Appendix E
Joshua Tree Survey
Report and Management Plan

JOSHUA TREE SURVEY REPORT

1555 Acre Hacienda at Fairview Valley in the Apple Valley Area

Unincorporated San Bernardino County, California

PCR

December 12, 2008
(Revised March 2009)

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1555 Acre Hacienda at Fairview Valley in the Apple Valley Area

Unincorporated San Bernardino County, California

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JOSHUA TREE ASSESSMENT
FOR THE APPROXIMATELY 1,555-ACRE
HACIENDA AT FAIRVIEW VALLEY PROJECT SITE
LOCATED IN THE APPLE VALLEY AREA,
SAN BERNARDINO COUNTY, CALIFORNIA

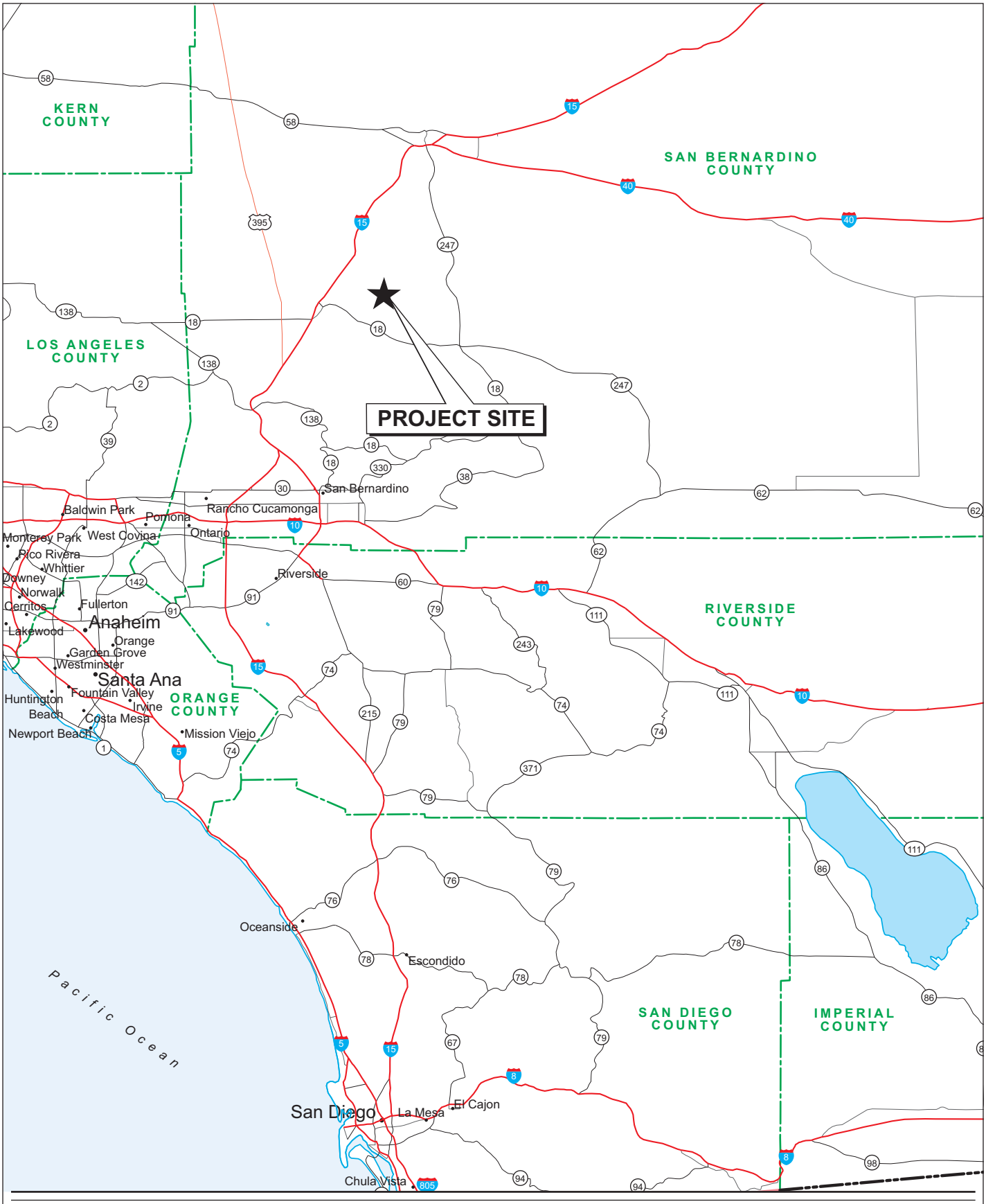
1.0 INTRODUCTION

This report presents the results of a Joshua tree (*Yucca brevifolia*) assessment conducted by **PCR Services Corporation (PCR)** for Strata Equity Group (Applicant) on the approximately 1,555-acre Hacienda at Fairview Valley project site (Site) located in the Apple Valley area, San Bernardino County (County), California. The assessment determined the population of Joshua trees occurring on the Site. The Site consists of APNs 0436-032-21; 0436-032-30; 0436-261-10; 0436-261-14; 0436-021-13; 0436-021-14; 0436-021-15; 0436-021-16; 0436-041-02; 0436-041-03; 0436-041-04; 0436-041-16; 0436-081-01; 0436-081-02; 0436-081-04; 0436-081-05. The Site is located east of Interstate 15 (I-15) and north of Highway 18 in unincorporated Apple Valley (Figure 1, *Regional Map*, on page 2). Topography within the Site is relatively flat with the elevation ranging from approximately 3,070 feet above mean sea level (MSL) in the southwest corner to 3,155 feet above MSL in the north and southeast corner. The Site can be found on the U.S. Geological Survey (USGS) 7.5-minute Fairview Valley topographic quadrangle map, Sections 3, 4, 5, 10, 11, and 14, T. 5 N., R. 2 W (Figure 2, *Vicinity Map*, on page 3).

The purpose of this report is to determine the size of the existing Joshua tree population found on-site to satisfy the County's Joshua tree reporting requirements for California Environmental Quality Act (CEQA) Initial Study submission. While this report does not satisfy the County's full reporting requirements under the County Development Code, Title 8 *Development Code*, Chapter 88.01 *Plant Protection and Management* (Ordinance), it has been determined that this report would be sufficient for initial project review pending a full-scale survey at a future date as a requirement for the Environmental Impact Report (EIR) prior to the issuance of building permits (Shellie Zias-Churchman, personal communication, August 2007).

