PROTECTED PLANT PRESERVATION PLAN

CITY OF HESPERIA, SAN BERNARDINO COUNTY, CALIFORNIA
APN: 0405-383-31

Prepared for:

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TITLE PAGE

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1.0 SUMMARY

At the request of the project proponent, RCA Associates, Inc. surveyed an approximately 10-acre property located on the Northwest of the intersection of Ranchero Road and Primrose Ave in the city of Hesperia, California (Township 4 North, Range 5 West, Section 336, USGS Hesperia, California Quadrangle, 1956) (Figures 1, 2, and 3).

The purpose of the survey was to evaluate the Joshua trees present on the site and determine which trees were suitable for relocation and which trees could be discarded prior to site clearing activities. This report provides the results of the Joshua tree survey performed on December 27, 2021. Following completion of the survey, RCA Associates, Inc. prepared this Protected Plant Preservation Plan to assist the project proponent with future relocation of the Joshua trees. Information on the Joshua trees which will need to be relocated-transplanted in the future is provided in Section 4.0. The City of Hesperia Municipal Code has a chapter (Chapter 16.24.110) stating the purpose of Joshua Tree preservation and the consequence of removing one, and follows the County of San Bernardino Plant Protection Plan and Management (Chapter 88.01.060) to help protect and preserve desert vegetation, including Joshua trees. The requirements of the Ordinance (Chapter 88.01.060) are provided in Appendix B.

Based on the results of the field investigations there are 25 Joshua trees which occur within the boundaries of the property (Figures 1, 2, and 3). Based on the evaluation and analysis of each tree it was determined that 5 of the 25 Joshua trees (20%) are suitable for transplanting. These trees are marked in red in Table 4-1. The remaining 20 Joshua trees (80%) were determined to be unsuitable for transplanting due to a variety of factors such as size, condition, damage, dying, dead, excessive leaning, possibly disease, clonal, etc.

2.0 INTRODUCTION AND PROJECT LOCATION

The area surveyed is located northwest from the intersection of Ranchero Rd and Primrose Ave in Hesperia, California (Figures 1 and 2). Current conditions on the property include a mix of moderately disturbed desert scrub community found within the northern half of the site with moderate signs of human disturbances. The southern half of the property contained a moderately sparse juniper woodland. The biological resources on the site consist of a desert scrub community typical of the area with creosote bush (*Larrea tridentata*), Juniper (*Juniperus communus*)**,** rubber rabbitbrush (*Ericameria nauseosa*), white-bursage (*Ambrosia dumosa*), flatspine bur ragweed (*Ambrosia acanthicarpa*), Joshua trees (*Yucca brevifolia*), kelch grass (*Schismus barbatus*), and cheatgrass (*Bromus tectorum*) observed on the site. Single family residential properties are located both in the west and the south while vacant property can be seen in the north (Figure 2).

Joshua trees occur throughout the Mojave Desert in Southern California and are typically found at an elevation of 400 to 1,800 meters (~1,200 to ~5,400 feet). Joshua trees within the western portion of the Mojave Desert typically receive more annual precipitation during "normal" years; consequently, cloning occurs more often resulting in numerous trunks sprouting from the same root system (Rowland, 1978). Joshua tree habitats provide habitat for a variety of wildlife species including desert woodrats (*Neotoma* sp.) and night lizards (*Xantusia* sp.) both of which utilize the base of the trees. A variety of birds also utilize Joshua trees for nesting such as hawks, common ravens, and cactus wrens. CDFW consider Joshua tree woodlands as areas that support relatively high species diversity and as such are considered to be a sensitive desert community. Joshua trees are also considered a significant resource under the California Environmental Quality Act (CEQA) and are included in the Desert Plant Protection Act, Food and Agricultural Code (80001 – 80006).

3.0 METHODOLOGIES

Pedestrian surveys were walked throughout the site and biologists from RCA Associates, Inc. evaluated each Joshua tree to determine which trees were suitable for relocation/transplanting based on a general health assessment. Each Joshua tree received a metal numbered tag which was affixed on the north side of each tree for orientation purposes during future transplanting. Surveyor flagging was also placed around those trees suitable for transplanting to facilitate future identification. The precise location of each tree was recorded using a Garmin inReach Explorer+ GPS unit and a Nikon Forestry Pro II rangefinder was utilized to determine the extent of the property boundaries and accurate tree height. Those Joshua trees which occur on the property site are presented in Table 4-1 and the locations are provided in Figure 2.

The factors utilized to determine which Joshua trees were suitable for transplanting include the following factors:

1. Trees from about 1 foot in height up to approximately 12 feet,
2. No visible signs of damage to the tree such as absence of bark due to rodent or other animals,
3. Minimal number of branches (No more than 2 or 3 branches),
4. No excessive leaning of the tree,
5. No yellow or brown fronds,
6. Proximity to other Joshua trees (i.e., clonal), and
7. No exposed roots at the base of the tree.
8. Dying or dead

4.0 RESULTS

There are 25 Joshua trees on the property and the GPS locations of the Joshua trees are provided in Table 4-1. A total of 5 Joshua trees (20%) are suitable for relocation/transplanting based on the nine factors listed in Section 3.0 (Table 4-1). The Joshua trees suitable for transplanting should be relocated/transplanted on-site, which is the preferable option, or to an off-site area approved by the City of Hesperia. Those Joshua trees that are not suitable for relocation/transplanting due to size, health of the tree, presence of damage, excessive branches, excessive leaning, clonal, and exposed roots should be disposed of as per City requirements.

