 100% Typic Torriorthents and Typic Haplargis, which occurs in fan aprons and is derived from igneous rock. This soil type is gravelly sandy loam, occurs at 2 to 8 percent slopes, and is somewhat excessively drained. The surface geology geologic unit for both the project site and study area contains older alluvium surficial sediments of sedimentary and volcanic rocks from the Pleistocene Epoch (USGS 2025b, Dibblee 1967).

### 2.3 Plants

A total of 41 plant species were identified on the Project Site and Study Area. The habit of the species consisted of trees, shrubs, succulents, perennial herbs, and annual herbs. A list of the species observed, and their California Rare Plant Rank (CRPR) is presented below in Table 1 (CNPS 2025a). Species listed with an asterisk are considered invasive by the California Invasive Plant Council (Cal-IPC 2025).

**Table 1. List of Plant Species Observed at the Project Site and Study Area**

<u>Common name</u>	<u>Scientific name</u>	<u>On project site</u>	<u>CRPR</u>	<u>Federal/ State</u>
small Philippine acacia	<i>Acacia confusa</i>	No	NR	--
flatspine bur ragweed	<i>Ambrosia acanthicarpa</i>	Yes	NR	--
common burrobush	<i>Ambrosia salsola</i>	Yes	NR	--
freckled milkvetch	<i>Astragalus lentiginosus</i>	Yes	NR	--
desert broom	<i>Baccharis sarothroides</i>	Yes	NR	--
*Asian mustard	<i>Brassica tournefortii</i>	Yes	NR	--
*cheatgrass	<i>Bromus tectorum</i>	No	NR	--
crimson bottlebrush	<i>Callistemon citrinus</i>	No	NR	--
*crimson fountain grass	<i>Cenchrus setaceus</i>	Yes	NR	--
palo verde	<i>Cercidium floridum</i> subsp. <i>Floridum</i>	No	NR	--
desert willow	<i>Chilopsis linearis</i>	Yes	NR	--
California croton	<i>Croton californicus</i>	Yes	NR	--
silver cholla	<i>Cylindropuntia echinocarpa</i>	Yes	NR	--
desert spoon	<i>Dasyliion wheeleri</i>	Yes	NR	--
sacred datura	<i>Datura wrightii</i>	No	NR	--
California jointfir	<i>Ephedra californica</i>	Yes	NR	--
Rough jointfir	<i>Ephedra aspera</i>	Yes	NR	--
Indian ricegrass	<i>Eriocoma hyenoides</i>	Yes	NR	--
yerba santa	<i>Eriodictyon californicum</i>	Yes	NR	--
California buckwheat	<i>Eriogonum fasciculatum</i>	No	NR	--
*redstem stork's bill	<i>Erodium cicutarium</i>	Yes	NR	--
broom snakeweed	<i>Gutierrezia sarothrae</i>	Yes	NR	--
*salt lover	<i>Halogeton glomeratus</i>	Yes	NR	--
big galleta	<i>Hilaria rigida</i>	Yes	NR	--
black walnut	<i>Juglans californica</i>	No	4.2	Endemic
tumbleweed	<i>Kali tragus</i> subsp. <i>Tragus</i>	Yes	NR	--
creosote	<i>Larrea tridentata</i>	Yes	NR	--
Texas ranger	<i>Leucophyllum frutescens</i>	Yes	NR	--
birdcage evening primrose	<i>Oenothera deltoides</i>	No	NR	--
*olive	<i>Olea europaea</i>	No	NR	--
beavertail cactus	<i>Opuntia basilaris</i>	No	NR	--
manybristle chinchweed	<i>Pectis papposa</i>	Yes	NR	--
pinos	<i>Pinus</i> spp.	No	NR	--
velvet mesquite	<i>Prosopis velutina</i>	Yes	NR	--
rosemary	<i>Salvia rosmarinus</i>	No	NR	--
lotebush	<i>Sarcophalus obtusifolius</i>	No	NR	--
cat claw acacia	<i>Senegalia greggii</i>	Yes	NR	--
desert globe mallow	<i>Sphaeralcea ambigua</i>	No	NR	--
woolly tidestromia	<i>Tidestromia lanuginosa</i>	No	NR	--



<u>Common name</u>	<u>Scientific name</u>	<u>On project site</u>	<u>CRPR</u>	<u>Federal/ State</u>
Joshua tree	<i>Yucca brevifolia</i>	Yes	NR	State Candidate
<i>*=invasive species; NR=Not Ranked</i>				

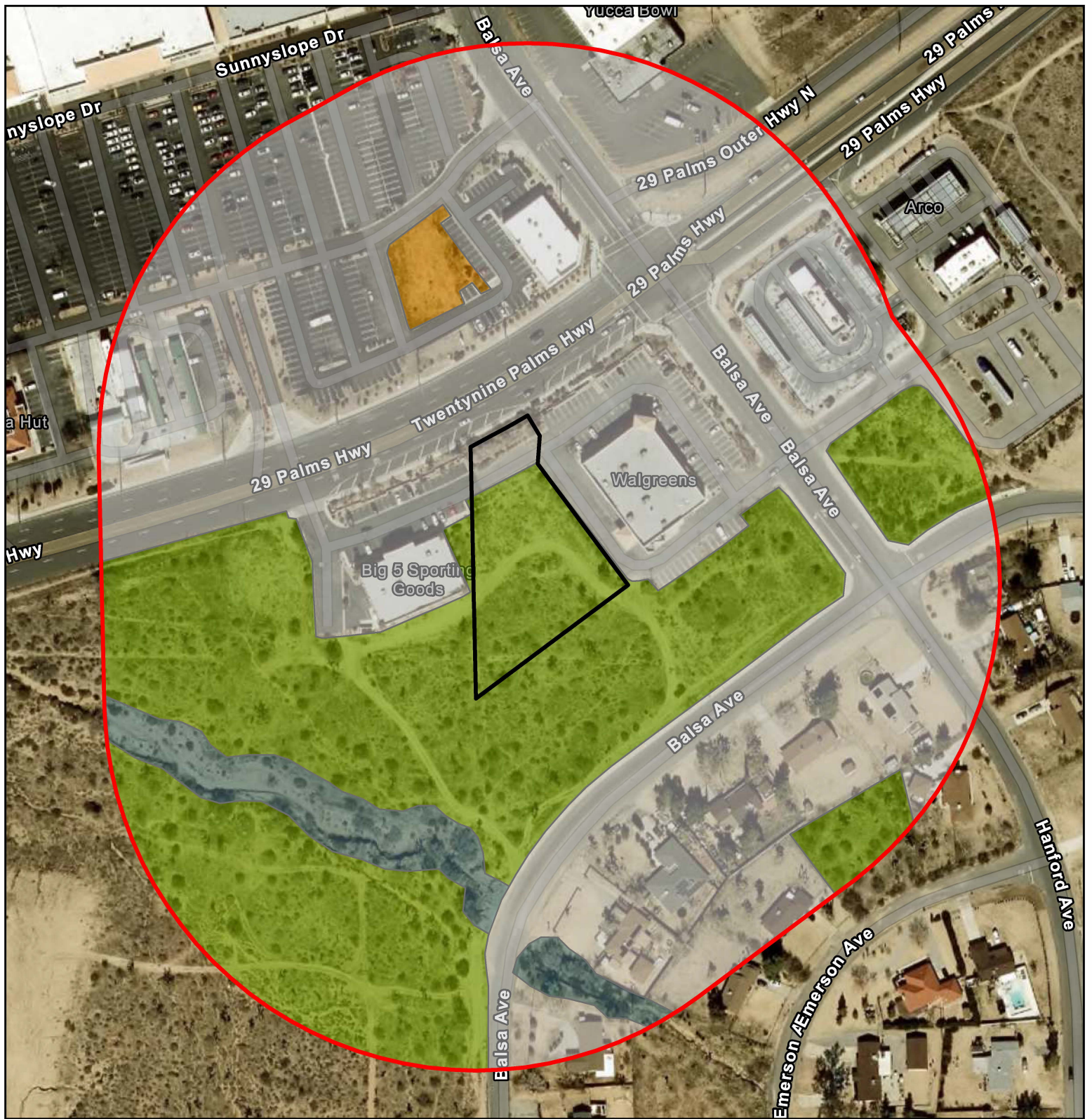
## 2.4 Plant Communities and Land Cover

There are two land cover types and two plant communities in the study area and the project site. Each is shown in Figure 4 below and the acres of each is summarized in Table 2 below.

**Table 2. Summary of Plant Communities on the Study Area and Project Site**

<b>Community or Cover Type</b>	<b>Acres on Study Area</b>	<b>Acres on Project Site</b>	<b>Acres Permanently Impacted by Project</b>	<b>Global / State Rank</b>
Joshua Tree Woodland	9.83	0.88	0.88	G4/S3.2
Desert Willow Woodland	1.18	0	0	G4/S3
Developed/Ornamental	18.63	0.14	0	N/A
Ruderal	0.28	0	0	N/A
<b>Total</b>	<b>29.92</b>	<b>1.02</b>	<b>0.88</b>	-



- Joshua Tree Woodland** (*Yucca brevifolia* Woodland Alliance) (CNPS 2025b) occurs on 9.83-acres of the Study Area and 0.88-acres of the Project Site. It has a global/state rarity ranking of G4/S3.2, which is considered a sensitive community in California. It is dominated by Joshua trees that form a canopy that is open to intermittent over an open shrub canopy containing other species such as common burrobrush, California ephedra, creosote bush, flatspine bur ragweed, and silver cholla, as well as occasional trees including desert willow and cat claw acacia. The herbaceous layer is also open to intermittent with perennial grasses and seasonal annuals observed such as crimson fountain grass, many-bristle chinchweed, and Asian mustard. The groundcover degrades this community with invasive and non-native, and the level of disturbance overall is very high from dirt roads that travel through the project site, illegal dumping of garbage, and the general trash and degradation from human presence associated with the adjacent Walgreens and Big 5 stores. The degraded community is unlikely to support special status species due to the level of disturbances and alterations from the typical natural community. A total of 0.88-acres of Joshua Tree Woodland would be permanently impacted by the proposed development.







Source: ESRI Aerial Map 2025

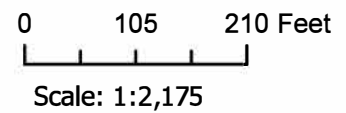
Yucca Valley Dutch Bros Coffee Project

Figure 4. Plant Communities and Land Cover

-  Project Site
-  500-foot buffer

Community

-  Desert Willow Woodland
-  Developed/Ornamental
-  Joshua Tree Woodland
-  Ruderal



- **Desert Willow Woodland** (*Chilopsis linearis* Woodland Alliance) (CNPS 2025b) occurs on 1.18-acre of the Study Area and 0-acre of the Project Site. It has a global/state rarity ranking of G4/S3, which is considered a sensitive community in California. This community occurs along and within a dry desert wash in the southwest Study Area. This plant community is dominated in the tree canopy by desert willow trees and shrubs that form an open canopy with other small trees such as cat claw acacia. The shrub layer includes species such as California buckwheat, California ephedra, creosote, and common burrobush. The herbaceous layer is sparse with native perennials such as big galleta and many-bristled chinchweed.
- **Developed/Ornamental** land cover occurred on 18.63-acres of the Study Area and 0.14-acres of the Project Site. Developed land does not have a rarity rating and is unable to support special status species. The developments included single-family houses, commercial developments, and paved roads, which landscaped plants. Among others, common plants observed in the developed areas included blue palo verde, Texas ranger, olive, rosemary, and California black walnut. A total of 0-acres of developed/ornamental land cover would be permanently impacted by the proposed development.
- **Ruderal** land cover occurred on 0.28-acres of the Study Area and is not on the Project Site. Ruderal communities do not have a community sensitivity rating. This land cover type occurs in the north Study Area surrounded by commercial developments. This land cover type was characterized by disturbed soils and a sparse covering of native and non-native annual and perennial herbs. Plant species were dominated by flatspine bur ragweed and tumbleweed. Other species observed included desert broom, desert willow, and Texas ranger.

## 2.5 Wildlife

Seven common desert wildlife species were observed in the project site and study area during the site visit and are shown in Table 3 below. Although few wildlife were observed during the site visit, most desert species are not active midday, and therefore many more species are expected to occupy the site.

**Table 3. Summary of Wildlife Observed within the Study Area**

<b>Common name</b>	<b>Scientific name</b>	<b>Taxa</b>	<b>Status</b>
Verdin	<i>Auriparus flaviceps</i>	Birds	None
Common raven	<i>Corvus corax</i>	Birds	None
Roadrunner	<i>Geococcyx californianus</i>	Birds	None
European house sparrow	<i>Passer domesticus</i>	Birds	None
California Ground squirrel	<i>Otospermophilus beecheyi</i>	Mammals	None



<u>Common name</u>	<u>Scientific name</u>	<u>Taxa</u>	<u>Status</u>
Say's phoebe	<i>Sayornis saya</i>	Birds	None
Mourning dove	<i>Zenaida macroura</i>	Birds	None

## 2.6 Special-Status Species

The literature analysis of the CNDDDB, CNPS, and IPAC databases for special-status species with the potential to inhabit the project site resulted in 63 special-status species, including 34 plants and 29 animals. The list includes rare, threatened, endangered species at a federal and state level. In the case of plants, it also includes California Rare Plant Rank (CRPR) species with a classification of 1-4.

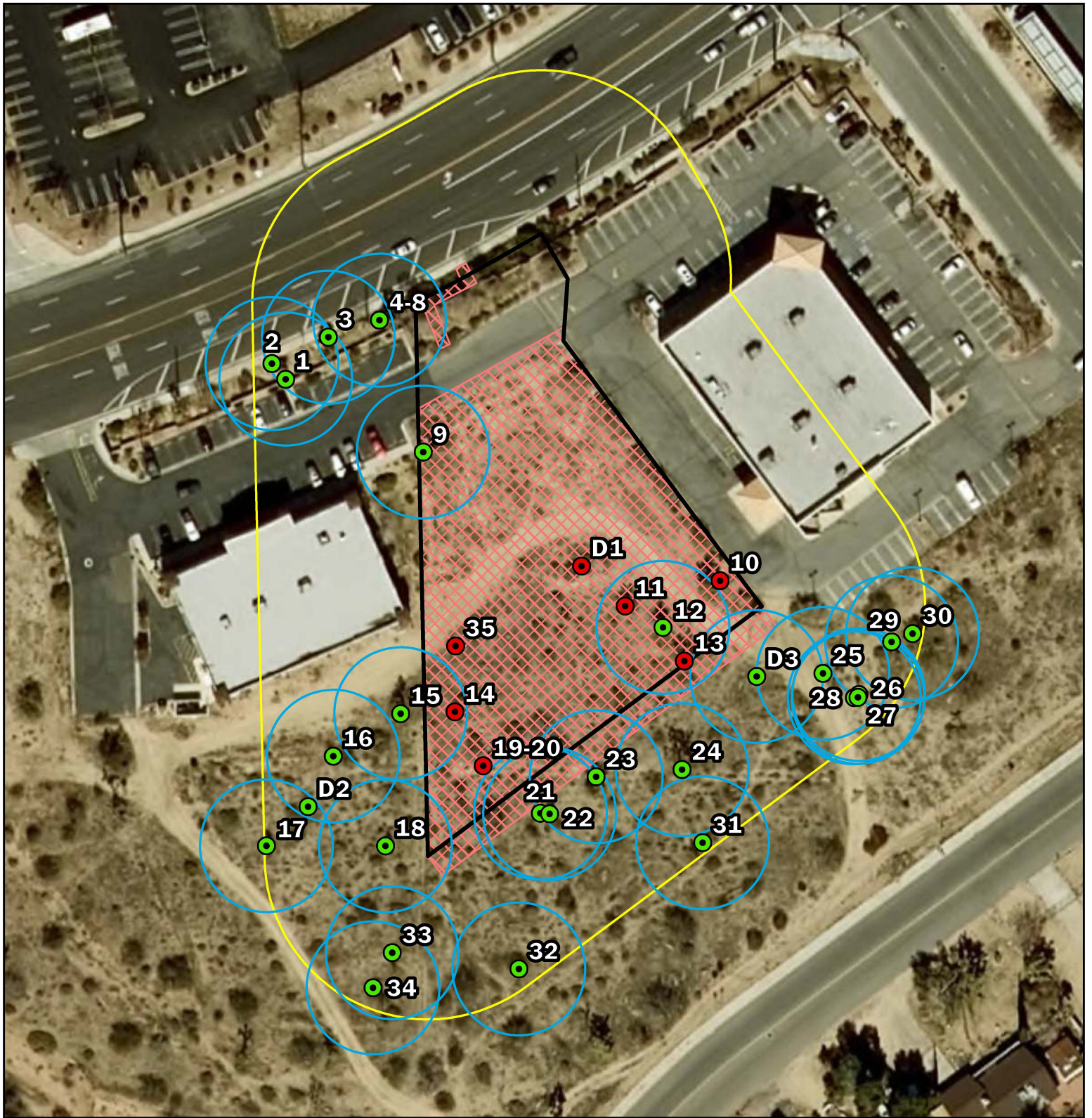
### 2.6.1 Special-Status Plants

During the field reconnaissance, western Joshua tree was observed throughout the site. Western Joshua tree is a Candidate species for listing under the CESA and is protected by the Western Joshua Tree Conservation Act. The 34 special-status plant species that CNDDDB, CNPS, and IPAC identify as occurring in the region of the project and an assessment of their likelihood to inhabit the project site are presented in Appendix B. The Joshua Tree Woodland on the Project Site has heavy disturbance from non-native herbaceous plants and human activity such as dirt roads and illegal garbage dumping, which reduces the potential for special-status plants to occur on the Project Site. Based on the analyses in Appendix B, no other special-status plants have the potential to occur on the project site due to the high level of disturbance and ecological degradation, and none were observed during the survey.

#### Western Joshua Tree

**Western Joshua tree** (*Yucca brevifolia*) is a monocot that is a candidate species for listing under the CESA and is protected by the Western Joshua Tree Conservation Act. The species has a general habitat that includes Joshua tree woodland, montane chaparral, pinyon and juniper woodland, and Sonoran and Mojavean desert scrub. It has been recorded at elevations between 750-2,200 meters (2,461-7,218 feet).

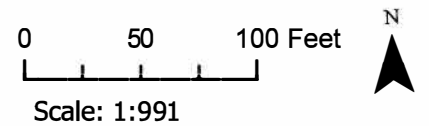
Based on the findings of the Joshua Tree Survey Report in Appendix E, a total of 38 Joshua trees were identified in the survey area (within 100-feet of the project site). These are shown in Figure 5 below and summarized in Table 4. Of the 38 Joshua trees surveyed, 3 were Class A, 32 Class B, and 3 Class C. A total of 3 Joshua trees were dead (labeled D1-D3) and 35 were mature live trees. Of the mature live trees, 25 had fruits or flowers.