Pursuant to Section 88.01.050 *Tree or Plant Removal Permits*, a Tree or Plant Removal Permit is required for the removal of a regulated tree or plant, including Joshua trees. Subsection 88.01.050(f)(1) *Findings for removals in the Valley Region, Mountain Region, and Desert Region* states one of the following findings must be made before a permit may be issued:

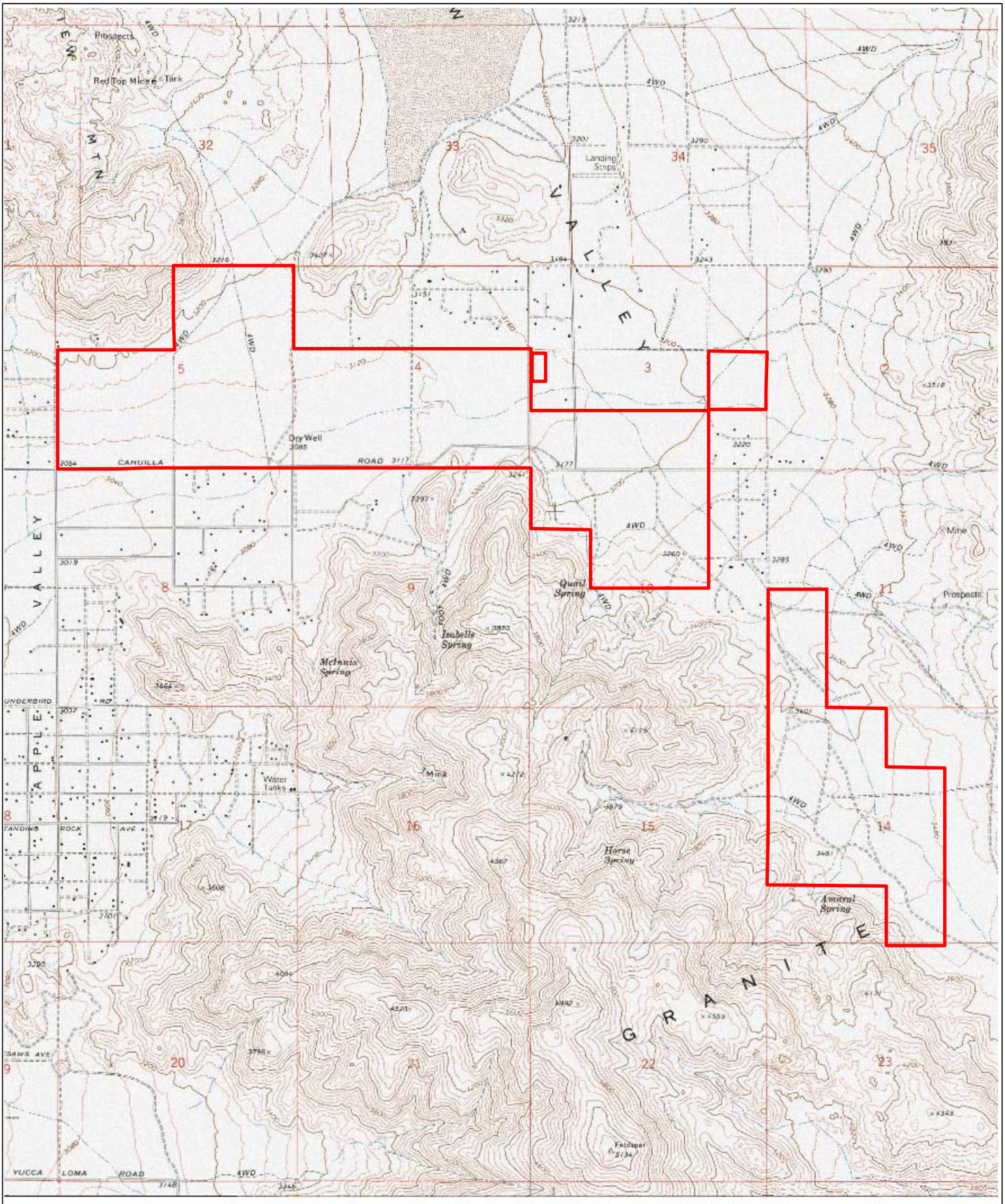
a. The location of the regulated tree or plant and/or its dripline interferes with an allowed structure, sewage disposal area, paved area, or other improvement or



PCR

Source: PCR Services Corporation, 2007.

Figure 1
Hacienda at Fairview Valley
Regional Map



PCR

N

3,000 0 3,000 Feet

Figure 2

Hacienda at Fairview Valley
Vicinity Map

Source: USGS Topographic Series (Fairview Valley, CA); PCR Services Corporation, 2008.

ground disturbing activity that there is no other alternative feasible location for the improvement.

b. The location of the regulated tree or plant and/or its dripline interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property and there is no other alternative feasible location for the improvement.

c. The location of the regulated tree or plant is hazardous to pedestrian or vehicular travel or safety.

d. The regulated tree or plant or its presence interferes with or is causing extensive damage to utility services or facilities, roadways, sidewalks, curbs, gutters, pavement sewer line(s), drainage or flood control improvements, foundations, existing structures, or municipal improvements.

e. The condition or location of the regulated tree or plant is adjacent to and in such close proximity to an existing or proposed structure that the regulated tree or plant has or will sustain significant damage.

Additionally, Subsection (3) states that in the desert region, the Review Authority shall also make the following findings:

a. Joshua trees that are proposed to be removed will be transplanted or stockpiled for future transplanting wherever possible.

b. In the instance of stockpiling, the permittee has complied with Department policy to ensure that Joshua trees are transplanted appropriately. Transplanting shall comply with the provisions of the Desert Native Plants Act (Food and Agricultural Code Section 80001 et seq.), as required by Subsection 88.01.060(d) (Compliance with Desert Native Plants Act).

c. No other reasonable alternative exists for the development of the land when the removal of specimen sized Joshua trees is requested. Specimen size trees are defined as meeting with one or more of the following criteria:

   (I) A circumference measurement equal to or greater than 50 inches measured at 4.5 feet above natural grade level.

   (II) Total tree height of 15 feet or greater

   (III) Trees possessing a bark-like trunk.