Table 4-1: Joshua tree census. (Note: The GPS locations of the Joshua trees are provided below and those trees which are suitable for transplanting on-site as part of project landscaping are highlighted in red.)

Total Number of Joshua Trees On Site	Joshua Trees to be Transplanted	Number of Clonal Trees	Number of Non-Clonal Trees	Number of Dead Trees
25	5	4	21	3

Tag#	Life Stage	Height	Location	Panicles	Branches	Condition	Health Assessment	Number of Trunks	Transplantable
7001	Adult	9	N34.383458° W117.348546°	10	15	Good		2	No
7002	Adult		N34.383496° W117.348526°			Dead			No
7003	Adult		N34.38339°W 117.350293°			Dead			No
7004	Adult	18	N34.383329° W117.350606°	16	39				No
7005	Juvenile	4	N34.383531° W117.350036°			Good			Yes
7006	Seedling	1	N34.383555° W117.350042°			Good			No
7007	Adult	15	N34.383497° W117.349982°	6	23	Good			No
7008	Juvenile	1	N34.383653° W117.349952°			Good			No
7009	Adult	10	N34.383633° W117.349156°	1	5	Poor	Heavy Damage	2	No
7010	Adult	13	N34.383947° W117.349915°	10	18	Fair	Light Damage		No
7011	Juvenile	3	N34.383876° W117.349952°			Good			Yes
7012	Seedling	1	N34.383848° W117.350059°			Good			No

Tag#	Life Stage	Height	Location	Panicles	Branches	Condition	Health Assessment	Number of Trunks	Transplantable
7013	Seedling	1	N34.383844° W117.350065°			Good			No
7014	Juvenile	3	N34.383742° W117.350225°			Good			Yes
7015	Juvenile	3	N34.383571° W117.350433°			Good			Yes
7016	Juvenile	2	N34.383896° W117.350553°			Good		2	No
7017	Seedling	1	N34.384058° W117.350591°			Good		2	No
7018	Adult	14	N34.38402°W 117.350363°	2	9	Fair	Light Damage		No
7019	Adult	7	N34.384148° W117.350207°	1		Good			Yes
7020	Adult	16	N34.384168° W117.350421°	3	6	Good			No
7021	Seedling	1	N34.384385° W117.350308°			Good			No
7022	Adult	4	N34.384357° W117.350296°	2	1	Fair	Light Damage		No
7023	Adult		N34.38462°W 117.349716°			Dead			No
7024	Seedling	1	N34.384637° W117.348985°			Good			No
7025	Adult	13	N34.383883° W117.349622°	14	22	Fair	Light Damage		No

5.0 CONCLUSIONS

There are 25 Joshua trees located on the property and 5 of the trees are suitable for relocation/transplanting. This conclusion was based on: (1) trees which were one foot or greater in height and less than twelve feet tall (approximate); (2) in good health; (3), two branches or less; (4) density of trees (i.e., no clonal trees); (5) no exposed roots; (6) and trees that are not leaning over excessively. As indicated in Table 4-1, the majority of the Joshua trees which were not suitable for relocation are dead and lying on the ground.

As of September 22, 2020, the California Department of Fish and Wildlife temporarily listed the western Joshua tree (*Yucca brevifolia*) as an endangered species for one year until a final decision is made in 2021. Therefore, any attempt to remove the Joshua tree from its current position will require an Incidental Take Permit (ITP).

The City of Hesperia's Municipal Code (Chapter 16.24.110) instructs to follow the County of San Bernardino's ordinance (88.01.060), which requires preservation of Joshua trees given their importance in the desert community. A qualified City-approved biologist or arborist should be retained to conduct any future relocation/transplanting activities and should follow the protocol of the County's Municipal Code (Appendix B: Chapter 88.01.060). The following criteria will be utilized by the contractor when conducting any future transplanting activities.

A. The Joshua trees will be retained in place or replanted somewhere on the site where they can remain in perpetuity or will be transplanted to an off-site area approved by the city where they can remain in perpetuity. Joshua trees which are deemed not suitable for transplanting will be cut-up and discarded as per City requirements.

B. Earthen berms will be created around each tree by the biologist prior to excavation and the trees will be watered approximately one week before transplanting. Watering the trees prior to excavation will help make excavation easier, ensure the root ball will hold together, and minimize stress to the tree.

C. Each tree will be moved to a pre-selected location which has already been excavated and will be placed and oriented in the same direction as their original direction. The hole will be backfilled with native soil, and the transplanted tree will be immediately watered. As noted in Section 3.0, a numbered

metal tag was placed on the north side of the trees and the trees were also flagged with surveyor's flagging. The biologist will develop a watering regimen to ensure the survival of the transplanted trees. The watering regimen will be based upon the needs of the trees and the local precipitation.

6.0 REFERENCES

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7.0 CERTIFICATION

I hereby certify the statements furnished above and in the attached exhibits, present the data and information required for this Joshua tree survey and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this survey was performed by Ryan Hunter, Brian Bunyi and Jessica Hensley.

Date: December 30, 2021 Signed: *Ryan Hunter*
Jessica Hensley
Brian Bunyi

Field Work Performed by: Ryan Hunter
Environmental Scientist/Biologist

Jessica Hensley
Environmental Scientist/Biologist

Brian Bunyi
Environmental Scientist/Biologist

APPENDIX A

Figures

APPENDIX B

City of Hesperia
Municipal Code: Chapter 16.24.110

County of San Bernardino
Municipal Code: Chapter 18.01.060