Source: ESRI Aerial Map 2025

Yucca Valley Dutch Bros Project

Figure 5. Joshua Tree Inventory



- Joshua Trees to be Removed
- Joshua Trees to Remain
- 15m buffer
- Project Site
- Survey Area
- Project Footprint



**Table 4. Summary of Western Joshua Tree Inventory**

Size Class (height)	# of Joshua Trees	Live	Dead	Mature	Fruits/Flowers	Within 15m of project	Removals
Class A <1m	3	3	0	0	0	0	0
Class B 1m-5m	32	29	3	27	22	19	8
Class C >5m	3	3	0	3	3	3	0
<b>Total</b>	<b>38</b>	<b>35</b>	<b>3</b>	<b>30</b>	<b>25</b>	<b>22</b>	<b>8</b>

## 2.6.2 Special-Status Wildlife

The 29 special-status animal species that CNDDDB, CNPS, and IPAC identify as occurring in the region of the project and an assessment of their likelihood to inhabit the project site are presented in Appendix B. No special-status animal species were observed during the survey and the degradation of the Project Site from invasive plants, onsite disturbances, and adjacent development limits the potential for special status wildlife to occur. However, based on the analysis in Appendix B, 2 special-status animals have a moderate potential to occur on the project site due to the presence of suitable habitat, which are discussed below:

1. **Coast horned lizard** (*Phrynosoma blainvillii*) is a reptile that is a CDFW Species of Special Concern. This lizard frequents a wide variety of habitats, most commonly in lowlands along sandy washes with scattered low bushes for cover, open areas for sunning, patches of loose soil for burial, and an abundant supply of ants and other insects. There are six CNDDDB records within the region of the project and the record nearest the Project Site is located .07 miles to the east. This species has a **moderate** potential to occur in the study area because it contains intact desert habitats and sandy washes with loose soils. This species is less likely to occur on the project site and is most likely to occur in the desert wash outside of the project site.
2. **Le Conte's thrasher** (*Toxostoma lecontei*) is a bird that is a CDFW Species of Special Concern and USFWS Bird of Conservation Concern. This species is primarily found in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats. Le Conte's thrasher commonly nests in dense, spiny shrub or densely branched cactus in desert wash habitat 2 to 8 feet above the ground. There are twelve CNDDDB records within the region of the project and the record nearest the project site is from 2010 and is located 3.31-miles to the east. This species has a **moderate** potential to occur in the study area because it contains desert wash and desert scrub habitats.

## 2.7 Sensitive Natural Communities

CDFW 2018 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* defines sensitive natural communities as those that are “of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects.” CDFW considers a natural community sensitive if it has a Global or State rarity rank of 1-3, which includes communities that are vulnerable (G3/S3), imperiled (G2/S2), and critically imperiled (G1/S1). CDFW uses the alliances and groups described in the California Natural Community List (CDFW 2025c) and the California Natural Communities List from A Manual of California Vegetation Online (CNPS 2025b) to characterize California’s natural communities. The current global and state rarity rank for natural communities of California are listed in these resources.

Developed and disturbed areas do not qualify for CDFW rankings and are not considered sensitive plant communities. The Desert Willow Woodland in the study area has a Global rarity rank of G4 and a State rarity rank of S3; therefore, it is considered a sensitive natural community in California by the CDFW. The Joshua Tree Woodland in the study area has a Global rarity rank of G4 and a State rarity rank of S3.2, which is considered a sensitive natural community in California by the CDFW.

## 2.8 Protected Trees

The study area is within the incorporated town of Yucca Valley in San Bernardino County. According to the Town of Yucca Valley Code of Ordinances (Yucca Valley 2025), regulated native plants require a Plant Removal Permit, including the following:

- All species of the genus *Prosopis* (mesquites) two (2) inches or more in diameter or six (6) feet or more in height.
- All species yuccas (yucca, Mojave yucca, Our Lord’s candle, etc.)
- Creosote Rings, ten feet or greater in diameter
- All Joshua trees (*Yucca brevifolia*)
- California Juniper
- Desert willow
- Pinon pine
- Palo verde
- Manzanita
- All plants protected or regulated by California Desert Native Plants Act

The study area contains western Joshua trees and desert willow.



## 2.9 Hydrology Features

According to the Environmental Protection Agency (EPA, 2025) the project site is located within Southern Mojave watershed (HUC8) and the Water Canyon subwatershed (HUC12). One unnamed and unmapped desert wash was observed in the Study Area approximately 200 feet southwest of the Project Site border. The wash is a dry streambed that hosts desert riparian plants, with a desert willow plant community. The exact jurisdiction of this wash is not determined however, it is likely under the jurisdiction of the CDFW and the Regional Water Quality Control Board. This feature was dry during the site visit though showed a clear ordinary high-water mark and a difference in vegetation type and soil substrate than the areas outside of the wash. The feature was several feet deep and hosted desert willow, cat claw acacia, California buckwheat, and common burrobush, among other native annuals and shrubs. This feature is an intact desert wash habitat and likely flows intermittently. There are no water features on the project site or impact areas.

## 2.10 Wildlife Movement Areas

The assessment of the potential for wildlife movement to and from the project site consisted of consulting the following resources:

- United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS) Information for Planning and Consultation (IPaC) (USFWS 2025a)
- USFWS Designated and Proposed Critical Habitat GIS data online (USFWS 2025b)
- GreenInfo Network, Park Information online (2025)
- California Protected Areas Database Map online (CPAD 2025)

Aerial photographs were used to assess the level of connectivity of large expanses of habitat to the Project Site. The foremost considerations were whether there was a direct connection of high-quality habitat to the site — without interference from development — and whether the connecting habitat is linked to large habitat tracts or protected habitats. During the South Environmental field visit, the Study Area was assessed for its potential use as a wildlife corridor or habitat linkage. The level of disturbance of the Study Area is by way of development that includes roads, houses, fences, and lighting. The Study Area was assessed for the presence of a corridor of linkage of habitat that connects the Study Area to adjacent and higher-quality habitat.

The Joshua Tree Woodland on the study area extends west and southwest beyond the Study Area boundary between further developed areas. This large undeveloped Joshua Tree woodland is bordered on all sides by developments such as roads and businesses and does not have connectivity to other open spaces or habitats. The Project Site is an endpoint of this community that is highly disturbed and bordered by large-scale commercial developments and major paved roadways. Any large open spaces or habitats are east of the Project Site across several roads and



lines of housing developments. Therefore, no wildlife corridors were found in the Study Area as there is no linkage to large habitats. The lack of connectivity limits the potential for special status plants and wildlife to populate the site from areas of high quality habitats. Therefore, the Project Site is not considered a wildlife movement corridor or habitat linkage area.

## 3. Impacts Analysis

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For the purposes of this report, impacts to protected biological resources are analyzed within the context of the regulatory setting. Below is an overview of the federal, state, and local regulations pertaining to protected biological resources in the study area, and an analysis of impacts to those resources that may occur as a result of the proposed development follows.

### 3.1 Regulatory Setting

#### 3.1.1 Federal Regulations

##### **Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA) protects individuals as well as any part, nest, or eggs of any bird listed as migratory. In practice, federal permits issued for activities that potentially impact migratory birds typically have conditions that require pre-disturbance surveys for nesting birds. In the event nesting is observed, a buffer area with a specified radius must be established, within which no disturbance or intrusion is allowed until the young have fledged and left the nest, or it has been determined that the nest has failed. If not otherwise specified in the permit, the size of the buffer area varies with species and local circumstances (e.g., presence of busy roads, intervening topography, etc.), and is based on the professional judgment of a monitoring biologist. A list of migratory bird species protected under the MBTA is published by USFWS.

#### 3.1.2 California Regulations

##### **California Environmental Quality Act (CEQA)**

The California Environmental Quality Act (CEQA) is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. CEQA applies to certain activities of state and local public agencies. A public agency must comply with CEQA when it undertakes an activity defined by CEQA as a “project.” A project is an activity undertaken by a public agency or a private activity which must receive some discretionary approval (meaning that the agency has the authority to deny the requested permit or approval) from a government agency which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment.

An Initial Study (IS) is prepared when a proposed action is determined to be a “project” under CEQA. The IS is a checklist that asks specific questions about the project’s level of environmental impacts in many categories, including biological resources. The checklist includes a series of



questions to determine the projects level of potential impacts in each of the categories. The CEQA Checklist includes the following questions regarding biological resources:

- *Would the project:*
  - *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*
  - *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*
  - *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*
  - *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*
  - *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance*
  - *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

Potential level of impact choices includes: No Impacts, Less Than Significant Impact, Less Than Significant with Mitigation Incorporated, and Potentially Significant Impact. For projects that have no impact or less than significant impact a Negative Declaration is prepared, for those with Less Than Significant with Mitigation Incorporated prepare a Mitigated Negative Declaration, and for those with a Potentially Significant Impact prepare an Environmental Impact Report (EIR).

## **California Endangered Species Act**

The California ESA mirrors the main tenets of the U.S. ESA with a few exceptions and is legislated through the Fish and Game Code, chapter 1.5, sections 2050-2115.5. One major difference is that under the California ESA, a species can be a “candidate” species for listing, a category that does not exist under the U.S. ESA. Similar to the U.S. ESA, Section 2080 of the Code prohibits the “import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species.” The idea of “take” in terms of listed species is defined in Section 2086 of Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” In contrast to the U.S. ESA, the Code does not include the idea of “harass” or “harm” in the definition of take. The U.S. ESA uses Habitat Conservation Plans (HCPs) whereas the California ESA uses “Natural Community Conservation Planning (NCCP). Central tents of an NCCPS are to “promote coordination, effectively address cumulative impact concerns, and promote

conservation of un-fragmented habitat areas, promote multispecies and multi-habitat management". Importantly, if a species is listed both under the U.S. ESA and the California ESA, a "consistency determination" can be requested to the California Department of Fish and Wildlife requesting that the federal "take" complies with the California "take" regulations which would effectively avoid further deliberations for the take under the California ESA.

### **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Act requires the adoption of water quality control plans (basin plans) that give direction to managing water pollution in California. The basin plans get adopted and administered by the Regional Water Quality Control Board (RWQCB). The plans incorporate the beneficial uses of the waters of the State and then provide objectives that should be met to maintain and protect these uses. Along with the Regional Water Boards, the State Water Resources Board can issue and enforce permits containing waste discharge requirements to maintain clean surface water and groundwater. Each basin plan identifies the specific beneficial uses of water in their region for the past, present, and future. These basin plans also all have objectives for which the plan clearly states steps that are being taken or will be taken to meet the objectives. These objectives are created for the purpose of keeping the water clean and safe to use beneficially. The Regional Board has the authority to give out permits for the purpose of waste disposal or waste assimilation.

### **State of California Fish and Game Code Section 1600**

Fish and Game Code Section 1602 outlines the Lake and Streambed Alteration Agreement (LSAA) permitting process, and states:

- An entity shall not 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, or 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

Fish and Game Code Section 1602 requires any entity (defined as any person, State or local governmental agency, or public utility) to notify the CDFW before beginning any activity that will do one or more of the following:

- substantially divert or obstruct the natural flow of and river, stream, or lake, or
- substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or
- 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.



A permit, known as a Lake or Streambed Alteration Agreement, from CDFW is required to conduct any of the activities described above.

### **Western Joshua Tree Conservation Act**

The Western Joshua Tree Conservation Act is the current legislation in the State of California for use in protection of the Joshua tree and was passed on 2023. Foremost, the legislation prohibits the importation, export, take, possession, purchase, or sale of any western Joshua tree in California unless authorized by CDFW. The Act currently supersedes the California Endangered Species Act (ESA) and authorizes CDFW to issue permits for the “take” of one or more western Joshua trees if the permittee meets specific conditions. Permittees have the opportunity to relocate a Joshua tree in areas impacted by development or pay a fee in lieu of conducting mitigation activities. The legislation also grants the CDFW the authority to issue permits for the removal of dead western Joshua trees and trimming of live western Joshua trees.

The legislation allow for agreements to be made between the CDFW and any county or city which limit the authority to permit the taking of a Joshua tree associated with developing single-family residences, multifamily residences, accessory structures, and public works projects. A similar agreement between the CDFW and a county or city can also be authorized to limit the authority to permit the removal of dead and trimming of live Joshua trees.

With this legislation, in-lieu fees collected will be deposited into the “Joshua Tree Conservation Fund” for appropriation to CDFW strictly with the goal of acquiring, conserving, and managing Joshua tree conservation lands and carrying out other project to conserve the species.

Additionally, the act mandates the CDFW with development and implementation of a Joshua tree conservation plan in collaboration with governmental agencies, California Native American Tribes, and the public. A draft of the plan must be presented by December 31, 2024, at a public meeting of the Fish and Game Commission for its review and approval. Finally, CDFW must produce annual reports assessing the conservation status of the western Joshua tree (State of California, 2023).

### **In cases of private development the following is a summary of important conservation measures under the Western Joshua Tree Conservation Act:**

The Western Joshua Tree Conservation Act stipulates several measures to assist with the assessment of impacts to and mitigation for western Joshua tree in areas proposed for development. Permittees may mitigate loss or damage to trees by relocating them or by paying specified fees in lieu of conducting mitigation. Under the act, all in-lieu fees collected will be deposited into the Western Joshua Tree Conservation Fund for the purposes of acquiring, conserving, and managing western Joshua tree conservation lands and completing other activities to conserve the western Joshua tree.



## **Western Joshua Tree Conservation Plan**

The Western Joshua Tree Conservation Act requires the California Department of Fish and Wildlife (CDFW) to develop and implement a Western Joshua Tree Conservation Plan (Conservation Plan) in collaboration with the Commission, governmental agencies, California Native American tribes (Tribes), and the public (Fish & G. Code, § 1927.6, subd. (a)). The plan was approved and finalized in August 2025. The Conservation Plan provides guidelines for western Joshua tree conservation, criteria to help define effectiveness of management actions, monitoring of management outcomes, and a process of adaptive management to refine and improve the management actions over time. The management actions can be incorporated into project approvals by local, state, and federal government agencies that authorize projects or resource management programs in western Joshua tree's range in California.

The Conservation Plan describes the steps required to achieve the vision of conserving western Joshua tree and its habitat in California such that listing under CESA will not be needed. The Conservation Plan can be divided into two parts: The first part summarizes guiding concepts and currently available information, and the second part describes management actions and the implementation approach for conserving western Joshua tree and achieving the vision of the Conservation Plan.

Chapter 5 of the Conservation Plan describes Conservation Management Actions and Effectiveness Criteria, and specifically Section 5.2.1 is focused on Impact Avoidance and Minimization that is often associated with construction projects. According to the section, the first priority for conservation of western Joshua tree and its habitat is to avoid adverse impacts altogether. When complete avoidance cannot be achieved, efforts should be made to minimize impacts on western Joshua tree and its habitat, and the presence of tribal cultural monitors and a trained arborist to minimize these impacts are encouraged. Minimization may include efforts to reduce the number of trees and seeds taken; the area of habitat that is lost or degraded; the severity of impacts on individual trees; impacts on other organisms on which western Joshua tree depends; and indirect impacts on trees, seeds, habitats, and other ecologically related organisms.

The avoidance and minimization actions in this section could be voluntarily adopted and implemented by project proponents and land managers, incorporated into project approvals by local governments and regulatory agencies, or incorporated into voluntary, cooperative agreements between relevant agencies, organizations, and other parties. The Western Joshua Tree Conservation Act (WJTCA) requires the avoidance and minimization of impacts on western Joshua tree to the maximum extent practicable as a condition of obtaining a WJTCA incidental take permit (ITP) (Fish & G. Code, § 1927.3, subd. (a)(2)). WJTCA also states that the Conservation Plan shall include guidance for the avoidance and minimization of impacts on western Joshua trees and protocols for the successful relocation of western Joshua trees (Fish & G. Code, § 1927.6, subd. (a)).



The following Management Actions are Recommended for construction projects:

1. Avoid direct and indirect impacts by project design that retains healthy trees, buffer areas for remaining trees, limit pesticide application, avoid OHV use, and avoid overgrazing.
2. Minimize direct and indirect impacts by avoiding trees, relocating trees, collect and store seeds, and minimizing invasive plants.
3. Minimize impacts from wildlife and wildfire suppression.

### **State of California Fish and Game Code Section 3500**

Section 3503.5 of the California Fish and Game Code states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Activities that result in the abandonment of an active bird of prey nest may also be considered in violation of this code. In addition, California Fish and Game Code, Section 3511 prohibits the taking of any bird listed as fully protected, and California Fish and Game Code, Section 3515 states that it is unlawful to take any non-game migratory bird protected under the MBTA.

### **California Migratory Bird Protection Act**

The California Migratory Bird Protection Act (MBPA) was enacted in September 2019 to reinforce the MBTA at the state level. The Act states:

- “It is unlawful to take or possess any migratory nongame bird as designated in the federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.), or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the United States Secretary of the Interior under that federal act.” This section became operative starting on January 20, 2025.

### **California Desert Native Plants Act**

The purpose of the 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 under many circumstances 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



### 3.1.3 Local Regulations

#### **Town of Yucca Valley Joshua Tree Ordinance**

This document is an addendum to the Town's General Plan Update certified environmental impact report (EIR), State Clearinghouse No. 2012111021, to address the Town's proposal to enact an urgency ordinance to establish regulations implementing the California Fish and Game Commission's Special Order relating to the take of western Joshua trees during the California Endangered Species Act (CESA) candidacy period and to remove the western Joshua tree from the Town's list of regulated desert native plants during the period the ordinance is effective, by adding new Chapter 9.56 to and amending Sections 9.07.130, 9.09.050 and 9.10.040 of the Town's Development Code (Proposed Project or Urgency Ordinance).

The temporary take authorization and related mitigation provisions of Urgency Ordinance are limited in scope and only apply to the three project types listed in and covered by the Special Order. Specifically, the temporary take authorization is limited to the Town's approval of single-family residences, accessory structures, and certain public works projects defined by the Special Order as:

- **Single Family Residence:** Single Family Residence means a single detached building that has been or will be constructed and used as living facilities, including provisions for sleeping, eating, cooking, and sanitation as required by the California Building Code for not more than one household. Nothing in this section shall be construed to authorize take of western Joshua tree for a subdivision or other development that includes more than one single-family residence.
- **Accessory Structure:** Accessory Structure means a subordinate structure, the use of which is incidental to an existing or contemporaneously constructed single-family residence, and includes: an accessory dwelling unit, addition to an existing single-family residence, garage, carport, swimming pool, patio, greenhouse, storage shed, gazebo, septic tank, sewer connection, solar panels, or gravel or paved driveway.
- **Public Works Project:** Public Works Project means a project for the erection, construction, alteration, maintenance, or repair, of any public structure, building, or road.

#### **Yucca Valley Municipal Code Chapter 9.56 (Removal of Joshua Tree)**

The purpose of this Chapter is to establish permitting standards and process for the issuance of take permits for the Western Joshua Tree as authorized pursuant to the Special Order approved by the California Fish and Game Commission pursuant to Fish and Game Code section 2084 on December 10, 2020 ("Special Order"). The Special Order was subsequently approved by the Office of Administrative Law, and went into effect on January 7, 2021. The requirements set forth in this Chapter are intended to protect the public's health, safety, and welfare by ensuring that take



permits for the Western Joshua Tree are only issued consistent and compliant with the Special Order. (Ord. 291, 1-19-2021). The Planning Commission may authorize the take of western Joshua tree associated with developing single-family residences, accessory structures, and public works projects concurrent with its approval of the project.