(IV) A cluster of 10 or more individual trees, of any size, growing in close proximity to each other.

2.0 NATURAL HISTORY OF JOSHUA TREES

Joshua tree woodlands are located in valleys, mesas, and on gradual slopes in the Mojave Desert between approximately 2,000 and 6,000 feet above MSL. Joshua tree woodlands are defined by the presence of the Joshua tree, which is a widely spaced arborescent species. Emergent Joshua trees typically occur within a wide variety of different desert scrub communities, which form the understory of the Joshua tree woodland. Joshua tree root systems are shallow and not extensive. For example, a tree that is four-feet tall typically has a root system two-feet deep and four-feet in width (BLM, Battle Mountain Field Office website). Joshua trees are also capable of sprouting from roots and branches (cloning). Joshua tree clones are defined by more than one trunk forming a cluster of trees growing less than three feet apart from a single root system and/or branch. Cloning allows the Joshua trees to recover more quickly after floods or other devastating environmental events. Joshua trees prefer to grow in fine-grained, well-drained soils.

Joshua trees and Joshua tree woodlands are not a Federally or State protected endangered species, threatened species, or species of concern; however, they are a biologically valuable resource to wildlife in the region and are hence regulated under the Ordinance prohibiting the removal of Joshua trees without justified reason (Section 88.01.050). In addition, Joshua tree woodland is considered of high priority for inventory by the California Natural Diversity Database (CDFG 2003). In times of drought, Joshua trees are a vital source of water to small rodents, which in turn support predators such as coyotes, foxes, bobcats, hawks, owls and snakes. Rodents rip the bark off the trees with their teeth, and water exudes from the exposed wood of the trunk. Thus, the Joshua tree is a key component in the desert ecosystem (Cornett 2004).

3.0 EXISTING CONDITIONS AND HABITAT CHARACTERISTICS

The entire Site is currently undeveloped, although some scattered rural development exists around the perimeter of the Site. The majority of the Site is classified as Joshua tree woodland (Holland 1986). Dominant species within this community include Joshua tree and creosote bush (*Larrea tridentata*). An extensive network of dirt roads and off road vehicle trails crisscross over the entire site.

4.0 METHODOLOGY

This Joshua tree survey is based on information compiled through field reconnaissance, and appropriate reference materials. Such reference materials include aerial photography, a USGS topographic map, and digital ortho quarter quadrangle data. In addition, numerous regional field guides, as well as the Internet, were utilized during the literature search. These and other references are listed in Section 9.0 of this report.

In addition, PCR biologists and International Society of Arboriculture (ISA)-certified arborist Richard Haywood conducted focused Joshua tree surveys in July 2007, and September 2008 within three regions of the Site. These focused surveys provided samples of the on-site Joshua tree woodland community's general health and condition.

These focused surveys included mapping the location of each Joshua tree with a Trimble GeoXT hand-held GPS unit. The Trimble system is an advanced geographic data collection tool that integrates satellite differential and wide area augmentation system capabilities to provide sub-meter (50 cm RMS) positional accuracy on a real-time basis. Individual Joshua trees were measured for diameter at breast height (dbh), which is 4.5 feet above natural grade, and height. Primary branching, and the presence and number of clones was also counted. An overall assessment of health was made on a grading system: A=excellent, B=good, C=fair, D=poor, E=Nearly dead, F=dead, (See Table 1, *Joshua Tree Health Assessment Ratings*, on page 7). Combining size, health, and location, an assessment was made on each tree's transferability.

Following the focused surveys, Joshua trees throughout the entire property were counted (stem count), to provide an overall census of the trees on the Site. The stem count utilized aerial photography (1" = 300' scale), and the existing network of dirt roads and off road vehicle trails to dissect the overall property into smaller, more easily assessed "polygons". The individual tree stems were counted within each polygon, and the density of each was then calculated based on its size (acreage) and the number of stems found. This data was then combined to calculate the total population of Joshua trees found on the entire project site.

The stem count involved driving and walking the dirt roads, trails, and off-road areas, to access the polygons throughout the entire Site. Due to the size of the Site, and the difficult terrain found in some areas, a detailed count of every tree was not feasible or considered necessary at this stage of review. While the stem count is not survey accurate, it does provide for a good estimation of the Joshua tree populations within each polygon. The segmentation of the Site into the smaller, more manageable polygons, allowed for this accurate estimation, and often provided exact counts in some of the smaller polygons.

Table 1

Joshua Tree Health Assessment Ratings

Health Rating	Description
A = Excellent	Tree has excellent health and strong vigor. No damage. Flowering and fruiting expected. Typically only given to large, high quality specimens (>15' in height). Transplanting generally not recommended due to size. Avoidance recommended.
B = Good	Tree has good health and vigor. All branches are alive and healthy. Damage is very localized and minimal. Flowering and fruiting likely, if tree is large enough. Tree is transplantable.
C = Fair	Tree health average. Some stressors or damage possible, however any damage is minimal to moderate (e.g. rodent grazing, or insect damage). No dead/broken branches. Tree is transplantable.
D = Poor	Tree under stress, and overall health in decline, or tree has taken significant damage. Mortality likely unless stressors relieved, and/or conditions change. Broken/dead limbs likely present. Tree is generally not transplantable.
E = Nearly Dead	Tree in extreme decline. One or more branches dead. One or more branches dying. Physical damage likely present. Damage is significant and extensive. Mortality expected within 2 to 4 years. Tree is not transplantable.
F = Dead	Tree is dead.

Source: PCR Services Corporation, 2008.

5.0 RESULTS

The calculated densities within each polygon range from a fraction of a tree per acre (i.e. multiple acres per tree) for low densities to slightly less then ten trees per acre at the highest densities. The polygons with similar densities have been organized into density categories segmented into number of tree per acre groups. An estimated total number of trees has been calculated based on these densities and the acreages they occupy.

The range of densities, their acreages and the estimated total number of trees is shown in Table 2, *Joshua Tree Densities*, on page 8. In addition, a map of the polygons is shown on Figures 3, 3A, 3B, and 3C, *Joshua Tree Density Map*, on pages 9 through 12.

A total of 948 Joshua trees were fully assessed in the focus Joshua tree surveys within the three sample plots on the Site, identified on Figure 3, below. These trees were inventoried, mapped and assessed for their health condition and transferability. Of the surveyed trees: 38 percent (361) were considered transferable, an additional 18 percent (172) are classified as potentially transferable and 44 percent (415) were classified as non-transferable. Survey data and maps for the three plots are included within Appendix A, Appendix B, and Appendix C.