### **Yucca Valley Native Plant Ordinance**

The Yucca Valley Native Plant Ordinance was adopted by the Town of Yucca Valley in 2014 and was codified into the Town's Development Code Section 9.09.050 for commercial zoned parcels. The Ordinance stipulates that commercial development projects shall be allowed to transplant on and off site and to remove all regulated desert native plants from their native locations within the property boundaries, pursuant to the development standards and requirements. Regulated desert native plants for all commercial land development projects, include the following: Joshua tree (*Yucca brevifolia*), Mojave yucca (*Yucca schidigera*), Parry's nolina (*Nolina parryi*), California juniper (*Juniperus californica*), Our Lord's candle (*Yucca whipplei*), and Pinon pine (*Pinus monophylla*).

## **3.2 Project Impacts**

### **3.2.1 Impacts to Plant Communities and Sensitive Natural Communities**

As shown in Figure 4 and summarized in Table 2, the project would permanently remove 0.88 acre of Joshua Tree Woodland. Joshua Tree Woodland is considered a sensitive natural community by CDFW based on the state rarity ranking of 3.2. The Joshua Tree Woodland community is heavily disturbed by dirt roads/paths, illegal dumping, invasive plants, and adjacent developments; however, it still has some potential to support special status wildlife such as coast horned lizard and Le Conte's thrasher. Impacts to sensitive natural communities and habitat for special-status species can be considered significant according to CEQA but 0.88 acre is a minor amount of Joshua Tree Woodland and it is highly disturbed. The project must compensate for the loss of individual Joshua Trees per the Western Joshua Tree Conservation Act as describe in Mitigation Measure 2 in Section 3.2.3. Paying into the fund and protecting adjacent Joshua trees and Joshua Tree Woodlands surrounding the project site would ensure there is compensation for the loss of 0.88 acre from the project footprint. The in lieu fee program described in Mitigation Measure BIO-2 would result in the conservation, restoration, or protection of Joshua trees and Joshua Tree Woodlands into perpetuity. With the implementation of that mitigation the project impacts to 0.88 acre of disturbed Joshua Tree Woodland would be reduced to a level that is considered less than significant per the thresholds of CEQA.

### 3.2.2 Impacts to Nesting Birds and Raptors

The proposed development would require potential removal of trees, shrubs, and herbaceous plants in the landscaping that could provide potential nesting habitat for birds and raptors protected by the MBTA, MBPA, and the Fish and Game Code, including special-status birds such as Le Conte's thrashers. If present at the time of vegetation removal, active nests, eggs, or young could be destroyed or otherwise disturbed to a point at which the young do not survive, which would be a violation of the MBTA, MBPA, and the Fish and Game Code. In addition, indirect impacts from noise or vibration has the potential to disturb an active bird nest that may occur in adjacent landscaping to the point of failure if the nest is within immediate proximity to project activities, and this would also be a violation of the MBTA and Fish and Game Code. To avoid impacts to active bird or raptor nests, eggs, or young, preconstruction nesting bird surveys and monitoring is required per the MBTA and Fish and Game Code as described in Mitigation Measure BIO-1.

#### **Mitigation Measure BIO-1 - Preconstruction Nesting Bird and Raptor Survey**

- If possible, ground disturbing activities and vegetation removal should be timed to occur between September 1 – January 31, which is outside the bird and raptor nesting season.
- If ground disturbing activities or vegetation removal (including tree trimming) are scheduled between February 1 – August 31, which is the bird nesting season, a preconstruction survey for nesting birds should be conducted within 72 hours prior to construction activities. The survey should be conducted by a qualified biologist with prior experience conducting nesting bird surveys for construction projects. The study area should include the affected area and suitable habitat within a 500-foot buffer, or a buffer size determined by the qualified biologist based on level of proposed disturbance and access. If no active nests are found, no additional measures are required.
- If active nests are found the biologist will map the location and document the species and nesting stage. A no-work buffer will be established around the active nest as determined by the qualified biologist and based on the species' sensitivity to disturbance and the type and duration of the disturbance. Typical buffers would be 300-feet for songbirds, 500-feet for raptors and special-status species, but it can be determined based on the conditions on the site and recommendations of the qualified biologist. No construction activities shall occur within the no-work buffer until the biologist has determined the nest is no longer active.

### 3.2.3 Impacts to Special-Status Plants

Western Joshua tree occurs in the project area, and no other special-status plants are expected to occur due to the level of disturbances in the plant community. There are 22 Joshua trees within 15-meters of the proposed project footprint and 8 of those would be removed by the project because they are within the development footprint. Removals include 0 Class A, 8 Class B (#10, #11, #13, #14, #19, #20, #35, D1), and 0 Class C. An additional 2 Joshua trees (#9 and #12) are within the project site but will remain within landscaping after the project is built, and these would be heavily encroached into the 15 meter buffer by development. As shown in the Site Plan in Appendix C, these Joshua trees will be fenced during construction of the project to protect them from potential inadvertent impacts. Another 12 Joshua trees (#4-#8, #15, #18, #21-#24, D3) are outside the project site but will be encroached within a 15 meter buffer by the project construction. Protective fencing shown in the Site Plan in Appendix C will be installed between these Joshua trees and the project site during construction to avoid inadvertent impacts to these trees.

Overall the population of Joshua trees within the survey area is healthy, with very few dead trees and a mix of size classes and observations of fruits and flowers indicate that the Joshua trees are regenerating naturally on the site. The number of removals proposed by the project is 18% of the number surveyed, however, there are numerous other Joshua trees surrounding the survey area that are contiguous plant communities with that found on the site, and the relative number of removals to those in the region is very small. The removal of 8 Joshua trees is insignificant in relation to the number that are found in the immediate area. These findings are in consideration of the guidelines and recommendations from the Western Joshua Tree Conservation Plan impacts avoidance section. To reduce the potential impacts to a less than significant level per the thresholds of CEQA the project will implement Mitigation Measure BIO-2 below that includes permitting for the removal of the Joshua trees and protected the remaining trees.

#### **Mitigation Measure BIO-2 – Western Joshua Tree Permitting and Protection**

Due to the proposed removal of eight (8) Joshua trees for the project, it will require a permit from the CDFW prior to removing the trees. To obtain the permit the applicant must complete a permit application and submit the application and Joshua tree inventory to the CDFW Region 6 Office via the online permitting system. This permit will require coordination with both the County of San Bernardino and CDFW to determine the number of Joshua trees that the agencies would require for transplanting to areas outside of the development. However, there is an in-lieu fee program that allows for a fee-based mitigation for removal of Joshua trees and these same mitigation fees could be applied to all of the Joshua trees that are encroached within 15-meters as determined by the agencies. Therefore, these estimated fees are subject to change per the requirements of the permitting agencies following an assessment of the project impacts to Joshua trees. The 2025 Western Joshua Tree Conservation Act Incidental Take Permit annual mitigation



fees for the proposed removal of 8 Joshua trees within the standard fee area is a total of \$4,072.00 as follows:

- 0 Class A trees x \$346.00 = \$0.00
- 8 Class B trees x \$509.00 = \$4,072.00
- 0 Class C trees x \$2,544.75 = \$0.00

#### Joshua Tree Avoidance During Construction

- South Environmental recommends installing temporary protective fencing between the project workspace and each Joshua tree during construction of the project. The fencing would be high-visibility fencing placed at a minimum 15-meter buffer zone prior to start of construction (or at the distance that is permitted for trees closer to the site). No work or project activities shall occur within the fenced area and all work shall occur outside of the proposed Joshua tree buffers. Fencing would help prevent compaction and/or contamination of soil and root zone.
- During construction, heavy equipment and vehicles shall be operated in accordance with standard Best Management Practices (BMPs). For example, all equipment used in the workspace shall be properly maintained such that no leaks of oil, fuel, or residues will take place. Provisions shall be in place to remediate any accidental spills. Implementation of the BMPs will help minimize the potential for impact to Joshua trees both within and outside the Joshua tree buffer zones.
- Night work should be avoided to ensure no disturbance of pollinators or photoperiods for the remaining Joshua trees.

### 3.2.4 Impacts to Special-Status Wildlife

Based on the analysis in this report coast horned lizard and Le Conte's thrasher have the potential to occur within the Joshua Tree Woodland and Desert Willow Woodland habitats on the Project Site and Study Area.

#### **Coast Horned Lizard**

Coast horned lizard have the potential to occur on the project site if it is present within the development area during construction activities they could be crushed and killed or injured. However, the habitat on the site is disturbed and of lower ecological value as a result, and coast horned lizard is more likely to occur in the desert wash outside of the project footprint. The potential for the species to be directly impacted by the project is low as it has a low potential



to occur at this area relative to the desert wash and it is highly disturbed at the urban interface. Coast horned lizard direct impacts would be low as a result. In addition, the loss of 0.88 acre of disturbed Joshua Tree Woodland that is potential habitat for coast horned lizard is less than significant as it is a very small area that is isolated and between existing developments at the urban interface. This small area is a minor fraction of the available habitat that would remain in the immediate area, including the much higher value habitat within the desert wash 200-feet away from the project as well as in the overall range of the species. In addition, the implementation of Mitigation Measure BIO-2 would ensure that the loss of Joshua trees and Joshua Tree Woodland habitat would be mitigated. For these reasons the project impacts to coast horned lizard would be considered less than significant per the thresholds of CEQA.

### **Le Conte's Thrasher**

Le Conte's thrasher is a CDFW Species of Special Concern that has the potential to nest and forage on the project site. The potential impacts to 0.88 acre of disturbed habitat is less than significant as it is a minor fraction of what would remain available in the immediate area and within the entire species range. To avoid direct and indirect impacts to Le Conte's thrasher birds, Mitigation Measure BIO-1 regarding nesting bird and raptor surveys is recommended. With the implementation of the mitigation measure the project impacts to Le Conte's thrasher would be reduced to a level that is less than significant according to CEQA.

### **3.2.5 Impacts to Water Resources**

One jurisdictional feature, a desert wash, occurs in the Study Area approximately 200 feet southwest of the Project Site and outside of the project impact areas. Since project impacts are limited to the Project Site it is not expected for the proposed project to impact the wash directly. Temporary Impacts would not occur from the project as temporary staging and construction equipment will occur on the Project Site outside of the wash, at a distance greater than 200-feet. Considering the large distance between the project site and the wash, and the position of the project site between two existing large commercial development, the project would have no indirect impacts on the wash. Therefore, no impacts to water resources would result from the project.

### **3.2.6 Impacts to Protected Trees**

The study area contains mature western Joshua trees, which are all regulated trees that may require permits before removal under the Yucca Valley Code of Ordinances. The velvet mesquite trees are located outside of the project footprint and would not be impacted by the project as a result. The project will remove 8 Joshua trees as described previously and propose to permit the impacts with Mitigation Measure BIO-2. With the implementation of Mitigation Measure BIO-2 the project would be in compliance with the Ordinance.



### 3.2.7 Impacts to Wildlife Movement Corridors and Habitat Linkages

Based on the analysis in this report the Project Site was determined not to be within a wildlife movement area or habitat linkage due to the surrounding disturbances and isolated nature of the Joshua Tree Woodland. Therefore, the project would have no impact on wildlife movement corridors and habitat linkages

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# Appendix A

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## Photograph Log



Image 1.) View of the landscaped and developed area at the north of the Project Site, connecting the adjacent commercial developments.



Image 2.) View of the Project Site from the access road, featuring Joshua tree woodlands and native shrubs.



Image 3.) Depicts a large burrow found on the Project Site.



Image 4.) Depicts the Project Site from the dirt road in the middle. Housing developments can be seen in the background.



Image 5.) View of Balsa Avenue facing northeast, within the south Study Area. Housing developments can be seen on the right, Joshua Tree Woodland on the left.



Image 6.) View of the dry desert wash in the southwest Study Area, featuring Desert Willow Woodland.



Image 7.) View of the Project Site frontage along 29 Palms Highway facing west, featuring native and ornamental trees.



Image 8.) View of a ruderal, undeveloped area within the north study area, found within an outdoor mall.

# Appendix B

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## Special-Status Species Analysis

## Special-Status Species

Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies as under threat from human-associated developments. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as special-status based on adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. Special-status species include:

- Plants or wildlife listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the federal Endangered Species Act or the California Endangered Species Act;
- Plants or wildlife that meet the definitions of rare or endangered under CEQA Guidelines Section 15380.
- Plants or wildlife covered under an adopted NCCP/HCP;
- Plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered (List 1A, 1B and 2 plants) in California;
- Plants listed by the CNPS as plants in which there is limited information about distribution (List 3);
- Plants listed as rare under the California Native Plant Protection Act (Fish and Game Code 1900 et seq.);
- Wildlife designated by CDFW as species of special concern;
- Wildlife "fully protected" in California (California Fish and Game Code Sections 3511, 4700, and 5050); and
- Wildlife protected by the Migratory Bird Treaty Act (MTBA).

## Federally-Protected Status

All references to Federally-protected species in this BRA include the most current published status or candidate category to which each species has been assigned by USFWS. For purposes of this assessment the following acronyms are used for Federal status species, as applicable:



<b>FE</b>	Federally-listed as Endangered
<b>FT</b>	Federally-listed as Threatened
<b>FPE</b>	Federally proposed for listing as Endangered
<b>FPT</b>	Federally proposed for listing as Threatened
<b>FPD</b>	Federally proposed for delisting
<b>FC</b>	Federal candidate species (former C1 species)

### State-Protected Status

For the purposes of this BRA, the following acronyms are used for State status species, as applicable:

<b>SE</b>	State-listed as Endangered
<b>ST</b>	State-listed as Threatened
<b>SR</b>	State-listed as Rare
<b>SCE</b>	State candidate for listing as Endangered
<b>SCT</b>	State candidate for listing as Threatened
<b>SFP</b>	State Fully Protected
<b>SSC</b>	California Species of Special Concern

### California Rare Plant Rank

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of special-status species in California. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California (CNPS 2018). The list serves as the candidate list for listing as Threatened and Endangered by CDFW. CNPS has developed six categories of rarity known as the California Rare Plant Rank (CRPR), of which Ranks 1A, 1B, 2A, and 2B are particularly considered sensitive:

<b>Rank 1A</b>	Presumed extinct in California.
<b>Rank 1B</b>	Plants Rare, Threatened, or Endangered in California and elsewhere.
<b>Rank 2A</b>	Presumed extinct in California, but more common elsewhere.
<b>Rank 2B</b>	Plants Rare, Threatened, or Endangered in California, but more common elsewhere.
<b>Rank 3</b>	Plants about which we need more information – a review list.
<b>Rank 4</b>	Plants of limited distribution – a watch list.

The CNPS recently added “threat ranks” which parallel the ranks used by the CNDDDB. These ranks are added as a decimal code after the CNPS List (e.g., Rank 1B.1). The threat codes are as follows:



- .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);
- .3 Not very threatened in California (<20% of occurrences threatened or no current threats known).

### Potential to Occur Assessment

Special-status species that **present** or are **likely** (high or medium potential) to occur within the parcel are based on one or more of the following:

- the direct observation of the species within the parcel during any field surveys;
- a record reported in the CNDDDB, CNPS, or IPAC; and
- the parcel is within known distribution of a species and contains appropriate habitat.

Special-status species that are **unlikely** (low potential) to occur are based on one of the following:

- the parcel has the general habitat types but lacks necessary habitat elements such as suitable microhabitat or soils; or
- the parcel is outside the known elevation range or distribution of the species, and has otherwise suitable habitats;

Special-status species that have no potential to occur on the parcel are labeled as **none** due to the absence of suitable habitat.

**Special-Status Animals**

Scientific Name	Common Name	Taxonomic Group	Federal Listing	State Listing	Other Status	General Habitat	Microhabitat	Potential to Occur on Study Area
<i>Anniella stebbinsi</i>	Southern California legless lizard	Reptiles	None	None	CDFW_SSC-Species of Special Concern   USFS_S-Sensitive	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County.	Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	<b>None:</b> Study Area lacks habitat for this species.
<i>Antrozous pallidus</i>	pallid bat	Mammals	None	None	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFS_S-Sensitive	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	<b>Low:</b> Study Area contains woodland and desert wash habitats, though no rocky areas for roosting sites are available.
<i>Asio otus</i>	long-eared owl	Birds	None	None	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFWS_BCC-Birds of Conservation Concern	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses.	Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	<b>None:</b> Study Area lacks habitat for this species.
<i>Astur cooperii</i>	Cooper's hawk	Birds	None	None	CDFW_WL-Watch List   IUCN_LC-Least Concern	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	<b>None:</b> Study Area lacks preferred habitats
<i>Athene cucularia</i>	burrowing owl	Birds	None	Candidate Endangered	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFWS_BCC-Birds of Conservation Concern	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	<b>Low:</b> Study Area contains habitat and cover sites, such as burrows but this species is not known to occur in Yucca Valley and has not been observed there before. The nearest records in the CNDDB are 6 miles to the northwest, and there are no other records in the region on this side of the mountains. The



Scientific Name	Common Name	Taxonomic Group	Federal Listing	State Listing	Other Status	General Habitat	Microhabitat	Potential to Occur on Study Area
<i>Bombus crotchii</i>	Grotch's bumble bee	Insects	None	Candidate Endangered	IUCN_EN-Endangered	Coastal California east to the Sierra-Cascade crest and south into Mexico.	Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	project site is also between two existing developments and lacks a lot of foraging area on the project site itself. It is highly unlikely that this species would occur based on known range of the species and the limited ability to forage at the project site due to adjacent developments. <b>Low:</b> Study Area contains habitat and some preferred food plants but is just outside of the known range for this species.
<i>Chaetodipus fallax pallidus</i>	pallid San Diego pocket mouse	Mammals	None	None		Desert border areas of San Diego, Riverside, San Bernardino, and Los Angeles counties in desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc.	Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	<b>Low:</b> Desert washes occur on the Study Area, though they are not rocky. There are no rocky or coarse gravelly areas on the project site or Study Area and there is a low potential for this species to occur as a result.
<i>Crotalus ruber</i>	red-diamond rattlesnake	Reptiles	None	None	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFS_S-Sensitive	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains.	Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	<b>Low:</b> Study Area contains woodland and rodent burrows, however lacks microhabitat.
<i>Eremarionta morongoana</i>	Morongo (=Colorado) desertsnaill	Mollusks	None	None	IUCN_NT-Near Threatened	Found in the eastern San Bernardino Mountains, the Little San Bernardino Mountains, and Mecca Hills along the the edge of the Coachella Valley and southern Mojave Desert.	Occur in rockslides with deep talus surrounded by desert scrub, or under beds of fallen palm fronds where tumbled rocks are present at palm oases.	<b>None:</b> Study Area lacks habitat for this species.
<i>Gopherus agassizii</i>	desert tortoise	Reptiles	Threatened	Endangered	IUCN_CR-Critically Endangered	Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in	Require friable soil for burrow and nest construction. Creosote bush habitat with large	<b>Low:</b> Study Area contains both habitat and microhabitat for this species but no burrows were observed, the habitat is degraded,



Scientific Name	Common Name	Taxonomic Group	Federal Listing	State Listing	Other Status	General Habitat	Microhabitat	Potential to Occur on Study Area
<i>Icteria virens</i>	yellow-breasted chat	Birds	None	None	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding.	Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	<b>None:</b> Study Area lacks riparian areas. <b>None:</b> Study Area lacks habitat for this species.
<i>Lasius cinereus</i>	hoary bat	Mammals	None	None	IUCN_LC-Least Concern	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	<b>Low:</b> Study Area contains desert wash habitats, however, no consistent water or palm trees are available.
<i>Myiarchus tyrannulus</i>	brown-crested flycatcher	Birds	None	None	CDFW_WL-Watch List   IUCN_LC-Least Concern	Inhabits desert riparian areas along the Colorado River, as well as other desert oases and riparian areas NW to Victorville.	Requires riparian thickets, trees, snags, and shrubs for foraging perches, nesting cavities, and cover.	<b>None:</b> Study Area lacks habitat for this species.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	Mammals	None	None	CDFW_SSC-Species of Special Concern	Coastal scrub of Southern California from San Diego County to San Luis Obispo County.	Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	<b>None:</b> Study Area lacks habitat for this species.
<i>Ovis canadensis nelsoni</i>	desert bighorn sheep	Mammals	None	None	BLM_S-Sensitive   CDFW_FP-Fully Protected   USFS_S-Sensitive	Widely distributed from the White Mtns in Mono Co. to the Chocolate Mts in Imperial Co.	Open, rocky, steep areas with available water and herbaceous forage.	<b>None:</b> Study Area lacks habitat for this species.
<i>Paranomada californica</i>	California cuckoo bee	Insects	None	None			Known only from two locations in San Bernardino County; the type locality near Yucca Valley, and a 1971 collection from 9.5 miles NW of Pioneertown, on	<b>Low:</b> Flowering for foraging occur on the Study Area. The project site occurs near the previous records of this species. However, the site is degraded and of low ecological value for this species.



Scientific Name	Common Name	Taxonomic Group	Federal Listing	State Listing	Other Status	General Habitat	Microhabitat	Potential to Occur on Study Area
<i>Parnopes borregoensis</i>	Borrego parnopes cuckoo wasp	Insects	None	None		Known from San Diego, San Bernardino, and Inyo counties.	Burns Canyon Rd (CNDDDB 2006). Desert dry washes and core habitats for desert tortoises.	<b>Low:</b> Study Area contains dry desert washes and suitable tortoise habitat. The site is degraded and not considered core habitat for desert tortoise.
<i>Perognathus longimembris bangsi</i>	Palm Springs pocket mouse	Mammals	None	None	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern	Desert riparian, desert scrub, desert wash and sagebrush habitats. Most common in creosote-dominated desert scrub.	Rarely found on rocky sites. Occurs in all canopy coverage classes.	<b>Low:</b> Study Area occurs outside of the species distribution.
<i>Phrynosoma blainvillii</i>	coast horned lizard	Reptiles	None	None	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	<b>High:</b> Study Area contains both habitat and microhabitat for this species.
<i>Piranga rubra</i>	summer tanager	Birds	None	None	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Summer resident of desert riparian along lower Colorado River, and locally elsewhere in California deserts.	Requires cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.	<b>none:</b> Willow desert wash habitat occurs on the Study Area, but the stands are not dense or along the Colorado River.
<i>Pyrocephalus rubinus</i>	vermillion flycatcher	Birds	None	None	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	During nesting, inhabits desert riparian adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas.	Nest in cottonwood, willow, mesquite, and other large desert riparian trees.	<b>None:</b> Study Area is not adjacent to irrigated areas.
<i>Setophaga petechia</i>	yellow warbler	Birds	None	None	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada.	Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	<b>None:</b> Study Area lacks habitat for this species.
<i>Taxidea taxus</i>	American badger	Mammals	None	None	CDFW_SSC-Species of Special Concern	Most abundant in drier open stages of most shrub, forest, and	Needs sufficient food, friable soils and open, uncultivated ground.	<b>None:</b> Lack of large open rangeland.



Scientific Name	Common Name	Taxonomic Group	Federal Listing	State Listing	Other Status	General Habitat	Microhabitat	Potential to Occur on Study Area
<i>Toxostoma bendirei</i>	Bendire's thrasher	Birds	None	None	IUCN_LC-Least Concern BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_VU-Vulnerable   USFWS_BCC-Birds of Conservation Concern	Migratory; local spring/summer resident in flat areas of desert succulent shrub/Joshua tree habitats in Mojave Desert.	Preys on burrowing rodents. Digs burrows. Nests in cholla, yucca, palo verde, thorny shrub, or small tree, usually 0.5 to 20 feet above ground.	<b>Low:</b> Study Area contains both habitat and microhabitat for this species but is outside the typical range and the habitat is degraded and of low value due to isolation.
<i>Toxostoma lecontei</i>	Le Conte's thrasher	Birds	None	None	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFWS_BCC-Birds of Conservation Concern	Desert resident; primarily of open desert wash, desert scrub, alkali desert succulent scrub habitats.	Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	<b>Moderate:</b> Study Area contains desert wash habitats.
<i>Uma inornata</i>	Coachella Valley fringe-toed lizard	Reptiles	Threatened	Endangered	IUCN_EN-Endangered	Limited to sandy areas in the Coachella Valley, Riverside County.	Requires fine, loose, windblown sand (for burrowing), interspersed with hardpan and widely-spaced desert shrubs.	<b>None:</b> Study Area lacks habitat for this species.
<i>Uma scoparia</i>	Mojave fringe-toed lizard	Reptiles	None	None	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Fine, loose, wind-blown sand in sand dunes, dry lakebeds, riverbanks, desert washes, sparse alkali scrub and desert scrub.	Shrubs or annual plants may be necessary for arthropods found in the diet.	<b>None:</b> Study Area contains desert wash habitats and shrubs and annuals but is distant from records of this species.
<i>Vireo bellii pusillus</i>	least Bell's vireo	Birds	Endangered	Endangered		Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft.	Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	<b>None:</b> Study Area is outside of the elevation range for this species.



### Special-Status Plants

Scientific Name	Common Name	Lifeform	CRPR	Federal Listing	State Listing	Other Status	General Habitat	Microhabitat	Potential to Occur on Study area
<i>Allium parishii</i>	Parish's onion	perennial bulbiferous herb	4.3	None	None		Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland	Rocky	<b>Low:</b> The Study Area lacks microhabitat for this species.
<i>Astragalus bernardinus</i>	San Bernardino milk-vetch	perennial herb	1B.2	None	None	BLM_S; SB_CalIBG/RSABG; USFS_S	Joshua tree "woodland", Pinyon and juniper woodland	Carbonate (often), Granitic (often)	<b>None:</b> The Study Area has low value habitat for this species but it is heavily degraded and unlikely to support this species. This perennial was not observed on the site during the survey.
<i>Astragalus lentiginosus</i> <i>var. coachellae</i>	Coachella Valley milk-vetch	annual/perennial herb	1B.2	FE	None	SB_CalIBG/RSABG; SB_USDA	Desert dunes, Sonoran desert scrub (sandy)		<b>None:</b> Study Area is outside of the elevation range for this species.
<i>Astragalus nutans</i>	Providence Mountains milk-vetch	annual herb	4.3	None	None	SB_CalIBG/RSABG	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland, Sonoran desert scrub	Gravelly (sometimes), Sandy (sometimes)	<b>None:</b> The Study Area is outside the typical range for this species.
<i>Astragalus tricarlinatus</i>	triple-ribbed milk-vetch	perennial herb	1B.2	FE	None	SB_CalIBG/RSABG	Joshua tree "woodland", Sonoran desert scrub	Gravelly (sometimes), Sandy (sometimes)	<b>None:</b> The Study Area is outside the known range for this species
<i>Berberis fremontii</i>	Fremont barberry	perennial evergreen shrub	2B.3	None	None	SB_CalIBG/RSABG	Joshua tree "woodland", Pinyon and juniper woodland	Granitic (sometimes), Rocky	<b>None:</b> Study Area is outside of the elevation range for this species.
<i>Boechera dispar</i>	pinyon rockcross	perennial herb	2B.3	None	None	SB_CalIBG/RSABG	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland	Granitic, Gravelly	<b>None:</b> Study Area is outside of the elevation range for this species.
<i>Boechera lincolniensis</i>	Lincoln rockcross	perennial herb	2B.3	None	None	BLM_S	Chenopod scrub, Mojavean desert scrub	Carbonate	<b>None:</b> Study Area is outside of the elevation range for this species.
<i>Boechera shockleyi</i>	Shockley's rockcross	perennial herb	2B.2	None	None	SB_CalIBG/RSABG; USFS_S	Pinyon and juniper woodland (carbonate, gravelly, quartzite, rocky)		<b>None:</b> Study Area lack habitat for this species.



Scientific Name	Common Name	Lifeform	CRPR	Federal Listing	State Listing	Other Status	General Habitat	Microhabitat	Potential to Occur on Study area
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer's mariposa-lily	perennial bulbiferous herb	1B.2	None	None	BLM_S; SB_CalBG/RSABG; SB_SBBG; USFS_S	Chaparral, Lower montane coniferous forest, Meadows and seeps	Mesic	<b>None:</b> Study Area lack habitat for this species.
<i>Camissonia kernensis</i> ssp. <i>kernensis</i>	Kern County evening-primrose	annual herb	4.3	None	None		Chaparral, Joshua tree "woodland", Pinyon and juniper woodland	Granitic, Gravelly (sometimes), Sandy (sometimes)	<b>None:</b> The Study Area is outside the known range for this species.
<i>Canbya candida</i>	white pygmy-poppy	annual herb	4.2	None	None	SB_CalBG/RSABG; USFS_S	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland	Granitic, Gravelly, Sandy	<b>Low:</b> The Study Area is heavily degraded and unlikely to support this species.
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	white-bracted spineflower	annual herb	1B.2	None	None	BLM_S; SB_CalBG/RSABG; SB_USDA; USFS_S	Coastal scrub (alluvial fans), Mojavean desert scrub, Pinyon and juniper woodland	Gravelly (sometimes), Sandy (sometimes)	<b>Low:</b> The Study Area is heavily degraded and unlikely to support this species.
<i>Cordylanthus eremicus</i> ssp. <i>eremicus</i>	desert bird's-beak	annual herb (hemiparasitic)	4.3	None	None	SB_CalBG/RSABG	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland		<b>Low:</b> The Study Area has habitat for this species, but the Study Area is outside the elevation range for this species.
<i>Gymnopus multinervatus</i>	purple-nerve cymopterus	perennial herb	2B.2	None	None		Mojavean desert scrub, Pinyon and juniper woodland	Gravelly (sometimes), Sandy (sometimes)	<b>Low:</b> The Study Area lacks preferred habitat for this species.
<i>Eriastrum harwoodii</i>	Harwood's eriastrum	annual herb	1B.2	None	None	BLM_S; SB_CalBG/RSABG; SB_USDA	Desert dunes		<b>None:</b> The Study Area lacks habitat for this species.
<i>Erigeron parishii</i>	Parish's daisy	perennial herb	1B.1	FT	None	SB_CalBG/RSABG	Mojavean desert scrub, Pinyon and juniper woodland	Carbonate (usually), Granitic (sometimes)	<b>Low:</b> The Study Area lack microhabitat for this species.
<i>Eschscholzia androuxii</i>	Joshua Tree poppy	annual herb	4.3	None	None		Joshua tree "woodland", Mojavean desert scrub	Flats, Gravelly, Rocky, Sandy, Slopes, Washes	<b>Low:</b> The Study Area is degraded and unlikely to support this species.
<i>Euphorbia vallis-mortae</i>	Death Valley sandmat	perennial herb	4.2	None	None	SB_CalBG/RSABG	Mojavean desert scrub (gravelly, sandy)		<b>None:</b> The Study Area lacks preferred habitat for this species.
<i>Funastrum utahense</i>	Utah vine milkweed	perennial herb	4.2	None	None		Mojavean desert scrub, Sonoran desert scrub	Gravelly (sometimes)	<b>None:</b> The Study Area lacks preferred habitat for this species.



Scientific Name	Common Name	Lifeform	CRPR	Federal Listing	State Listing	Other Status	General Habitat	Microhabitat	Potential to Occur on Study area
<i>Galium angustifolium</i> <i>ssp. gracillimum</i>	slender bedstraw	perennial herb	4.2	None	None	SB_CalIBG/RSABG	Joshua tree "woodland", Sonoran desert scrub	Sandy (sometimes) Granitic, Rocky	<b>Low:</b> The Study Area lacks micro habitat for this species. <b>None:</b> Study Area is outside of the elevation range for this species.
<i>Galium johnstonii</i>	Johnston's bedstraw	perennial herb	4.3	None	None	SB_CalIBG/RSABG	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Riparian woodland		<b>None:</b> Study Area is outside of the elevation range for this species.
<i>Grusonia parishii</i>	Parish's club-cholla	perennial stem	2B.2	None	None		Joshua tree "woodland", Mojavean desert scrub, Sonoran desert scrub	Rocky, Sandy	<b>None:</b> The Study Area is outside the known range of this species.
<i>Hulsea vestita</i> <i>ssp. parryi</i>	Parry's sunflower	perennial herb	4.3	None	None	SB_CalIBG/RSABG	Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest	Carbonate (sometimes), Granitic (sometimes), Openings, Rocky	<b>None:</b> Study Area is outside of the elevation range for this species.
<i>Linanthus bernardinus</i>	Pioneertown linanthus	annual herb	1B.2	None	None	BLM_S; SB_CalIBG/RSABG	Joshua tree "woodland", Pinyon and juniper woodland		<b>None:</b> Study Area is outside of the elevation range for this species.
<i>Linanthus maculatus</i> <i>ssp. maculatus</i>	Little San Bernardino Mtns. linanthus	annual herb	1B.2	None	None	BLM_S; SB_CalIBG/RSABG	Desert dunes, Joshua tree "woodland", Mojavean desert scrub, Sonoran desert scrub	Sandy	<b>None:</b> The Study Area is outside the known range for this species.
<i>Lycium torreyi</i>	Torrey's box-thorn	perennial shrub	4.2	None	None		Mojavean desert scrub, Sonoran desert scrub	Rocky, Sandy, Streambanks, Washes	<b>Low:</b> The Study Area lacks rocky streambanks.
<i>Monardella robinsonii</i>	Robison's monardella	perennial rhizomatous herb	1B.3	None	None	BLM_S; SB_CalIBG/RSABG	Pinyon and juniper woodland		<b>None:</b> The Study Area lacks habitat for this species.
<i>Muilla coronata</i>	crowned muilla	perennial bulbiferous herb	4.2	None	None		Chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland		<b>Low:</b> The Study Area is outside the known range for this species.
<i>Penstemon clevelandii</i> <i>var. mohavensis</i>	Mojave beardtongue	perennial herb	1B.2	None	None		Mojavean desert scrub, Pinyon and juniper woodland	Granitic (often), Rocky	<b>Low:</b> The Study Area lack microhabitat for this species.



Scientific Name	Common Name	Lifeform	CRPR	Federal Listing	State Listing	Other Status	General Habitat	Microhabitat	Potential to Occur on Study area
<i>Phacelia mohavensis</i>	Mojave phacelia	annual herb	4.3	None	None	SB_CalIBG/RSABG; SB_USDA	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland	Gravelly (sometimes), Sandy (sometimes)	<b>None:</b> Study Area is outside of the elevation range for this species.
<i>Salpiglossa latimeri</i>	Latimer's woodland-gilia	annual herb	1B.2	None	None	BLM_S; SB_CalIBG/RSABG; SB_USDA; USFS_S	Chaparral, Mojavean desert scrub, Pinyon and juniper woodland	Granitic (often), Rocky (sometimes), Sandy Washes (sometimes)	<b>Low:</b> The Study Area lacks the preferred habitat for this species.
<i>Streptanthus campestris</i>	southern jewelflower	perennial herb	1B.3	None	None	BLM_S; SB_CRES; USFS_S	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland	Rocky	<b>None:</b> The Study Area lacks habitat for this species.
<i>Tetradlopus hallii</i>	Hall's tetradlopus	perennial deciduous shrub	4.3	None	None	SB_CalIBG/RSABG	Mojavean desert scrub, Sonoran desert scrub		<b>Low:</b> The Study Area lacks the preferred habitat for this species.
<i>Yucca brevifolia</i>	Western Joshua tree	Monocotyledonous tree	CBR	None	Candidate Threatened	Western Joshua Tree Conservation Act (WJTCA)	Mojavean desert scrub, pinyon and juniper woodland, Joshua tree woodland	Hot, dry sites on flats, mesas, bajadas, and gentle slopes in the Mojave Desert	<b>Present.</b> This species was observed throughout the study area and project site and create a Joshua Tree Woodland.



# Appendix C

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## Biologist Qualifications

## EDUCATION

B.S., Wildlife Ecology, University of Wisconsin-Madison, 2004

## CERTIFICATIONS

Certified Wildlife Biologist, The Wildlife Society 2014

Certified Technical Service Provider (TSP) for Fish and Wildlife Management Plans, USDA NRCS 2017

Authorized Desert Tortoise Biologist – Numerous BOs

Unmanned Aircraft System Pilot Certification, FAA #4177603

## TRAINING

Wetland Delineation Training Course – The Wetland Institute (2014)

Southwest Willow Flycatcher Workshop, 2017

USGS Desert Tortoise Health Assessment and Tissue Collection Techniques Training, 2009

# Matthew South

## PRINCIPAL BIOLOGIST

Matthew South founded South Environmental in 2018. He is a certified wildlife biologist with over 17 years of professional experience providing natural resources consulting services for a wide variety of clients that include residential, commercial, government, utility, infrastructure, research, and non-profit projects. For the last 14 years, Mr. South has been an environmental consultant in southern California acting as a Wildlife Biologist and Geographic Information System (GIS) Analyst. In early 2018 he started South Environmental and has since been supporting clients in Los Angeles, Ventura, Santa Barbara, San Bernardino, and Riverside Counties.

Mr. South's background in ecology has led to a passion for conservation planning and resources assessments for the purpose of preservation and management. The integration of the latest technologies such as advanced GIS systems, mobile computing, and drone sensing allows him to innovate new data collection, analysis, and collaboration tools for the environmental sciences that produce more accurate data and better-informed resource managers.

## EXPERTISE

- **Conservation and Management Planning.** Mr. South's has extensive experience preparing mitigation and monitoring plans, habitat conservation plans, and technical biological resources management plans that are compliant with federal, state, and local regulations. Mr. South is the only active NRCS TSP for Fish and Wildlife Plans Certified in California.
- **Biological Resources Assessment.** Mr. South has completed dozens of biological resources assessments throughout southern California.
- **Rare Plants and Arborist Services.** Mr. South has surveyed and assessed thousands of native and landscaped trees in southern California. He is a certified arborist with 5-years of tree survey experience working closely with some of the most experienced arborists in California. In addition, he has performed hundreds of hours of rare plant surveys and habitat assessments.
- **Wetland & Jurisdictional Delineations.** Mr. South has conducted dozens of jurisdictional and wetland delineations per the guidelines and methods from the US Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and the state Regional Water Quality Control Boards (RWQCB).
- **GIS.** Mr. South is an expert at spatial data collection and analysis using ESRI mobile and desktop software products and Trimble hardware.