Table 2

Joshua Tree Densities

Density Categories (trees per acre)	Area (acres)	Number of Trees[a]
0.00 – 1.00	506.3	249
1.01 – 2.00	244.9	362
2.01 – 3.00	491.8	1,252
3.01 – 4.00	75.3	247
4.01 – 5.00	30.8	145
5.01 – 6.00	41.8	233
6.01 – 7.00	26.5	172
7.01 – 8.00	9.4	71
8.01 – 9.00	52.6	446
9.01 – 10.00	74.3	716
Total	**1,553.7**	**3,891**

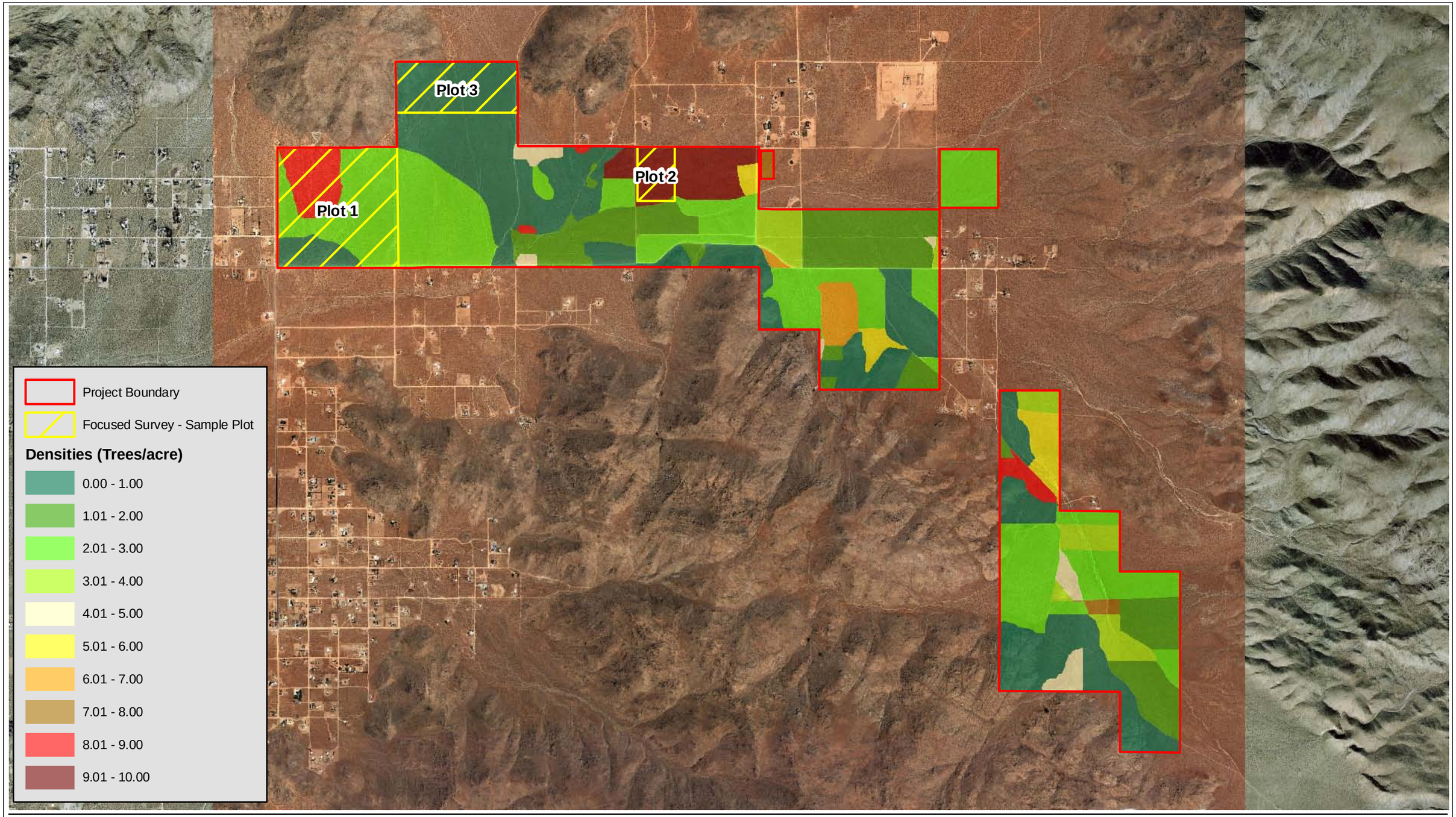
[a] *The number of trees per Density Category is estimated, and has been determined by calculating the actual average density (trees per acre) for each Density Category and multiplying this number by the on-site acreage occupied by that tree density.*

Source: PCR Services Corporation, 2008.

6.0 COUNTY REMOVAL REQUIREMENTS

According to County officials, the Applicant shall attempt to avoid impacts to Joshua trees and preserve in-place to the farthest extent possible in order to achieve a "design of excellence." Specifically, Shellie Zias-Churchman of the County has stated

> *"As of August, 2007, it has been well documented that [the Site] and others near it are heavily forested with the protected desert native plant, Yucca brevifolia or commonly known as, Joshua Tree. Biologists are currently assessing the quantity and health of the "forest," however, it is believed that a project of ~1500 acres encompassing this and near parcels will affect [several thousand] Joshua Trees, in addition to other important desert vegetation. Grading and clearing of this and connected parcels will require careful review of grading plans and Joshua Tree removal and/or transplanting plans and subsequent guidance based on environmental review under CEQA (California Environmental Quality Act). Joshua Tree viability is at issue, as well as maintaining the health of the fertile soils located under desert shrubs which contain large amounts of organic matter and form islands of fertility. In addition, erosion and dust impacts are secondary effects of grading the desert floor and are equally important environmental concerns with any project that pursues development on this and nearby parcels.*



PCR

N

2,000 0 2,000 Feet

Source: Google Earth (Aerial), 2006; PCR Services Corporation, 2008.