## SELECT PROJECT EXPERIENCE

**EVMWD Rice Canyon Reservoir Access Road and New Conduit Project, City of Lake Elsinore, Riverside County, California (2022).** South Environmental was retained to complete biological and cultural resources services. Biological resources work included a Jurisdictional Delineation Report, a Biological Resources Assessment/MSHCP Consistency Analysis, Rare Plant Surveys, Burrowing Owl Surveys, and mitigation planning. Matthew South was the Principal Biologist on the project.

**Wendy's in Calimesa Project, Riverside County, California (2023).** South Environmental was retained to complete a Biological Resources Assessment and Western Riverside County MSHCP Consistency Analysis Report. Mr. South served as the Principal Biologist on the Project.

**Southern California Gas (SCG) As-Needed Biological and Cultural Resources Services (2022-ongoing).** As a subconsultant on this contract Mr. South has overseen the assessment numerous resources from single point locations to many miles of pipelines. More recently he has begun to conduct biological assessment in the coastal zone in Santa Barbara County as well as endangered species Biological Assessments (BAs) in support of Coastal Development Permits for SCG. Wetland delineation and permitting, biological resources assessments, and resources surveys and monitoring are services that Mr. South both provides personally and oversees a team of specialists that support the environmental impacts analysis and permitting for SCG.

**Southern California Edison (SCE) As-Needed Natural and Cultural Resources Services (2021-ongoing).** As a subconsultant on this contract for multiple Primes (SWCA, EI, Rincon, Cardno, and ERM), South Environmental has focused its biological resources services on wetland delineations and permitting efforts for SCE throughout all its regions. From single pole delineations in roadside ditches to several hundred poles through miles of wet meadows in the Sierras, the projects vary in size and complexity as well as location. Primarily, delineations have been in the Sierras with the largest and most complex projects in Inyo and Mono Counties and several in Kern and Tulare. A few of the specific projects include

- Pickle Meadow: Aquatic Resources Delineation Report and Permitting for 300-poles located in a wet meadow behind Bridgeport Reservoir.
- Kern River: Wetland Delineation and Permitting for 15 pole replacements in Kernville.
- June Lake to Tom's Place: Wetland Delineation and Permitting for 40 poles spread through Inyo and Mono Counties.
- Cajon Wash: Jurisdictional Delineation and SBKR Assessment and Permitting for 10 pole replacements and realignment for a capital project located in SBKR Critical Habitat.
- Pipes Wash: Delineation and Permitting for 25-poles that are within Pipes Wash, a large ephemeral wash in the San Bernardino desert.

**City of Palmdale - Palmdale Warehouse Project (2022-on going).** South Environmental prepared a jurisdictional delineation and permit applications to CDFW and RWQCB for the project. Services included EPIMS application and RWQCB Dredge and Fill Application and coordination including for mitigation management and alternatives analysis. Currently South Environmental is overseeing the compliance monitoring for the project.

**City of Los Angeles Recreation and Parks Department Controlled Burn Project Burrowing Owl Surveys and Mitigation (2022).** Mr. South planned and implemented a large scale burrowing owl protocol survey at



a model airfield park in the Sepulveda Basin. The survey was conducted over 1,300-acres and two burrowing owls were identified. Mr. South prepared a mitigation plan for conducting the controlled burn and avoiding impacts to burrowing owls.

**California Coastal Zone Experience (2018-2024).**

- Old Chimney Road Development, Santa Monica Mountains LCP (2018-present). Completed a BRA and oak tree survey per the LCP guidelines and presented to the Environmental Review Board (ERB).
- Gold Stone Road Development, Santa Monica Mountain LCP (2019-present). Completed a BRA, oak tree survey, and native tree survey per the LCP guidelines.
- Entrada Road Development, Santa Monica Mountains LCP (2020). Completed a BRA and oak tree survey per the LCP guidelines.
- Schueren Road Development, Santa Monica Mountains LCP (2019-2020). Completed a wetland delineation according to the California Coastal Commission guidelines.
- Decker Edison Road Development, City of Malibu (2020). Completed a BRA per the City of Malibu LCP guidelines.
- Malibou Lake Developments, North Santa Monica Mountains SEA (2020). Completed a biological resources map per the updated SEA guidelines.
- Medley Lane Development, Santa Monica Mountains LCP (2020). Completed a biological inventory per the guidelines of the Santa Monica Mountains LCP.
- Stunt Road Development, Santa Monica Mountains LCP (2018). Completed a BRA per the LCP guidelines.
- Malibou Lake Mountain Club, North Santa Monica Mountains SEA (2018). Completed permit packages for routine maintenance dredging of the lake, including a BRA, Section 404 CWA permit application, and CDFW Lake and Streambed Alteration Agreement.



## EDUCATION

B.S., Physics and Astronomy,  
University of Rochester, 2022

B.A., Religious Studies, University  
of Rochester, 2022

## SKILLS

-Scientific collection and  
management of field data

-Technical Writing

- Compliance monitoring

-Python for data analysis  
and data visualization

-Grant writing and  
coordination of award  
usage

# Lucas South

## BIOLOGIST

Lucas South is a biologist conducting compliance monitoring and biological resources assessments in southern California. They are a graduate of the University of Rochester, with a Bachelor of Science in Astrophysics. During their degree they gained extensive lab experience in experimental data collection and technical writing (3 years), winning 3 grants for their work in granular physics. More recently they have endeavored to apply their skills to the area of biological monitoring and conservation. They have experience in avian biological monitoring for a major environmental consulting firm during which they conducted field biological research in the Midwestern region. Since relocating to southern California, Lucas has focused on compliance monitoring and nesting bird surveys and has been the lead monitor for several large-scale projects, including City of Los Angeles and Southern California Gas projects.

Mr. South's educational background in physics and planetary science has led to an interest in researching environmental impacts on earth, especially in the context of continuing climate change. Their professional experience in biological monitoring has created a specific interest in avian species. They also seek to apply skills of data analytical techniques with Python and technical writing toward facilitating different research projects centered around the conservation of critical natural resources.

## EXPERTISE

- **Compliance Monitoring.** Mr. South has extensive experience monitoring utilities and large-scale construction projects for environmental compliance measures, as well as providing environmental training for construction personnel. Mr. South is cross-trained in paleontological monitoring.
- **Biological Resource Assessment.** Mr. South is experienced in conducting resources assessments, nesting bird surveys, and small mammal surveys.
- **Bird and Bat Identification.** Mr. South has experience in identifying migratory and resident bird and bat species throughout the Midwestern region and southern California, including identification of endangered species.
- **Data Acquisition.** Mr. South has experience with data acquisition systems that utilize GIS, as well as laboratory data management systems.
- **Scientific Writing.** Mr. South has expertise in writing scientific reports, presentations, and grant proposals, having contributed to 3 journal publications, and acquired 3 grants, as well as having written dozens of technical reports detailing survey results.

## SELECT PROJECT EXPERIENCE

**Jackson Street Improvements Paleontological Monitoring (2025).** Lucas was the lead paleontological monitor for a street improvement project in Indio, California. The project site required monitoring for paleontological resources such as fossils found during excavation. Lucas trained construction crew in fossil find procedures, documented onsite compliance, and documented more than 5 nonsignificant paleontological finds.

**Highway 74 Sewer Extension Project Monitoring (2025).** Lucas was a primary monitor for a sewer extension project in Perris, California. The project site required monitoring for burrowing owls, nesting birds, and jurisdictional resources. Lucas assisted in training construction crew in environmental procedures, documenting onsite compliance, ensuring resource avoidance, and conducting preconstruction surveys for burrowing owl and nesting birds.

**Desert Hot Springs Project Viento Monitoring (2024).** Lucas was a primary monitor for a warehouse construction project in Desert Hot Springs, California. The project site hosted 3 burrowing owl nests with both adult burrowing owls and their young. Lucas assisted in establishing Environmentally Sensitive Areas around the burrows, training construction crew in environmental procedures, documenting onsite compliance, and submitting project compliance reports. The monitor's main duty was to observe and analyze owl behavior to determine whether any change of work method was required.

**Trader Joe's Palmdale Warehouse Project (2023-2024).** Lucas was the lead monitor for a long-term monitoring project in Palmdale California. The project constructed a Trader Joe's distribution Center on 130-acres in the City of Palmdale. The project had an ITP and LSAA that covered Mohave Ground Squirrel, western Joshua tree, 2 streams on the site, special-status reptiles, rare plants, Crotch's bumble bee, Swainson's hawk, and several other species. Lucas oversaw compliance with all of the permitting documents on a full-time basis and conducted preconstruction rare plant and Mojave ground squirrel surveys. Lucas conducted Worker Environmental Awareness Programs for 300+ workers over the course of the project and worked with the Designated Biologist to monitor several active bird nests on the site and relocate several small mammals.

**Aliso Canyon Emergency Monitoring Project Southern California Gas (2023).** Lucas was a monitor for a long-term project that included the removal of sediment from catch basins where sensitive wetlands and wildlife such as coast range newt occurs. Lucas was responsible for conducting monitoring, daily reports, and project compliance. Lucas conducted surveys in wetlands for coast range newt and conducted compliance monitoring during the project. Lucas relocated 19 coast range newt larvae for the project.

**Southern California Gas (SCG) On-Call Biological and Cultural Services (2023).** Lucas was a biologist on the contract and typically performed construction and compliance monitoring for projects such as the L133 DeRate Project, State Street Valve Project, and the Glen Oaks Pipeline Maintenance Project. Other duties include preconstruction surveys for nesting birds and other special-status species and monitoring reports that include BMP and photoplates for preconstruction and post construction compliance reports. For these projects Lucas has identified and protected numerous species such as San Joaquin antelope squirrel, San Joaquin kit fox, several kangaroo rats, blunt-nosed leopard lizard, and pocket mice, as well as general compliance monitoring for BMPs.

**City of LA Recreation and Parks City Park Brush Clearance Monitoring within Riparian Areas (2023).** Lucas was the primary monitor that conducted nesting bird surveys and compliance monitoring at 5 parks where brush clearance is performed annually to meet LA Fire Department requirements. The work was within and near riparian areas and wetland and riparian vegetation and wildlife were the target species.



**City of Los Angeles Biological Resources Assessments (2023 – present).** Lucas conducts site assessments for biological resources, surveys for special-status plants and animals, maps and characterizes plant communities and wetlands/streams, and assesses potential impacts to biological resources from proposed developments. Lucas has worked on the following reports:

- 4933 Cerrillos Drive
- Bakersfield Commerce Center
- 434 Chautauqua Boulevard
- Colton Truck and Trailer Repair Project
- 18942 Arminta Street SB9 Report
- 1851 Stanley Avenue SB9 Report
- Brookside Golf Course Lighting Impact Assessment
- 1903 Hanscom Drive Biological Constraints Analysis
- 4875 Onteora Sensitive Natural Community Assessment
- 2526 Briarcrest Road BRA
- 64 Beverly Park Biologist’s Statement
- 360 S Mapleton Biologist’s Statement
- 700 Paseo Del Mar Biologist’s Statement
- 4119 & 4123 Rolle Street Biologist’s Statement
- 13433 Newcomb Drive Biologist’s Statement
- Sunset Jewelbox Lighting Impact Assessment



# Appendix D

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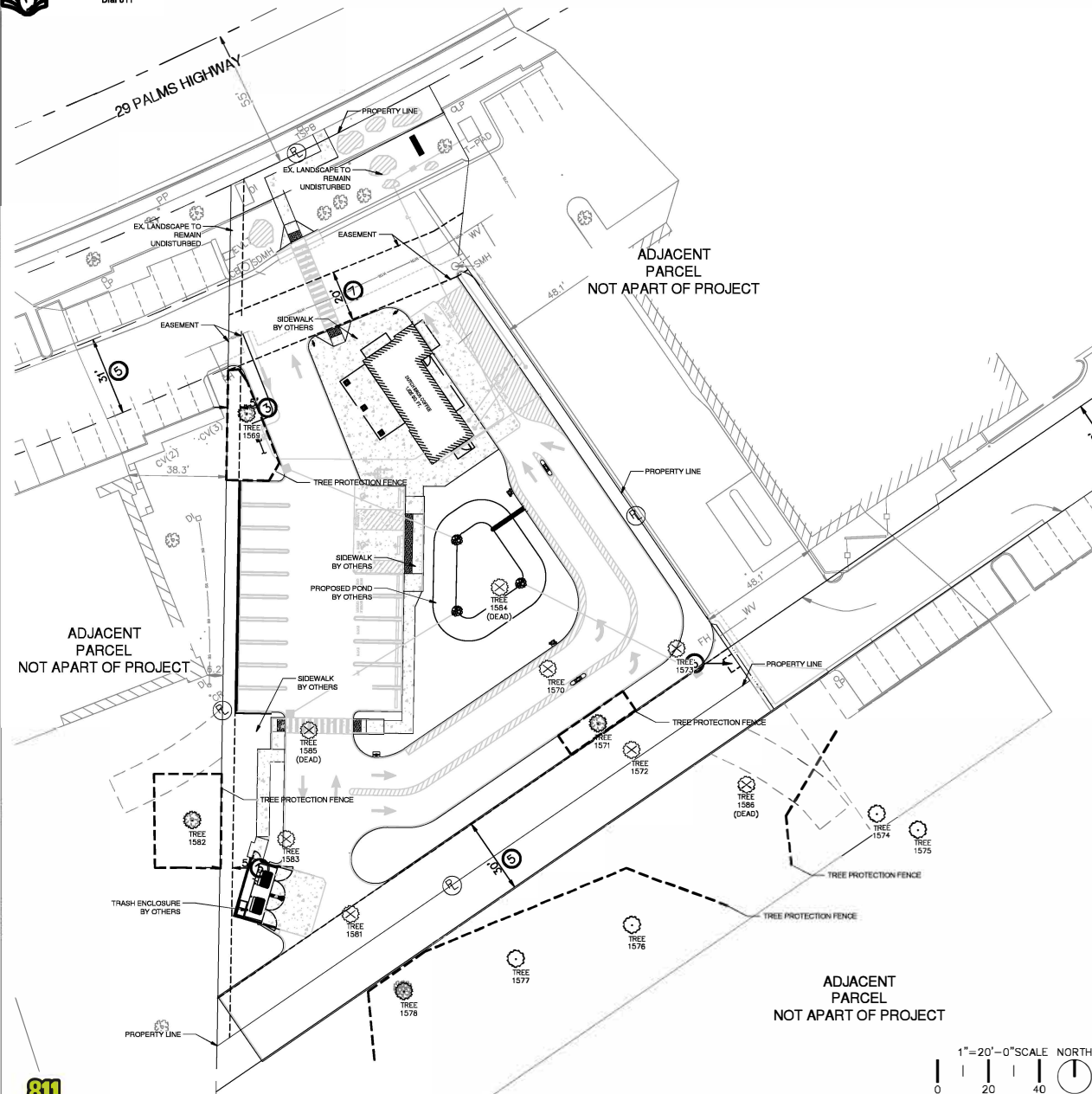
## Site Plan





Know what's below.  
Call before you dig.  
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# DUTCH BROS. COFFEE - CA3714 - YUCCA VALLEY, CA

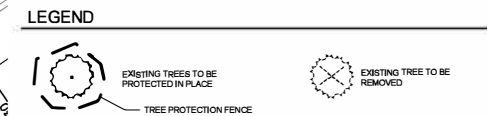


**PROJECT TEAM**  
 LANDSCAPE ARCHITECT:  
 EVERGREEN DESIGN GROUP  
 17875 VON KARMAN, STE 150  
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 900-880-9830  
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 E: ARBORIST@SERVICES@YAHOO.COM  
 W: WWW.DESERTARBORISTSERVICES.COM

**NATIVE PLANT & TREE CALCULATIONS**

NATIVE TREES-ON-SITE	16 TREES
NATIVE TREES- TO BE REMOVED	3 TREES
NATIVE TREES- TO BE TRANSPLANTED	0 TREES
NATIVE TREES- TO BE REIMPLANTED	5 TREES
NATIVE TREES- TO REMAIN (PROTECT IN PLACE)	8 TREES

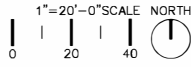


**NATIVE PLANT DOCUMENTATION SURVEY TABLE**

Joshua Tree Survey Data							DISPOSITION
Waypoint	Tree Type	Quantity	Diameter	Height	Health		
1569	Joshua Tree	1	9.5"	22ft	Good		REMAIN
1570	Joshua Tree	1	10"	15ft	Good		REMOVE
1571	Joshua Tree	1	16"	22ft	Good		REMAIN
1572	Joshua Tree	2	14"	18ft	Good		REMOVE
1573	Joshua Tree	1	16.5"	18ft	Good		REMOVE
1574	Joshua Tree	1	7.5"	16ft	Good		REMAIN
1575	Joshua Tree	2	7", 1.5"	10ft	Good		REMAIN
1576	Joshua Tree	1	14"	20ft	Good		REMAIN
1577	Joshua Tree	1	16"	14ft	Good		REMAIN
1578	Joshua Tree	3	8", 3", 7"	9/2/6ft	Good		REMAIN
1581	Joshua Tree	3	6", 3.5", 2.5"	6/3.5/2.5ft	Good		REMOVE
1582	Joshua Tree	1	6"	8ft	Fair		REMAIN
1583	Joshua Tree	1	13"	18ft	Good		REMOVE
1584	Joshua Tree	Dead	Dead	Dead	Dead		REMOVE
1585	Joshua Tree	Dead	Dead	Dead	Dead		REMOVE
1586	Joshua Tree	Dead	Dead	Dead	Dead		REMOVE

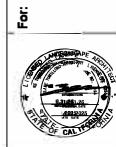
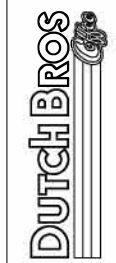
NOTE: TREE PROTECTION FOR ANY PRESERVED OR RELOCATED TREES MUST BE PROVIDED PER DETAILS AND SPECIFICATIONS ON SHEET NP-2. THESE MUST BE UP PRIOR TO THE COMMENCEMENT OF ANY WORK AND MAINTAINED THROUGHOUT CONSTRUCTION.

NOTE: ALL TREE TRIMMING MUST BE APPROVED BY THE OWNER AND LOCAL JURISDICTION PRIOR TO COMMENCEMENT OF WORK. ALL TREE TRIMMING MUST BE DONE BY AN ISA CERTIFIED ARBORIST IN ACCORDANCE WITH LOCAL TREE PRESERVATION ORDINANCE.



PRELIMINARY NOT FOR CONSTRUCTION

NATIVE PLANT PROTECTION PLAN  
 SWQ 29 PALMS HWY & BALS AVE  
 YUCCA VALLEY, CA



Book: Horizontal Vertical  
 Design: Drawn Checked Approved Date

**Borghausen Consulting Engineers, LLC**  
 1025 72nd Avenue South  
 Kent, WA 98032  
 425.251.6722  
 borghausen.com

Job Number: 23690  
 Sheet: NP-1  
 Date: 11/21/2025 12:32 PM



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Project: 23690-11/21/2025 12:32 PM  
 Book: Horizontal Vertical  
 Design: Drawn Checked Approved Date  
 Job Number: 23690  
 Sheet: NP-1  
 Date: 11/21/2025 12:32 PM

# Appendix E

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## Joshua Tree Inventory

# Western Joshua Tree Inventory

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## Yucca Valley Dutch Bros Coffee

**December 2025**

**Prepared For:**

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- Appendix A: Joshua Tree Data Matrix
- Appendix B: Photograph Exhibit
- Appendix C: Site Plan



# 1. Introduction

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This report includes results of a western Joshua tree (*Yucca brevifolia*) inventory conducted by South Environmental for the Yucca Valley Dutch Bros Project located in the town of Yucca Valley, San Bernardino County, California. There is a proposal to develop the parcel to create a drive through Dutch Bros Coffee restaurant on 1.01-acre (Assessor Parcel Number 0601-416-05) located at 58121 Twentynine Palms Highway. The purpose of this report is to create an inventory of western Joshua trees on the site and assess potential impacts to them from the proposed development. The scope of this report includes a description of the survey area; methods used to survey the trees involving assessment of structure, health, and mapping; the results of the survey including photographs of each tree; a description of the laws and regulations pursuant to Joshua tree protection; and the potential development impacts to Joshua trees on the site. Recommendations for mitigation are also included in the report.

## 1.1 Project Location and Setting

The project site is in the Town of Yucca Valley in an unincorporated area of San Bernardino County at 58121 Twentynine Palms Highway (State Route 62). The project is within the U.S. Geological Survey (USGS) Yucca Valley North 7.5 Minute Topographical Quadrangle, and within Section 31 of Township 01 North (01N) and Range 06 East (06E). The site is set between two commercial developments on the east side of the town of Yucca Valley. The site is entirely undeveloped apart from a small dirt road through the middle. The plant community is Joshua Tree Woodland dominated by western Joshua tree in the canopy and Joshua tree and desert shrubs in the sub-canopy. The soil is sandy and the overall vegetative cover on the site is moderate (40-60%). The areas adjacent to the site are mostly developed with housing and commercial businesses to the north, east, and south. The area to the west is undeveloped and contains a desert wash. The survey area is bordered by 29 Palms Highway on the north and Balsa Avenue on the south.

## 1.2 Proposed Development

The Project proposes the construction and operation of an approximately 1,025-square-foot Dutch Bros Coffee restaurant with a dual-lane drive-through facility and associated site improvements. The drive-through is designed to accommodate 23 queued vehicles. In addition to on-site improvements, the Project also includes off-site roadway improvements consistent with the Town's circulation plans, including the future widening of Twentynine Palms Highway to an ultimate half-width of 67 feet along the Project frontage



## 2. Methodology

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### 2.1 Field Survey

South Environmental biologist Lucas South conducted a survey of each western Joshua tree on the proposed project site and within a 100-foot buffer zone on October 28, 2025. Data were collected on each tree's height, canopy width, structure, and condition (health). The surveys were conducted in accordance with California Fish and Game Code section 1927.3, subdivision (a)(1). During the survey, each observed Joshua tree was given a unique identification number, and its location was recorded using a ESRI FieldMaps mobile phone application. The biologist evaluated the structure and general health of each tree, and a digital photograph was taken of each tree. The following highlights the parameters used in the structural and health evaluation of the trees.

#### 2.1.1 Structural Evaluation

An evaluation of the physical structure of each tree included the following:

- **Height of main stem** was measured using a visual estimation
- **Canopy spread** was measured using a visual estimation by estimating the distance across the entire canopy of the tree (main stem and rhizome stems) where that distance was greatest,
- **Structure/Architecture** included describing in general structure of each tree
- **Structural Height Rating** – each Joshua tree were classified by their height by 3 groups:
  - <1m tall (Class A)
  - >1-<5m tall (Class B)
  - Greater than or equal to 5m tall (Class C)

#### 2.1.2 Condition/Health Assessment

**Condition/Health Rating** – each Joshua tree received a single number health rating based on its similarity to an archetypal Joshua tree in excellent condition:

- 5 – Maximum health: has flowers or regrowth
- 4 – Healthy: Overall good health
- 3 – Fair health: Trees that had bad (dead or dying) branches, but overall structure was okay
- 2 – Poor health: no new foliage, leaf yellowing, expected to the dying soon
- 1 – Dead: all foliage dead or dying (yellow or brown)



Each tree was assessed for its **maturity**, and those trees with at least one branch were considered mature, while those without branching were immature.

**Flowers** and/or **fruits** were noted for each tree.

## 2.2 Regulatory Setting

### 2.2.1 State Regulations

#### *California Endangered Species Act (ESA)*

In 2022, the CDFW developed a status review report for western Joshua tree assessing whether listing the species as endangered or threatened under the California Endangered Species Act would be warranted. And in 2023, the Western Joshua Tree Conservation Act was passed, which acted to postpone a further analysis of the species under the California ESA until at least 2033 when the CDFW is mandated with preparation of an updated status review of the species, unless the Fish and Game Commission directs CDFW to complete the update sooner. In the interim period, protection of the species in California, including take of the species, is pursuant to the Western Joshua Tree Conservation Act.

#### *Western Joshua Tree Conservation Act*

The Western Joshua Tree Conservation Act is the current legislation in the State of California for use in protection of the Joshua tree and was passed on 2023. Foremost, the legislation prohibits the importation, export, take, possession, purchase, or sale of any western Joshua tree in California unless authorized by CDFW. The Act currently supersedes the California Endangered Species Act (ESA) and authorizes CDFW to issue permits for the “take” of one or more western Joshua trees if the permittee meets specific conditions. Permittees have the opportunity to relocate a Joshua tree in areas impacted by development or pay a fee in lieu of conducting mitigation activities. The legislation also grants the CDFW the authority to issue permits for the removal of dead western Joshua trees and trimming of live western Joshua trees.

The legislation allow for agreements to be made between the CDFW and any county or city which limit the authority to permit the taking of a Joshua tree associated with developing single-family residences, multifamily residences, accessory structures, and public works projects. A similar agreement between the CDFW and a county or city can also be authorized to limit the authority to permit the removal of dead and trimming of live Joshua trees.

With this legislation, in-lieu fees collected will be deposited into the “Joshua Tree Conservation Fund” for appropriation to CDFW strictly with the goal of acquiring, conserving, and managing Joshua tree conservation lands and carrying out other project to conserve the species.

Additionally, the act mandates the CDFW with development and implementation of a Joshua tree conservation plan in collaboration with governmental agencies, California Native American Tribes, and the public. A draft of the plan must be presented by December 31, 2024, at a public meeting of the Fish and Game Commission for its review and approval. Finally, CDFW must produce annual reports assessing the conservation status of the western Joshua tree (State of California, 2023).

**In cases of private development the following is a summary of important conservation measures under the Western Joshua Tree Conservation Act:**

The Western Joshua Tree Conservation Act stipulates several measures to assist with the assessment of impacts to and mitigation for western Joshua tree in areas proposed for development. Permittees may mitigate loss or damage to trees by relocating them or by paying specified fees in lieu of conducting mitigation. Under the act, all in-lieu fees collected will be deposited into the Western Joshua Tree Conservation Fund for the purposes of acquiring, conserving, and managing western Joshua tree conservation lands and completing other activities to conserve the western Joshua tree.

*Western Joshua Tree Conservation Plan*

The Western Joshua Tree Conservation Act requires the California Department of Fish and Wildlife (CDFW) to develop and implement a Western Joshua Tree Conservation Plan (Conservation Plan) in collaboration with the Commission, governmental agencies, California Native American tribes (Tribes), and the public (Fish & G. Code, § 1927.6, subd. (a)). The plan was approved and finalized in August 2025. The Conservation Plan provides guidelines for western Joshua tree conservation, criteria to help define effectiveness of management actions, monitoring of management outcomes, and a process of adaptive management to refine and improve the management actions over time. The management actions can be incorporated into project approvals by local, state, and federal government agencies that authorize projects or resource management programs in western Joshua tree’s range in California.

The Conservation Plan describes the steps required to achieve the vision of conserving western Joshua tree and its habitat in California such that listing under CESA will not be needed. The Conservation Plan can be divided into two parts: The first part summarizes guiding concepts and currently available information, and the second part describes management actions and the implementation approach for conserving western Joshua tree and achieving the vision of the Conservation Plan.



Chapter 5 of the Conservation Plan describes Conservation Management Actions and Effectiveness Criteria, and specifically Section 5.2.1 is focused on Impact Avoidance and Minimization that is often associated with construction projects. According to the section, the first priority for conservation of western Joshua tree and its habitat is to avoid adverse impacts altogether. When complete avoidance cannot be achieved, efforts should be made to minimize impacts on western Joshua tree and its habitat, and the presence of tribal cultural monitors and a trained arborist to minimize these impacts are encouraged. Minimization may include efforts to reduce the number of trees and seeds taken; the area of habitat that is lost or degraded; the severity of impacts on individual trees; impacts on other organisms on which western Joshua tree depends; and indirect impacts on trees, seeds, habitats, and other ecologically related organisms.

The avoidance and minimization actions in this section could be voluntarily adopted and implemented by project proponents and land managers, incorporated into project approvals by local governments and regulatory agencies, or incorporated into voluntary, cooperative agreements between relevant agencies, organizations, and other parties. The Western Joshua Tree Conservation Act (WJTCA) requires the avoidance and minimization of impacts on western Joshua tree to the maximum extent practicable as a condition of obtaining a WJTCA incidental take permit (ITP) (Fish & G. Code, § 1927.3, subd. (a)(2)). WJTCA also states that the Conservation Plan shall include guidance for the avoidance and minimization of impacts on western Joshua trees and protocols for the successful relocation of western Joshua trees (Fish & G. Code, § 1927.6, subd. (a)).

The following Management Actions are Recommended for construction projects:

1. Avoid direct and indirect impacts by project design that retains healthy trees, buffer areas for remaining trees, limit pesticide application, avoid OHV use, and avoid overgrazing.
2. Minimize direct and indirect impacts by avoiding trees, relocating trees, collect and store seeds, and minimizing invasive plants.
3. Minimize impacts from wildlife and wildfire suppression.

## 2.2.2 Local Regulations

### *Town of Yucca Valley Joshua Tree Ordinance*

This document is an addendum to the Town's General Plan Update certified environmental impact report (EIR), State Clearinghouse No. 2012111021, to address the Town's proposal to enact an urgency ordinance to establish regulations implementing the California Fish and Game Commission's Special Order relating to the take of western Joshua trees during the California Endangered Species Act (CESA) candidacy period and to remove the western Joshua tree from the Town's list of regulated desert native plants during the period the ordinance is effective, by adding

new Chapter 9.56 to and amending Sections 9.07.130, 9.09.050 and 9.10.040 of the Town's Development Code (Proposed Project or Urgency Ordinance).

The temporary take authorization and related mitigation provisions of Urgency Ordinance are limited in scope and only apply to the three project types listed in and covered by the Special Order. Specifically, the temporary take authorization is limited to the Town's approval of single-family residences, accessory structures, and certain public works projects defined by the Special Order as:

- **Single Family Residence:** Single Family Residence means a single detached building that has been or will be constructed and used as living facilities, including provisions for sleeping, eating, cooking, and sanitation as required by the California Building Code for not more than one household. Nothing in this section shall be construed to authorize take of western Joshua tree for a subdivision or other development that includes more than one single-family residence.
- **Accessory Structure:** Accessory Structure means a subordinate structure, the use of which is incidental to an existing or contemporaneously constructed single-family residence, and includes: an accessory dwelling unit, addition to an existing single-family residence, garage, carport, swimming pool, patio, greenhouse, storage shed, gazebo, septic tank, sewer connection, solar panels, or gravel or paved driveway.
- **Public Works Project:** Public Works Project means a project for the erection, construction, alteration, maintenance, or repair, of any public structure, building, or road.

### *Yucca Valley Municipal Code Chapter 9.56 (Removal of Joshua Tree)*

The purpose of this Chapter is to establish permitting standards and process for the issuance of take permits for the Western Joshua Tree as authorized pursuant to the Special Order approved by the California Fish and Game Commission pursuant to Fish and Game Code section 2084 on December 10, 2020 ("Special Order"). The Special Order was subsequently approved by the Office of Administrative Law, and went into effect on January 7, 2021. The requirements set forth in this Chapter are intended to protect the public's health, safety, and welfare by ensuring that take permits for the Western Joshua Tree are only issued consistent and compliant with the Special Order. (Ord. 291, 1-19-2021). The Planning Commission may authorize the take of western Joshua tree associated with developing single-family residences, accessory structures, and public works projects concurrent with its approval of the project.

### *Yucca Valley Native Plant Ordinance*

The Yucca Valley Native Plant Ordinance was adopted by the Town of Yucca Valley in 2014 and was codified into the Town's Development Code Section 9.09.050 for commercial zoned parcels.



The Ordinance stipulates that commercial development projects shall be allowed to transplant on and off site and to remove all regulated desert native plants from their native locations within the property boundaries, pursuant to the development standards and requirements. Regulated desert native plants for all commercial land development projects, include the following: Joshua tree (*Yucca brevifolia*), Mojave yucca (*Yucca schidigera*), Parry's nolina (*Nolina parryi*), California juniper (*Juniperus californica*), Our Lord's candle (*Yucca whipplei*), and Pinon pine (*Pinus monophylla*).

### *Joshua Tree Community Action Plan*

The Joshua Tree Community Action Plan was adopted in 2016 and provides overarching goals to protect desert habitat in the area including Joshua tree woodland. There are two overarching "action statements" in the Plan that apply to conservation of Joshua trees: 1) Partner with organizations such as Mojave Desert Land Trust to conserve natural desert habitats and wildlife corridors and to protect native plants and animals, and 2) Promote respect for local ecosystems and be stewards of the environment. While the Plan does not contain detailed specific actions related to these goals, it does embody the spirit and general intent of Joshua tree conservation in the area (San Bernardino County, 2016).

### 3. Results

A total of 38 Joshua trees were identified in the survey area. Detailed findings are detailed in the data matrix in Appendix A, including the latitude and longitude, size class, health, maturity, flowers/fruits, impacts, if is within 15-meters of the development, tree heights, canopy width, and structure. Table 1 below summarizes the results of the survey and the tree locations are shown in Figure 1. Photographs of the trees are in Appendix B.

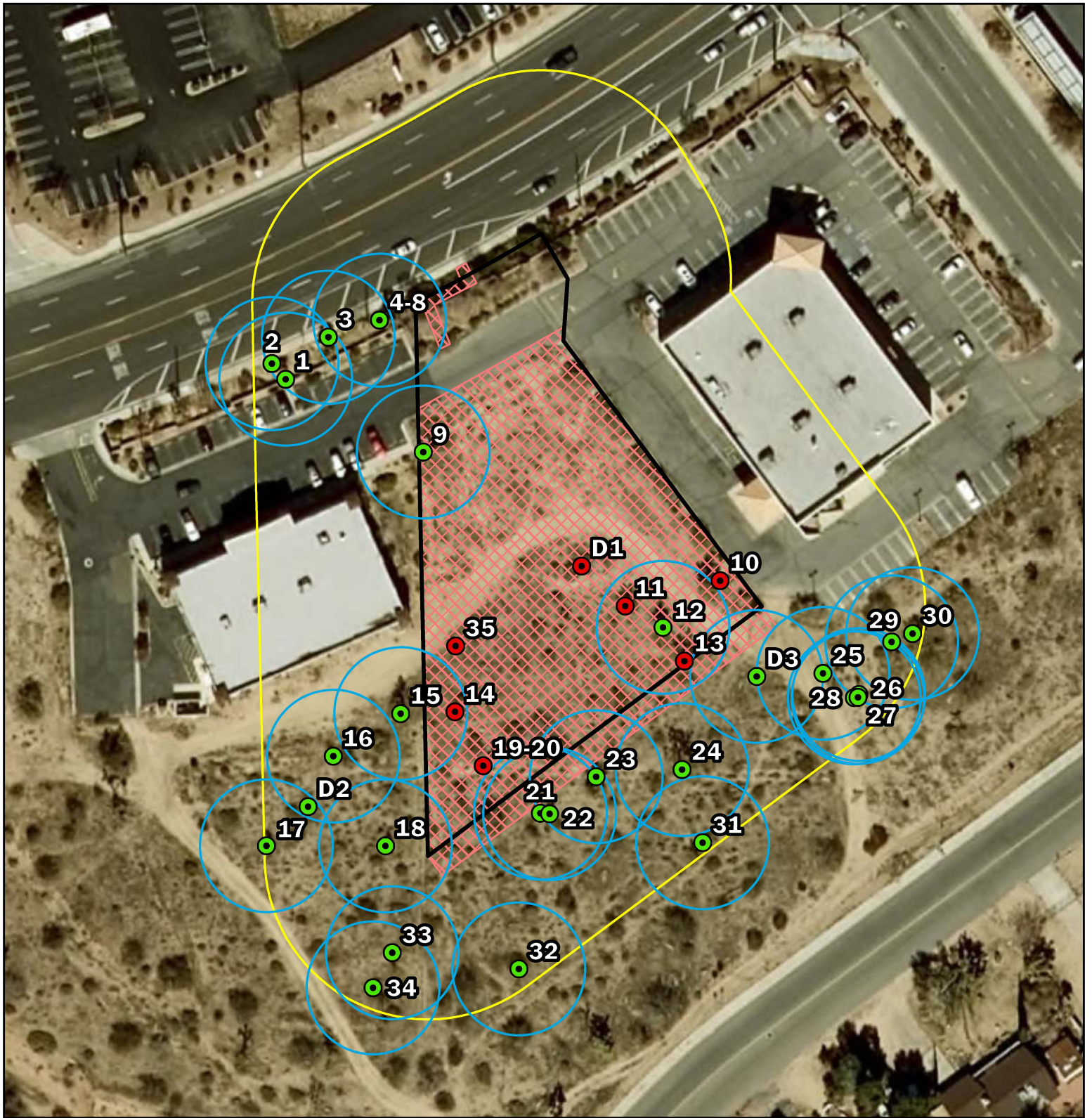
**Table 1. Summary of Western Joshua Tree Inventory**

Size Class (height)	# of Joshua Trees	Live	Dead	Mature	Fruits/Flowers	Within 15m of project	Removals
Class A <1m	3	3	0	0	0	0	0
Class B 1m-5m	32	29	3	27	22	19	8
Class C >5m	3	3	0	3	3	3	0
<b>Total</b>	<b>38</b>	<b>35</b>	<b>3</b>	<b>30</b>	<b>25</b>	<b>22</b>	<b>8</b>

Of the 38 Joshua trees surveyed, 3 were Class A, 32 Class B, and 3 Class C. A total of 3 Joshua trees were dead (labeled D1-D3) and 35 were mature live trees. Of the mature live trees, 25 had fruits or flowers. There are 22 Joshua trees within 15-meters of the proposed project footprint and 8 of those would be removed by the project because they are within the development footprint. Removals include 0 Class A, 8 Class B (#10, #11, #13, #14, #19, #20, #35, D1), and 0 Class C. An additional 2 Joshua trees (#9 and #12) are within the project site but will remain within landscaping after the project is built, and these would be heavily encroached into the 15 meter buffer by development. As shown in the Site Plan in Appendix C, these Joshua trees will be fenced during construction of the project to protect them from potential inadvertent impacts. Another 12 Joshua trees (#4-#8, #15, #18, #21-#24, D3) are outside the project site but will be encroached within a 15 meter buffer by the project construction. Protective fencing shown in the Site Plan in Appendix C will be installed between these Joshua trees and the project site during construction to avoid inadvertent impacts to these trees.