Figure 3

Hacienda at Fairview Valley
Joshua Tree Density Map - Overall View

Project Boundary

0.00 Joshua Tree Density

Densities (Trees/acre)

- 0.00 - 1.00
- 1.01 - 2.00
- 2.01 - 3.00
- 3.01 - 4.00
- 4.01 - 5.00
- 5.01 - 6.00
- 6.01 - 7.00
- 7.01 - 8.00
- 8.01 - 9.00
- 9.01 - 10.00

Inset

0.72
0.84
4.71
8.19
9.64
9.64
9.64
7.78
5.91
8.77
2.34
1.16
2.69
0.29
2.94
2.94
1.47
2.21
8.58
3.44
1.61
1.05
0.25
0.94
0.71
1.26
0.37
4.21
1.74
0.43
6.17
2.54

PCR

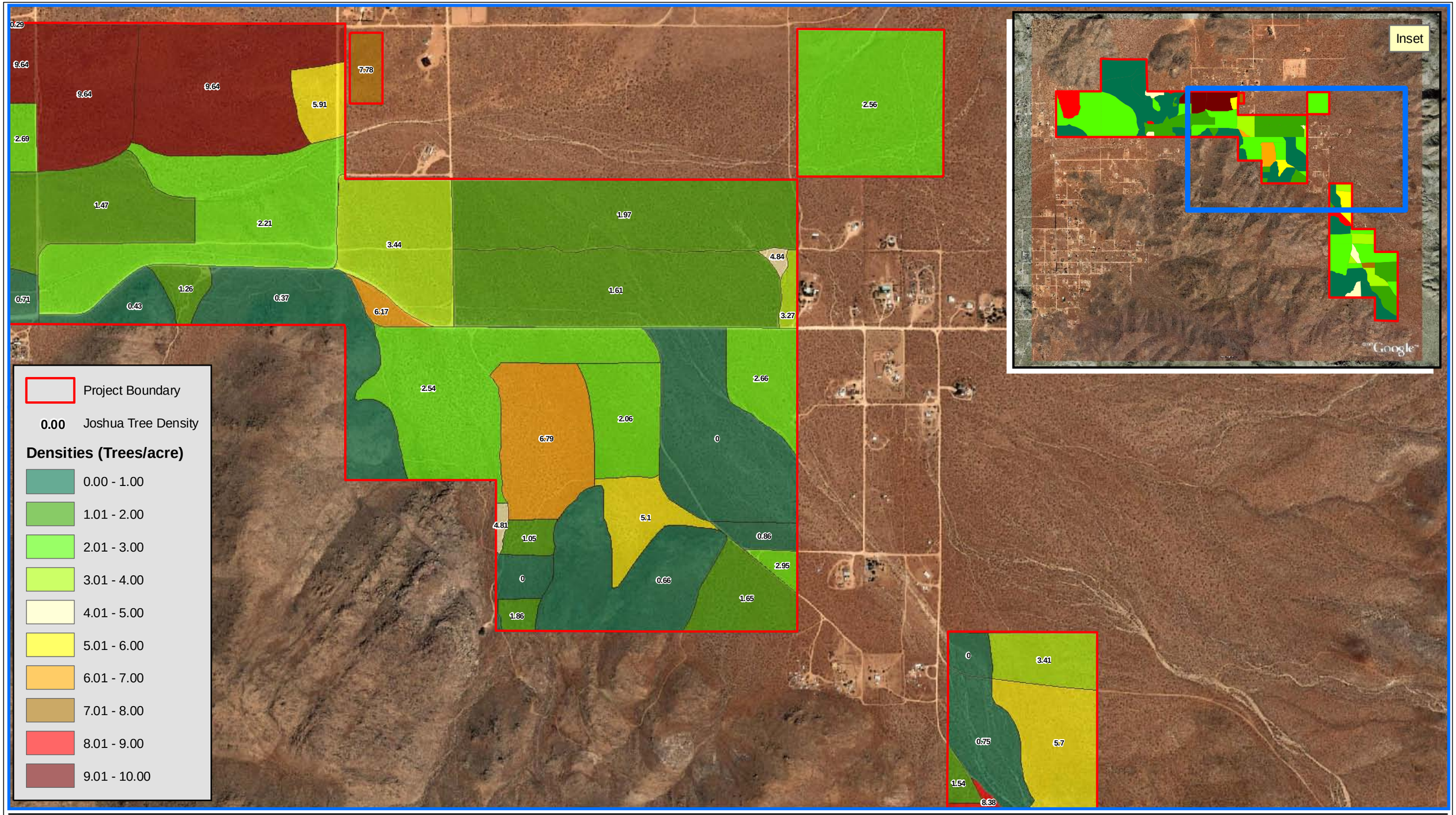
N

800 0 800 Feet

Source: Google Earth (Aerial), 2006; PCR Services Corporation, 2008.