Overall the population of Joshua trees within the survey area is healthy, with very few dead trees and a mix of size classes and observations of fruits and flowers indicate that the Joshua trees are regenerating naturally on the site. The number of removals proposed by the project is 18% of the number surveyed, however, there are numerous other Joshua trees surrounding the survey area that are contiguous plant communities with that found on the site, and the relative number of removals to those in the region is very small. The removal of 8 Joshua trees is insignificant in relation to the number that are found in the immediate area.

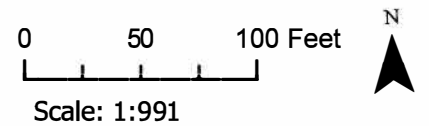




Source: ESRI Aerial Map 2025

Yucca Valley Dutch Bros Project

Figure 1. Joshua Tree Inventory



- Joshua Trees to be Removed
- Joshua Trees to Remain
- 15m buffer
- Project Site
- Survey Area
- Project Footprint



## 4. Recommendations and Conclusions

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### 4.1 Permitting and Mitigation Fees

Due to the proposed removal of eight (8) Joshua trees for the project, it will require a permit from the California Department of Fish and Wildlife (CDFW) prior to removing the trees. To obtain the permit the applicant must complete a permit application and submit the application and Joshua tree inventory to the CDFW Region 6 Office via the online permitting system. This permit will require coordination with both the County of San Bernardino and CDFW to determine the number of Joshua trees that the agencies would require for transplanting to areas outside of the development. However, there is an in-lieu fee program that allows for a fee-based mitigation for removal of Joshua trees and these same mitigation fees could be applied to all of the Joshua trees that are encroached within 15-meters as determined by the agencies. Therefore, these estimated fees are subject to change per the requirements of the permitting agencies following an assessment of the project impacts to Joshua trees.. The 2025 Western Joshua Tree Conservation Act Incidental Take Permit annual mitigation fees for the proposed removal of 8 Joshua trees within the standard fee area is a total of \$4,072.00 as follows:

- 0 Class A trees x \$346.00 = \$0.00
- 8 Class B trees x \$509.00 = \$4,072.00
- 0 Class C trees x \$2,544.75 = \$0.00

#### 4.1.1 Joshua Tree Avoidance During Construction

- South Environmental recommends installing temporary protective fencing between the project workspace and each Joshua tree during construction of the project. The fencing would be high-visibility fencing placed at a minimum 15-meter buffer zone prior to start of construction (or at the distance that is permitted for trees closer to the site). No work or project activities shall occur within the fenced area and all work shall occur outside of the proposed Joshua tree buffers. Fencing would help prevent compaction and/or contamination of soil and root zone.
- During construction, heavy equipment and vehicles shall be operated in accordance with standard Best Management Practices (BMPs). For example, all equipment used in the workspace shall be properly maintained such that no leaks of oil, fuel, or residues will take place. Provisions shall be in place to remediate any accidental spills. Implementation of

the BMPs will help minimize the potential for impact to Joshua trees both within and outside the Joshua tree buffer zones.

- Night work should be avoided to ensure no disturbance of pollinators or photoperiods for the remaining Joshua trees.

## 4.2 Conclusion

A total of 38 Joshua trees were identified by South Environmental within the project survey area. A total of 8 Joshua trees are proposed for removal by the project, which would require a permit from CDFW. In-lieu fees for the loss of the 8 Joshua trees would be a minimum of \$4,072.00, but overall mitigation would be determined by CDFW and San Bernardino County and could include relocation of some or all of the trees that are proposed for removal. The project would need to obtain the permit prior to removal of the trees and prior to start of construction of the project. Additional mitigation is recommended by South Environmental including installation of protected fencing around the remaining Joshua Trees during construction, BMPs to avoid damaging trees or root zones, and limiting construction to daytime hours.

If you have any questions regarding the information in this report, please contact Matthew South by email: [msouth@southenvironmental.com](mailto:msouth@southenvironmental.com) or by mobile phone: 303-818-3632.

Sincerely,



Matthew R. South  
Principal Biologist

## References

- Bowns, J.E. 1973. An Auto-ecological Study of Blackbrush (*Coleogyne ramosissima* torr.) in southwestern Utah, All Graduate Theses and Dissertations, 1442, Utah State University, Logan Utah.
- County of San Bernardino. 2007. San Bernardino County Joshua Tree Community Plan, San Bernardino, California.
- Rundel, P.W. Personal communication, August 13-18, 2021. University of California, Los Angeles, California.
- State of California. Western Joshua Tree Conservation Act, Senate Bill 122, Chapter 11.5 added to Division 2 of the Fish and Game Code.

## Appendix A: Joshua Tree Data Matrix

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Tree ID	Latitude	Longitude	Size Class	Health	Mature (Y/N)	Flowers/ Fruit (Y/N)	Impact	Within 15m of Tree	Canopy (ft)	Structure
1	34.127978	-116.3963407	1-5	3	Y	Y			7	3
2	34.128005	-116.3963673	<1	5	N	N			<1	3
3	34.128045	-116.3962512	1-5	5	Y	Y			25	3
4	34.128071	-116.3961467	1-5	5	N	N		Y	1	3
5	34.128071	-116.3961467	1-5	4	N	N		Y	1	3
6	34.128071	-116.3961467	1-5	4	N	N		Y	3	3
7	34.128071	-116.3961467	1-5	5	Y	Y		Y	5	3
8	34.128071	-116.3961467	1-5	4	Y	Y		Y	20	3
9	34.127847	-116.3960683	1-5	3	Y	Y		Y	15	2
10	34.127612	-116.3954786	1-5	5	Y	Y	Removal	Y	30	3
11	34.127575	-116.3956722	1-5	5	Y	Y	Removal	Y	8	3
12	34.127537	-116.3955974	>5	5	Y	Y		Y	15	3
13	34.127479	-116.3955569	1-5	3	Y	Y	Removal	Y	20	2
14	34.127408	-116.3960243	1-5	3	Y	N	Removal	Y	5	3
15	34.127409	-116.3961341	>5	5	Y	Y		Y	25	3
16	34.127342	-116.3962734	1-5	2	Y	N			12	1
17	34.127195	-116.3964154	1-5	3	Y	Y			20	2
18	34.127188	-116.396175	1-5	3	Y	Y		Y	15	3
19	34.127316	-116.3959713	1-5	4	N	N	Removal	Y	1	3
20	34.127316	-116.3959713	1-5	5	Y	Y	Removal	Y	5	3
21	34.127233	-116.3958595	1-5	5	Y	Y		Y	8	3
22	34.127231	-116.3958409	1-5	4	Y	Y		Y	6	2
23	34.12729	-116.395744	1-5	5	Y	Y		Y	25	3
24	34.127297	-116.3955698	>5	4	Y	Y		Y	30	3
25	34.127449	-116.3952777	1-5	3	Y	Y			15	3
26	34.127412	-116.3952069	1-5	5	Y	Y			7	3
27	34.127407	-116.3952162	<1	5	N	N			<1	3
28	34.127407	-116.3952088	<1	5	N	N			<1	3
29	34.127498	-116.3951366	1-5	3	Y	Y			15	2
30	34.127511	-116.3950936	1-5	4	Y	Y			20	3
31	34.127173	-116.3955338	1-5	4	Y	Y			12	3
32	34.126973	-116.3959148	1-5	5	Y	Y			7	3
33	34.127008	-116.3961694	1-5	5	Y	Y			12	3
34	34.12695	-116.3962109	1-5	3	Y	Y			15	3
35	34.127514	-116.396005	1-5	3	Y	Y	Removal	Y	-	3
D1	34.12764	-116.3957453	1-5	1	Y		Removal	Y	-	1
D2	34.127453	-116.396316	1-5	1	N				-	1
D3	34.127443	-116.3953998	1-5	1	Y			Y	-	1

## Appendix B: Photograph Exhibit

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Joshua Tree 03



Joshua Trees 01-02



Joshua Tree 04



Joshua Trees 04-08



Joshua Tree 09



Joshua Tree 10



Joshua Tree 11



Joshua Tree 012



Joshua Tree 13



Joshua Tree 14



Joshua Tree 15



Joshua Tree 16



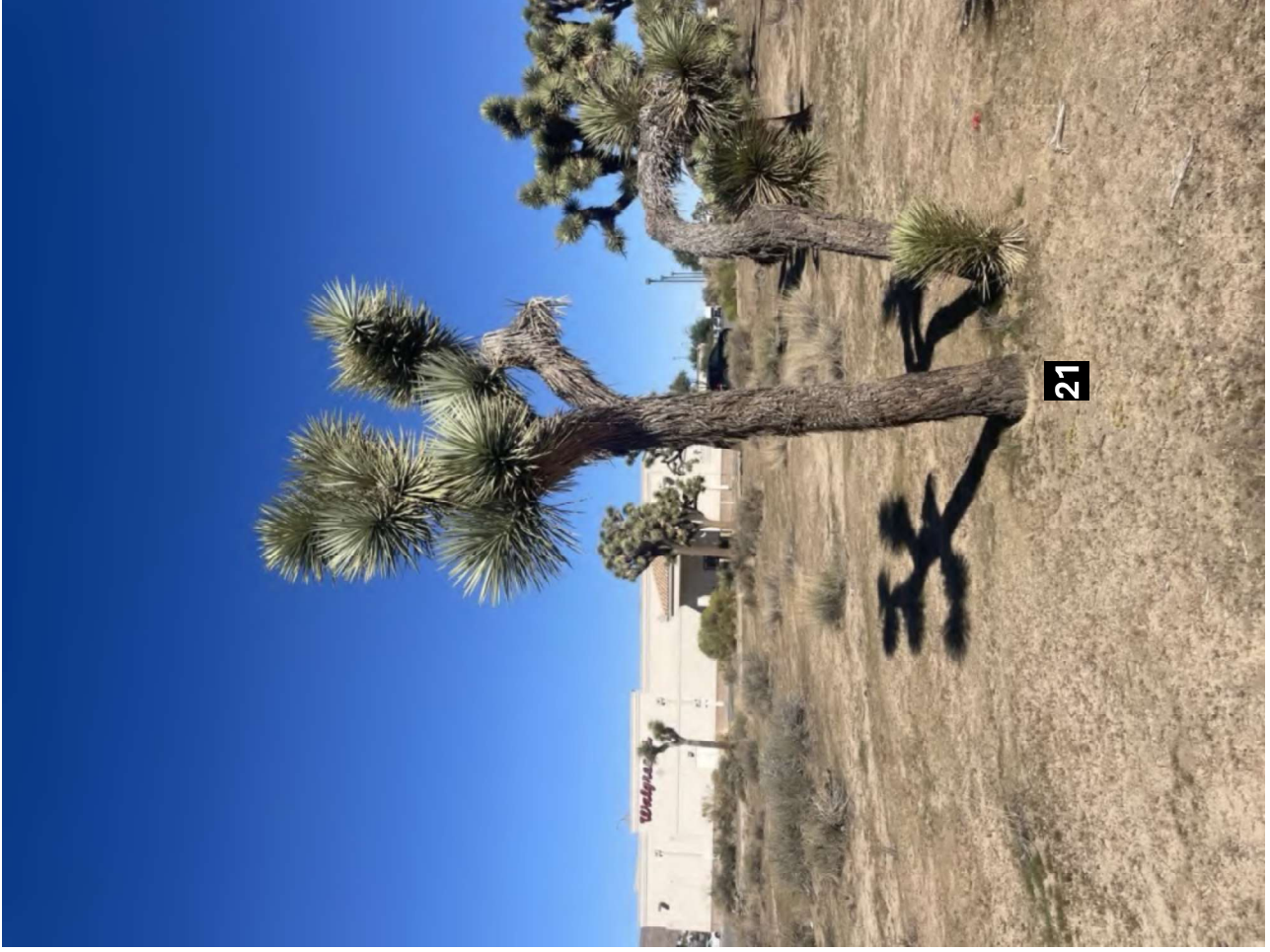
**Joshua Tree 17**



**Joshua Tree 18**



Joshua Trees 19-20



Joshua Tree 21



Joshua Tree 22



Joshua Tree 23



Joshua Tree 24



Joshua Trees 25



Joshua Tree 26



Joshua Trees 27-28



Joshua Tree 29



Joshua Tree 30



Joshua Tree 31



Joshua Tree 32



Joshua Tree 33



Joshua Tree 34



**Joshua Tree 35**



**Joshua Tree D1**



**Joshua Tree D2**



**Joshua Tree D3**

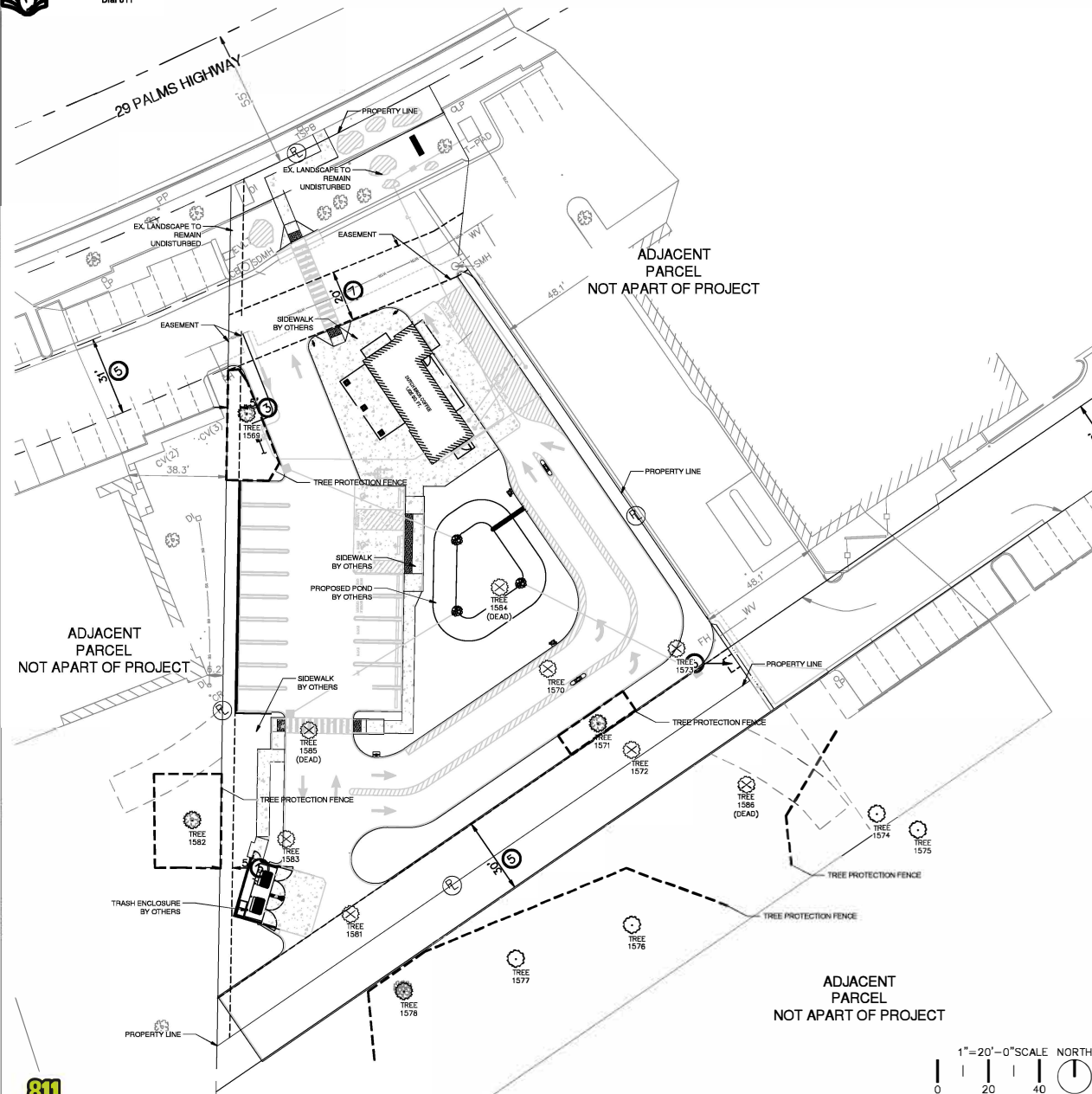
## Appendix C: Site Plan

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# DUTCH BROS. COFFEE - CA3714 - YUCCA VALLEY, CA

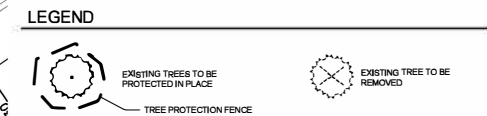


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 W: WWW.DESERTARBORISTSERVICES.COM

**NATIVE PLANT & TREE CALCULATIONS**

NATIVE TREES-ON-SITE	16 TREES
NATIVE TREES-TO BE REMOVED	3 TREES
NATIVE TREES- TO BE TRANSPLANTED	0 TREES
NATIVE TREES- TO BE REIMPOSED	5 TREES
NATIVE TREES- TO REMAIN (PROTECT IN PLACE)	8 TREES

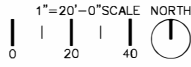


**NATIVE PLANT DOCUMENTATION SURVEY TABLE**

Joshua Tree Survey Data							DISPOSITION
Waypoint	Tree Type	Quantity	Diameter	Height	Health		
1569	Joshua Tree	1	9.5"	22ft	Good	REMAIN	
1570	Joshua Tree	1	10"	15ft	Good	REMOVE	
1571	Joshua Tree	1	16"	22ft	Good	REMAIN	
1572	Joshua Tree	2	14"	18ft	Good	REMOVE	
1573	Joshua Tree	1	16.5"	18ft	Good	REMOVE	
1574	Joshua Tree	1	7.5"	16ft	Good	REMAIN	
1575	Joshua Tree	2	7", 1.5"	10ft	Good	REMAIN	
1576	Joshua Tree	1	14"	20ft	Good	REMAIN	
1577	Joshua Tree	1	16"	14ft	Good	REMAIN	
1578	Joshua Tree	3	8", 3", 7"	9/2/6ft	Good	REMAIN	
1581	Joshua Tree	3	6", 3.5", 2.5"	6/3.5/2.5ft	Good	REMOVE	
1582	Joshua Tree	1	6"	8ft	Fair	REMAIN	
1583	Joshua Tree	1	13"	18ft	Good	REMOVE	
1584	Joshua Tree	Dead	Dead	Dead	Dead	REMOVE	
1585	Joshua Tree	Dead	Dead	Dead	Dead	REMOVE	
1586	Joshua Tree	Dead	Dead	Dead	Dead	REMOVE	

NOTE: TREE PROTECTION FOR ANY PRESERVED OR RELOCATED TREES MUST BE PROVIDED PER DETAILS AND SPECIFICATIONS ON SHEET NP-2. THESE MUST BE UP PRIOR TO THE COMMENCEMENT OF ANY WORK AND MAINTAINED THROUGHOUT CONSTRUCTION.