Figure 3A

Hacienda at Fairview Valley
Joshua Tree Density Map - Northwestern View



PCR

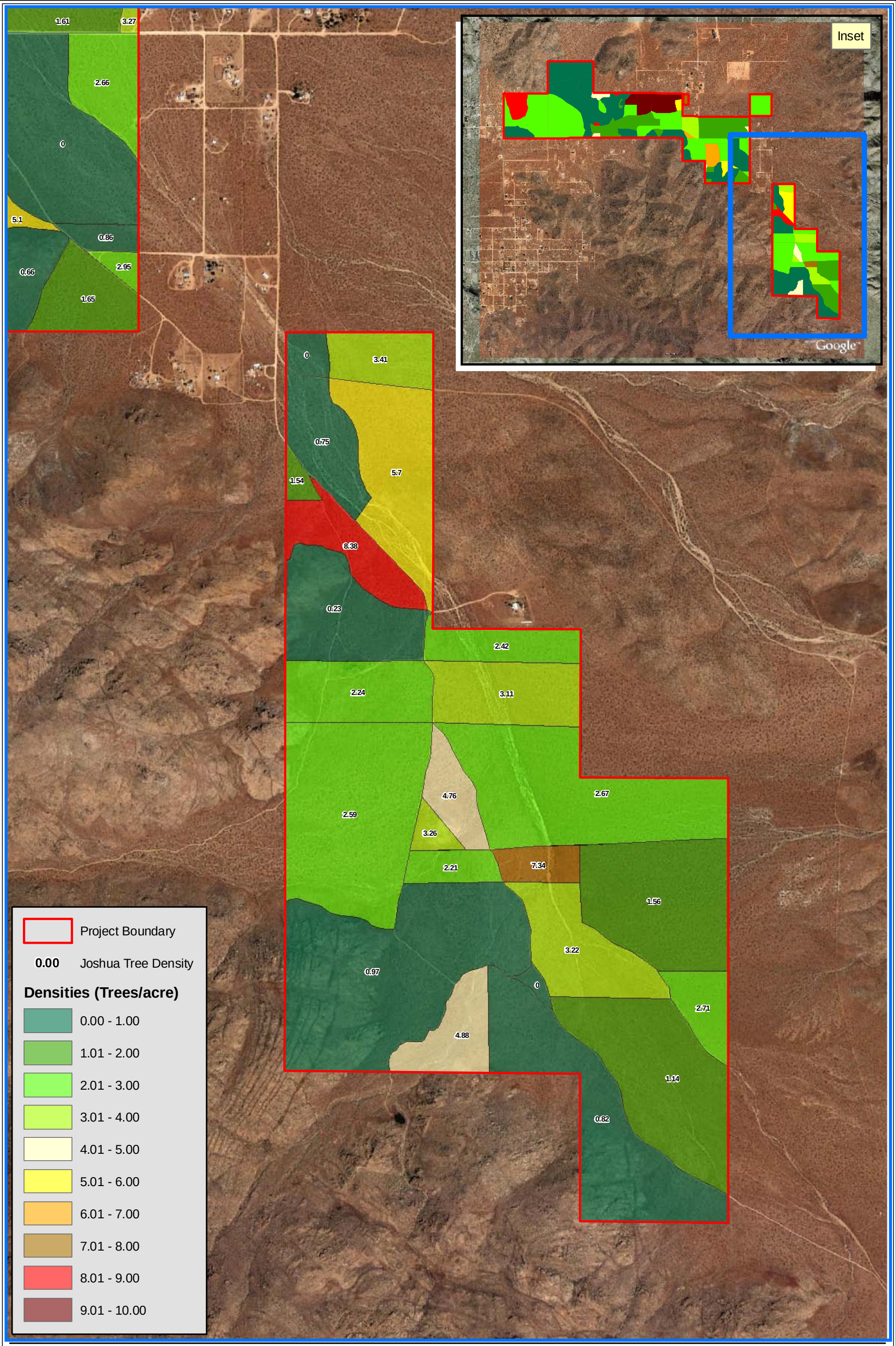
N

800 0 800 Feet

Source: Google Earth (Aerial), 2006; PCR Services Corporation, 2008.

Figure 3B

Hacienda at Fairview Valley
Joshua Tree Density Map - Central View



PCR

N

800 0 800 Feet

Source: Google Earth (Aerial), 2006; PCR Services Corporation, 2008.

Figure 3C

Hacienda at Fairview Valley
Joshua Tree Density Map - Southeastern View

Massive depletion of the existing desert vegetation may have a direct and/or indirect affect on water quality and groundwater recharge."

The Ordinance requires that transferable Joshua trees that are proposed for removal shall be transplanted or stockpiled for future transplanting whenever possible (Subsection 88.01.050(f)(3)). Due to the number of transferable and potentially transferable trees located throughout the Site, it is recommended that the Applicant and County work together to find appropriate mitigation for the removal of Joshua trees, such as those provisions included in the *Hacienda at Fairview Valley Joshua Tree Management Program* (under separate cover).

7.0 RECOMMENDATIONS

7.1 Full Joshua Tree Survey

Full Joshua tree surveys will be required for each phase of the Hacienda at Fairview Valley project as a part of the EIR approval requirements. The maximum number of transferable trees shall be transplanted or stockpiled for later transplantation, or provided for adoption as outlined in the *Hacienda at Fairview Valley Joshua Tree Management Program* (under separate cover). A Joshua tree report shall be prepared for each phase's full Joshua tree survey, for acceptance by the County. Each report shall include the mapped location, size, health, and transferability of each Joshua tree surveyed, and will include project phase specific recommendations with the goal of maximizing Joshua tree preservation within that phase.

A Joshua Ttree Transplantation Plan shall be prepared along with each phase's Joshua tree report. The Transplantation Plan requirements are outlined in detail within the *Hacienda at Fairview Valley Joshua Tree Management Program,* but shall include each tree targeted for transplantation, stockpiled for later transplantation, or provided for adoption within that particular phase. These trees shall be identified on a Joshua tree map, included as part of the report. In addition, proposed replanting areas within each phase shall be identified where feasible. Project phase-specific timeframes, maintenance, monitoring, and reporting specifications shall be provided to ensure maximum survivability of the Joshua trees within each phase. Only those Joshua trees that occur within the boundary of each individual phase shall be addressed within the transplantation plan, unless specifically authorized by the County.

The goal of each transplantation plan will be: (1) to minimize the time each Joshua tree remains stockpiled by providing coordination with construction activities within each phase; (2) to ensure maximum survivability by outlining good tree care guidelines for both stockpiled and transplanted trees; and (3) to maximize the number of Joshua trees that remain in or are transplanted back into each phase.

7.2 Migratory Bird Treaty Act (MBTA)

Due to Joshua trees and large shrub species on the Site, we are including this section to ensure the protection of nesting birds per the MBTA and the protection of nests and eggs per the California Department of Fish and Game Code Section 3503. All Joshua tree and vegetation transplanting and removal activities should take place outside of the nesting season (February 15th–August 15th). If vegetation removal activities must occur during the nesting season, a biological monitor shall be present during the removal activities to ensure that no active nests will be impacted. If active nests are found, a 200' buffer radius (500' for raptors) will be established until the fledglings have left the nest.

8.0 CONCLUSIONS

Utilizing Joshua tree density mapping, a total of 3,891 Joshua trees are estimated to be located on the approximately 1,555-acre Site. Of these, it is estimated that 38 percent are transferable based on size, health, and location.

Approximately 80 percent of all the trees located within the three sample plots are in good to fair condition physiologically, structurally, and aesthetically. Approximately 38 percent of the Joshua trees were considered transferable. While a full Joshua tree survey would be required to identify exact numbers and locations of transferable trees on-site, the results of this survey provide a realistic estimate for the size of the Joshua tree population on the Site.