NOTE: ALL TREE TRIMMING MUST BE APPROVED BY THE OWNER AND LOCAL JURISDICTION PRIOR TO COMMENCEMENT OF WORK. ALL TREE TRIMMING MUST BE DONE BY AN ISA CERTIFIED ARBORIST IN ACCORDANCE WITH LOCAL TREE PRESERVATION ORDINANCE.



PRELIMINARY NOT FOR CONSTRUCTION



Know what's below.  
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NATIVE PLANT PROTECTION PLAN  
 SWQ 29 PALMS HWY & BALSAS AVE  
 YUCCA VALLEY, CA

Title:



For:



Book:

Designed	Checked	Approved	Date

**Borghausen Consulting Engineers, LLC**  
 10325 72nd Avenue South  
 Kent, WA 98032  
 425.251.6222  
 borghausen.com



Job Number: 23690  
 Sheet: NP-1  
 Printed: 08/11/2025 11:03 AM



Project: 23690 - Yucca Valley, CA - 29 Palms Hwy & Balsas Ave, CA  
 Date: 07/21/2025 11:03 AM  
 User: BLAKE



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Dial 811

### TREE PROTECTION SPECIFICATIONS

#### MATERIALS

- FABRIC: 4 FOOT HIGH ORANGE PLASTIC FENCING AS SHOWN ON THE PLANS AND SHALL BE WOVEN WITH 2 INCH MESH OPENINGS SUCH THAT IN A VERTICAL DIMENSION OF 23 INCHES THE DIAGONALS OF THE OPENINGS THERE SHALL BE AT LEAST 7 MESHES.
- POSTS: POSTS SHALL BE A MINIMUM OF 72 INCHES LONG AND STEEL "I" SHAPED WITH A MINIMUM WEIGHT OF 1.3 POUNDS PER LINEAR FOOT.
- THE WIRE WIRE FOR ATTACHING THE FABRIC TO THE T-POSTS SHALL BE NOT LESS THAN NO. 12 GAUGE GALVANIZED WIRE.
- USED MATERIALS: PREVIOUSLY USED MATERIALS MEETING THE ABOVE REQUIREMENTS AND WHEN APPROVED BY THE OWNER, MAY BE USED.

#### CONSTRUCTION METHODS

- ALL TREES AND SHRUBS SHOWN TO REMAIN WITHIN THE PROXIMITY OF THE CONSTRUCTION SITE SHALL BE PROTECTED PRIOR TO BEGINNING ANY DEVELOPMENT ACTIVITY.
- EMPLOY THE SERVICES OF AN ISA (INTERNATIONAL SOCIETY OF ARBORICULTURE) CERTIFIED ARBORIST AND OBTAIN ALL REQUIRED PERMITS TO PRUNE THE EXISTING TREES FOR CLEANING, RAISING AND THINNING, AS MAY BE REQUIRED.
- PROTECTIVE FENCING SHALL BE ERRECTED OUTSIDE THE CRITICAL ROOT ZONE (CRZ) EQUAL TO 1' FROM THE TRUNK FOR EVERY 1" OF DBH) AT LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE LANDSCAPE CONSULTANT AND/OR CITY ENGINEER, AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS. FENCING SHALL BE MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. TREES IN CLOSE PROXIMITY SHALL BE FENCED TOGETHER, RATHER THAN INDIVIDUALLY.
- PROTECTIVE FENCE LOCATIONS IN CLOSE PROXIMITY TO STREET INTERSECTIONS OR DRIVES SHALL ADHERE TO THE APPLICABLE JURISDICTIONS SIGNAGE CRITERIA.
- THE PROTECTIVE FENCING SHALL BE ERRECTED BEFORE SITE WORK COMMENCES AND SHALL REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PHASE.
- THE INSTALLATION POSTS SHALL BE PLACED EVERY 6 FEET ON CENTER AND EMBEDDED TO 18 INCHES DEEP. MESH FABRIC SHALL BE ATTACHED TO THE INSTALLATION POSTS BY THE USE OF SUFFICIENT WIRE TIES TO SECURELY FASTEN THE FABRIC TO THE T-POSTS TO HOLD THE FABRIC IN A STABLE AND UPRIGHT POSITION.
- WITHIN THE CRZ:
  - DO NOT CLEAR, FILL OR GRADE IN THE CRZ OF ANY TREE.
  - DO NOT STORE, STOCKPILE, OR DUMP ANY JOB MATERIAL, SOIL OR RUBBISH UNDER THE SPREAD OF THE TREE BRANCHES.
  - DO NOT PARK OR STORE ANY EQUIPMENT OR SUPPLIES UNDER THE TREE CANOPY.
  - DO NOT SET UP ANY CONSTRUCTION OPERATIONS UNDER THE TREE CANOPY (SUCH AS FIRE CUTTING AND THINNING, MORTAR MIXING, PAINTING OR LUMBER CUTTING).
  - DO NOT NAIL OR ATTACH TEMPORARY SIGNS, METERS, SWITCHES, WIRES, BRACKETS OR ANY OTHER ITEM TO THE TREES.
  - DO NOT PERMIT RUNOFF FROM WASTE MATERIALS INCLUDING SOLVENTS, CONCRETE WASHOUTS, ASPHALT TACK COATS (MCS-01), ETC. TO ENTER THE CRZ. BARRIERS ARE TO BE PROVIDED TO PREVENT SUCH RUNOFF. SUBSTANCES FROM ENTERING THE CRZ WHENEVER POSSIBLE, INCLUDING IN AN AREA WHERE RAIN OR SURFACE WATER COULD CARRY SUCH MATERIALS TO THE ROOT SYSTEM OF THE TREE.
- ROUTE UNDERGROUND UTILITIES TO AVOID THE CRZ. IF DIGGING IS UNAVOIDABLE, BORE UNDER THE ROOTS, OR HAND DIG TO AVOID SEVERING THEM.
- WHERE EXCAVATION IN THE VICINITY OF TREES MUST OCCUR, SUCH AS FOR IRRIGATION INSTALLATION, PROCEED WITH CAUTION, AND USING HAND TOOLS ONLY.
- THE CONTRACTOR SHALL NOT CUT ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATION OCCURS NEAR EXISTING TREES. ALL ROOTS LARGER THAN ONE INCH IN DIAMETER ARE TO BE CUT CLEANLY. FOR CRZS ONLY, ALL WOUNDS SHALL BE PAINTED WITH WOUND SEALER WITHIN 30 MINUTES.
- REMOVE ALL TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS BY HAND.
- TREES DAMAGED OR KILLED DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED AT THE CONTRACTOR'S EXPENSE AND TO THE PROJECT OWNERS AND LOCAL JURISDICTIONS SATISFACTION.
- ANY TREE REMOVAL SHALL BE APPROVED BY THE OWNER AND LOCAL JURISDICTION PRIOR TO ITS REMOVAL, AND THE CONTRACTOR SHALL HAVE ALL REQUIRED PERMITS FOR SUCH ACTIVITIES.
- COVER EXPOSED ROOTS AT THE END OF EACH DAY WITH SOIL, MULCH OR WET BURLAP.
- IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION AND WHERE HEAVY TRAFFIC IS ANTICIPATED, COVER THE SOIL WITH EIGHT INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION. THIS EIGHT INCH DEPTH OF MULCH SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
- WATER ALL TREES IMPACTED BY CONSTRUCTION ACTIVITIES, DEEPLY ONCE A WEEK DURING PERIODS OF HOT DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
- WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL TREE PROTECTION FENCING WHEN ALL THREATS TO THE EXISTING TREES FROM CONSTRUCTION-RELATED ACTIVITIES HAVE BEEN REMOVED.

### TREE PROTECTION GENERAL NOTES

- PRIOR TO THE LAND CLEARING STAGE OF DEVELOPMENT, THE CONTRACTOR SHALL CLEARLY MARK ALL PROTECTED TREES FOR WHICH A TREE REMOVAL PERMIT HAS NOT BEEN ISSUED AND SHALL ERRECT BARRIERS FOR THE PROTECTION OF THE TREES ACCORDING TO THE FOLLOWING:
  - AROUND AN AREA 'A' OR GREATER THAN A SIX-FOOT RADIUS OF ALL SPECIES OF MAJOROVES AND PROTECTED CABAGE PALMS.
  - AROUND AN AREA AT OR GREATER THAN THE FULL DRIFLINE OF ALL PROTECTED NATIVE PINES.
  - AROUND AN AREA 'A' OR GREATER THAN TWO-THIRDS OF THE DRIFLINE OF ALL OTHER PROTECTED SPECIES.
- NO PERSON SHALL ATTACH ANY SIGN, NOTICE OR OTHER OBJECT TO ANY PROTECTED TREE OR FASTEN ANY WIRES, CABLES, NAILS OR SCREWS TO ANY PROTECTED TREE IN ANY MANNER THAT COULD PROVE HARMFUL TO THE PROTECTED TREE, EXCEPT AS NECESSARY IN CONNECTION WITH ACTIVITIES IN THE PUBLIC INTEREST.
- DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE CONTRACTOR SHALL NOT CAUSE OR PERMIT THE CLEANING OF EQUIPMENT OR MATERIAL WITHIN THE PROTECTED PERIMETER OF THE CROWN DRIFLINE OR ON THE NEARBY GROUND OF ANY TREE OR GROUP OF TREES WHICH IS TO BE PRESERVED, WITHIN THE OUTSIDE PERIMETER OF THE CROWN DRIFLINE OF ANY TREE OR NEARBY GROUND, THE CONTRACTOR SHALL NOT CAUSE OR PERMIT STORAGE OF BUILDING MATERIAL AND/OR EQUIPMENT, OR DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF THE TREE.
- NO PERSON SHALL PERMIT ANY UNNECESSARY FIRE OR BURNING WITHIN 30 FEET OF THE DRIFLINE OF A PROTECTED TREE.
- ANY LANDSCAPING ACTIVITIES WITHIN THE BARRIER AREA SHALL BE ACCOMPLISHED WITH HAND LABOR.
- PRIOR TO ISSUING A CERTIFICATE OF OCCUPANCY OR COMPLIANCE FOR ANY DEVELOPMENT, BUILDING OR STRUCTURE, ALL TREES DESIGNATED TO BE PRESERVED THAT WERE DESTROYED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR WITH TREES OF EQUIVALENT DIAMETER AT BREAST HEIGHT TREE CALIPER AND OF THE SAME SPECIES AS SPECIFIED BY THE TOWN OF YUCCA VALLEY NATIVE PLANT ORDINANCE, BEFORE OCCUPANCY OR USE, UNLESS APPROVAL FOR THEIR REMOVAL HAS BEEN ORNITED UNDER PERMIT.
- THE TOWN OF YUCCA VALLEY MAY CONDUCT PERIODIC INSPECTIONS OF THE SITE DURING LAND CLEARANCE AND CONSTRUCTION.
- IF, IN THE OPINION OF THE TOWN OF YUCCA VALLEY, DEVELOPMENT ACTIVITIES WILL SO SEVERELY STRESS SLASH FINES OR ANY OTHER PROTECTED TREE SUCH THAT THEY ARE MADE SUSCEPTIBLE TO INSECT ATTACK, PREVENTATIVE SPRAYING OF THESE TREES BY THE CONTRACTOR MAY BE REQUIRED.

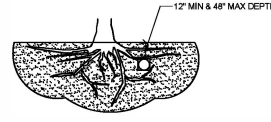
### TREE RELOCATION GUIDELINES

- TREES SHALL NOT BE UNNECESSARILY DAMAGED DURING REMOVAL, TRANSPORT OR REPLANTING OF THE TREE.
- IF THE TREE HAS A DOMINANT PERIOD, THEY SHOULD BE TRANSLANTED DURING THAT TIME. TREES SHOULD NOT BE TRANSLATED DURING PERIODS OF STRONG WINDS, DRY WINTER WINDS OR DURING DROUGHT.
- APPROPRIATE SPACES FOR ROOT AND CROWN DEVELOPMENT SHALL BE PROVIDED.
- TREES SHALL BE ROOT AND CANOPY PRUNED IN ACCORDANCE WITH SOUND ARBORICULTURAL STANDARDS PRIOR TO TRANSLANTING.
- DURING AND FOLLOWING TRANSLANTING, THE ROOT BALL AND TRUNK SHALL BE PROTECTED, THE ROOT BALL MUST BE KEPT MOIST AT ALL TIMES.
- TRANSLANTED TREES SHALL BE BRACED FOR A MINIMUM OF ONE (1) YEAR.
- TRANSLANTED TREES SHALL NOT BE FERTILIZED AT PLANTING TIME, BUT SHALL BE WATERED SUFFICIENTLY UNTIL THE TREE GROWTH IS REESTABLISHED.
- ALL CROWN PRUNING SHALL BE DONE IN ACCORDANCE WITH "THE AMERICAN NATIONAL STANDARDS INSTITUTE A-301, TREE SHRUB AND OTHER WOODY PLANT MAINTENANCE-STANDARD PRACTICES", AND "Z-1311 PRUNING, REPAIRING, MAINTAINING AND REMOVING TREES, AND CUTTING BRUSH-SAFETY REQUIREMENTS" OR PALM PRUNING IN ACCORDANCE WITH THE STANDARDS IN RICHARD HARRIS, "ARBORICULTURE, INTEGRATED MANAGEMENT OF LANDSCAPE TREES, SHRUBS AND VINES", AS AMENDED.
- CONTRACTOR IS RESPONSIBLE FOR REGULAR WATERING AND MAINTENANCE OF TRANSLANTED TREES DURING STORAGE PERIOD.

## DUTCH BROS. COFFEE - CA3714 - YUCCA VALLEY, CA

TREES THAT ARE MARKED TO BE PRESERVED ON A SITE PLAN AND FOR WHICH UTILITIES MUST PASS THROUGH THEIR ROOT PROTECTION ZONES MAY REQUIRE TUNNELING AS OPPOSED TO OPEN TRENCHES. THE DECISION TO TUNNEL WILL BE DETERMINED ON A CASE-BY-CASE BASIS BY THE ENGINEER.

TUNNELS SHALL BE DUG THROUGH THE ROOT PROTECTION ZONE IN ORDER TO MINIMIZE ROOT DAMAGE.



TUNNEL TO MINIMIZE ROOT DAMAGE (TOP) AS OPPOSED TO SURFACE-DUG TRENCHES IN ROOT PROTECTION ZONE WHEN THE 9" MINIMUM DISTANCE FROM TRUNK CAN NOT BE ACHIEVED.



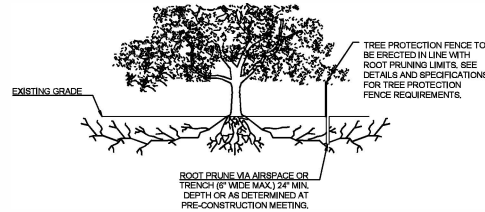
OPEN TRENCHING MAY BE USED IF EXPOSED TREE ROOTS DO NOT EXCEED 3" OR ROOTS CAN BE BENT BACK.

### C BORING THROUGH ROOT PROTECTION ZONE

SCALE: NOT TO SCALE

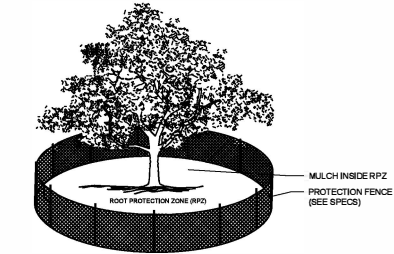
#### NOTES

- RETENTION AREAS WILL BE SET AS PART OF THE REVIEW PROCESS AND PRE-CONSTRUCTION MEETING.
- SOLIDARITIES OF RETENTION AREAS MUST BE STAKED AT THE PRE-CONSTRUCTION MEETING AND FLAGGED PRIOR TO ROOT PRUNING.
- EXACT LOCATION OF ROOT PRUNING SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FORESTRY INSPECTOR.
- TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH EXCAVATED SOIL OR OTHER ORGANIC SOIL AS SPECIFIED PER PLAN OR BY THE FORESTRY INSPECTOR.
- ROOTS SHALL BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT. ROOT PRUNING METHODS AND MEANS MUST BE IN ACCORDANCE WITH ANS I AND ANSI Z39.01.
- ALL PRUNING MUST BE EXECUTED AT LOD SHOWN ON PLANS OR AS AUTHORIZED IN WRITING BY THE FORESTRY INSPECTOR.
- SUPPLEMENTAL WATERING MAY BE REQUIRED FOR ROOT PRUNED TREES THROUGHOUT THE GROWING SEASON DURING CONSTRUCTION AND SUBSEQUENT WARRANTY AND MAINTENANCE PERIOD.



### D ROOT PRUNING DETAIL

SCALE: NOT TO SCALE

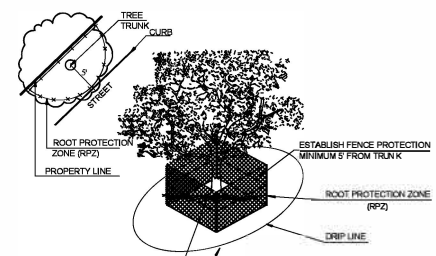


#### NOTES

- THE FENCING LOCATIONS SHOWN ABOVE IS DIAGRAMATIC ONLY AND WILL CONFORM TO THE DRIP LINE AND BE LIMITED TO PROJECT BOUNDARY, WHERE MULTIPLE ADJACENT TREES WILL BE ENCLOSED BY FENCING, THE FENCING SHALL BE CONTINUOUS AROUND ALL TREES.
- FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

### A TREE PROTECTION FENCE

SCALE: NOT TO SCALE



#### NOTES

- OPTION USED FOR TIGHT CONSTRUCTION AREAS OR WHEN CONSTRUCTION OCCURS IN ROOT PROTECTION ZONE FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

### B TREE PROTECTION FENCE - TIGHT CONSTRUCTION

SCALE: NOT TO SCALE

NATIVE PLANT PROTECTION  
SPECS & DETAILS  
SWQ 29 PALMS HWY & BALSA AVE  
YUCCA VALLEY, CA

Title:



For:



Scale:

Horizontal

Vertical

Designed:

Drawn:

Checked:

Approved:

Date:

**Barghausen Consulting Engineers, LLC**  
1835 77th Avenue South  
Miami, FL 33156  
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Job Number:

23690

Sheet:

NP-2

Project:

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11/14/2023



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