9.0 REFERENCES

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APPENDIX A
JOSHUA TREE SURVEY PLOT 1

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
1	*Yucca brevifolia*	10	2	13	C	No		under utility line
2	*Yucca brevifolia*	6	1	12	D	No		
3	*Yucca brevifolia*	5	1	7	B	Yes		
4	*Yucca brevifolia*	11	1	20	B	No	X	
5	*Yucca brevifolia*	10	2	20	B	No	X	
6	*Yucca brevifolia*	6	1	12	B	Potential		dead stem next to it
7	*Yucca brevifolia*	12	3	27	C	No	X	
8	*Yucca brevifolia*	7	2	22	F	No	X	fallen to ground
9	*Yucca brevifolia*	5	2	12	B	Potential		
10	*Yucca brevifolia*	5	2	11	B	Potential		
11	*Yucca brevifolia*	6	2	21	C	No	X	
12	*Yucca brevifolia*	6	2	12	B	Potential		
13	*Yucca brevifolia*	7	2	20	D	No	X	severe lean
14	*Yucca brevifolia*	7	2	14	B	Potential		
15	*Yucca brevifolia*	6	1	9	B	Yes		
16	*Yucca brevifolia*	8	4	21	C	No	X	
17	*Yucca brevifolia*	6	2	9	B	Yes		dead stem next to it
18	*Yucca brevifolia*	8	2	18	B	No	X	
19	*Yucca brevifolia*	7	2	12	B	Potential		
20	*Yucca brevifolia*	7	2	12	B	Potential		
21	*Yucca brevifolia*	7	2	8	B	Yes		
22	*Yucca brevifolia*	5	2	14	B	Potential		2 clones < 3 ft
23	*Yucca brevifolia*	9	3	22	D	No	X	broken branches
24	*Yucca brevifolia*	6	3	10	B	Yes		
25	*Yucca brevifolia*	6	1	10	B	Yes		
26	*Yucca brevifolia*	6	1	8	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
27	*Yucca brevifolia*	5	1	7	C	Yes		
28	*Yucca brevifolia*	7	1	7	F	No		dead, no leaves
29	*Yucca brevifolia*	7	3	21	C	No	X	
30	*Yucca brevifolia*	6	2	13	C	No		
31	*Yucca brevifolia*	7	2	15	B	Potential	X	
32	*Yucca brevifolia*	6	1	10	B	Yes		
33	*Yucca brevifolia*	6	1	11	B	Potential		
34	*Yucca brevifolia*	6	1	12	B	Potential		
35	*Yucca brevifolia*	7	2	10	B	Yes		
36	*Yucca brevifolia*	8	3	20	B	No	X	
37	*Yucca brevifolia*	7	3	12	B	Potential		
38	*Yucca brevifolia*	7	3	14	B	Potential		
39	*Yucca brevifolia*	6	2	10	B	Yes		
40	*Yucca brevifolia*	6	2	10	B	Yes		
41	*Yucca brevifolia*	12	5	26	C	No	X	
42	*Yucca brevifolia*	7	2	10	B	Yes		
43	*Yucca brevifolia*	7	4	15	C	No	X	
44	*Yucca brevifolia*	6	2	13	B	Potential		
45	*Yucca brevifolia*	7	3	14	C	No		
46	*Yucca brevifolia*	7	2	11	B	Potential		
47	*Yucca brevifolia*	8	4	15	B	No	X	
48	*Yucca brevifolia*	7	3	18	B	No	X	
49	*Yucca brevifolia*	6	1	8	B	Yes		
50	*Yucca brevifolia*	13	5	25	C	No	X	dead branches
51	*Yucca brevifolia*	6	2	8	B	Yes		
52	*Yucca brevifolia*	7	3	8	C	Yes		
53	*Yucca brevifolia*	6	2	12	B	Potential		
54	*Yucca brevifolia*	6	1	6	B	Yes		lean
55	*Yucca brevifolia*	8	3	13	B	Potential		
56	*Yucca brevifolia*	6	2	10	B	Yes		
57	*Yucca brevifolia*	6	2	14	B	Potential		
58	*Yucca brevifolia*	6,6	2	12	C	No		
59	*Yucca brevifolia*	12	5	16	F	No	X	hollow

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
60	*Yucca brevifolia*	7	3	20	C	No	X	
61	*Yucca brevifolia*	7,8	4	26	D	No	X	dead branches
62	*Yucca brevifolia*	6	1	10	B	Yes		
63	*Yucca brevifolia*	6	2	10	B	Yes		
64	*Yucca brevifolia*	7	2	14	B	Potential		
65	*Yucca brevifolia*	6	2	10	D	No		
66	*Yucca brevifolia*	7	3	13	C	No		
67	*Yucca brevifolia*	6,6	2	13	C	No		
68	*Yucca brevifolia*	5	1	9	B	Yes		
69	*Yucca brevifolia*	7	3	14	B	Potential		
70	*Yucca brevifolia*	6	1	10	B	Yes		
71	*Yucca brevifolia*	11	3	16	C	No	X	under utility line
72	*Yucca brevifolia*	6	2	14	D	No		
73	*Yucca brevifolia*	12	4	18	C	No	X	under utility line
74	*Yucca brevifolia*	11	3	20	C	No	X	under utility line
75	*Yucca brevifolia*	10	3	15	D	No	X	hollow trunk
76	*Yucca brevifolia*	5	2	12	D	No		
77	*Yucca brevifolia*	5	1	7	B	Yes		
78	*Yucca brevifolia*	4	2	7	D	No		dead branches
79	*Yucca brevifolia*	5	2	8	B	Yes		1 clone < 1 ft
80	*Yucca brevifolia*	12	3	25	C	No	X	
81	*Yucca brevifolia*	6	2	10	B	Yes		
82	*Yucca brevifolia*	6	2	9	C	No		lean
83	*Yucca brevifolia*	6	2	9	B	Yes		
84	*Yucca brevifolia*	11	3	18	C	No	X	
85	*Yucca brevifolia*	6	1	12	B	Potential		
86	*Yucca brevifolia*	7	2	20	C	No	X	
87	*Yucca brevifolia*	8	3	21	C	No	X	
88	*Yucca brevifolia*	6	2	12	B	Potential		
89	*Yucca brevifolia*	5	1	7	B	Yes		
90	*Yucca brevifolia*	5	1	10	B	Yes		
91	*Yucca brevifolia*	6	2	12	C	No		
92	*Yucca brevifolia*	6	2	14	B	Potential		1 small clone < 1 ft

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
93	*Yucca brevifolia*	5	2	6	B	Yes		
94	*Yucca brevifolia*	5	2	8	B	Yes		
95	*Yucca brevifolia*	6	2	13	B	Potential		
96	*Yucca brevifolia*	4	1	4	B	Yes		
97	*Yucca brevifolia*	7,5	3	14	C	No		
98	*Yucca brevifolia*	4	1	4	B	Yes		
99	*Yucca brevifolia*	6	1	7	B	Yes		
100	*Yucca brevifolia*	4	1	9	B	Yes		
101	*Yucca brevifolia*	5	1	7	B	Yes		
102	*Yucca brevifolia*	4	1	12	B	Potential		lean
103	*Yucca brevifolia*	6	2	7	B	Yes		
104	*Yucca brevifolia*	4	2	6	B	Yes		
105	*Yucca brevifolia*	5,4	2	11	C	No		
106	*Yucca brevifolia*	5	2	13	C	No		lean
107	*Yucca brevifolia*	7	1	10	B	Yes		
108	*Yucca brevifolia*	5	2	13	C	No		lean
109	*Yucca brevifolia*	6	2	10	C	No		lean
110	*Yucca brevifolia*	5	2	5	B	Yes		1 clone < 1 ft
111	*Yucca brevifolia*	6	2	14	C	No		lean
112	*Yucca brevifolia*	6	2	10	B	Yes		
113	*Yucca brevifolia*	4	2	10	B	Yes		
114	*Yucca brevifolia*	5	2	8	B	Yes		
115	*Yucca brevifolia*	5	2	9	D	No		
116	*Yucca brevifolia*	7	3	22	B	No	X	
117	*Yucca brevifolia*	4	2	11	B	Potential		
118	*Yucca brevifolia*	6	2	12	B	Potential		
119	*Yucca brevifolia*	4	3	3.5	B	Yes		
120	*Yucca brevifolia*	6	2	11	B	Potential		
121	*Yucca brevifolia*	7	3	16	C	No	X	
122	*Yucca brevifolia*	6	3	14	C	No		
123	*Yucca brevifolia*	7	3	14	C	No		
124	*Yucca brevifolia*	7	3	15	C	No	X	1 clone < 3 ft
125	*Yucca brevifolia*	7	2	11	B	Potential		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
126	*Yucca brevifolia*	7	2	18	D	No	X	
127	*Yucca brevifolia*	4.5	1	10	B	Yes		
128	*Yucca brevifolia*	5	1	11	B	Potential		
129	*Yucca brevifolia*	3	1	6	B	Yes		
130	*Yucca brevifolia*	6	2	13	B	Potential		
131	*Yucca brevifolia*	5	1	6	B	Yes		
132	*Yucca brevifolia*	5	1	6	D	No		
133	*Yucca brevifolia*	6	2	12	B	Potential		
134	*Yucca brevifolia*	5	2	12	B	Potential		
135	*Yucca brevifolia*	6	2	13	C	No		
136	*Yucca brevifolia*	6	3	12	D	No		
137	*Yucca brevifolia*	6	3	12	B	Potential		
138	*Yucca brevifolia*	7	3	15	B	Potential	X	
139	*Yucca brevifolia*	6	2	15	C	No	X	lean
140	*Yucca brevifolia*	6	2	12	B	Potential		
141	*Yucca brevifolia*	6	2	16	C	No	X	
142	*Yucca brevifolia*	5	2	7	B	Yes		1 clone < 1 ft
143	*Yucca brevifolia*	4,4	2	3	B	No		dead main, these are clones
144	*Yucca brevifolia*	4	1	7	B	Yes		
145	*Yucca brevifolia*	7	2	14	C	No		
146	*Yucca brevifolia*	6	1	7	B	Yes		
147	*Yucca brevifolia*	6	1	7	B	Yes		
148	*Yucca brevifolia*	5	1	5	B	Yes		dead stems next to it
149	*Yucca brevifolia*	6	2	11	B	Potential		
150	*Yucca brevifolia*	5	2	15	D	No	X	
151	*Yucca brevifolia*	5	2	18	C	No	X	
152	*Yucca brevifolia*	5	1	4	B	Yes		
153	*Yucca brevifolia*	6	2	10	B	Yes		
154	*Yucca brevifolia*	6	2	10	D	No		severe lean
155	*Yucca brevifolia*	5	1	10	F	No		lean
156	*Yucca brevifolia*	8	3	20	C	No	X	
157	*Yucca brevifolia*	5	1	7	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
158	*Yucca brevifolia*	5	2	10	B	Yes		
159	*Yucca brevifolia*	4	1	3	B	Yes		
160	*Yucca brevifolia*	5	2	10	B	Yes		
161	*Yucca brevifolia*	7	3	17	C	No	X	lean
162	*Yucca brevifolia*	15	5	22	C	No	X	
163	*Yucca brevifolia*	5	1	5	B	Yes		
164	*Yucca brevifolia*	5	2	11	C	No		
165	*Yucca brevifolia*	9	3	23	E	No	X	broken branches
166	*Yucca brevifolia*	10	3	22	C	No	X	
167	*Yucca brevifolia*	11	3	22	C	No	X	
168	*Yucca brevifolia*	4.5	1	5	B	Yes		
169	*Yucca brevifolia*	4.5	2	12	B	Potential		
170	*Yucca brevifolia*	4	1	3.5	B	Yes		
171	*Yucca brevifolia*	5	1	5	B	Yes		
172	*Yucca brevifolia*	8	4	14	B	No		
173	*Yucca brevifolia*	6	1	12	B	Potential		
174	*Yucca brevifolia*	4	1	13	B	Potential		
175	*Yucca brevifolia*	7	2	13	B	Potential		
176	*Yucca brevifolia*	6	2	8	B	Yes		
177	*Yucca brevifolia*	5	2	7	B	Yes		
178	*Yucca brevifolia*	4	1	7	B	Yes		
179	*Yucca brevifolia*	6.5	2	8	B	Yes		
180	*Yucca brevifolia*	5	1	9	B	Yes		
181	*Yucca brevifolia*	5	2	11	B	Potential		
182	*Yucca brevifolia*	8	3	16	C	No	X	
183	*Yucca brevifolia*	4.5	1	7	D	No		broken branches
184	*Yucca brevifolia*	5	2	11	C	No		
185	*Yucca brevifolia*	6	2	7	B	Yes		
186	*Yucca brevifolia*	6	2	11	B	Potential		
187	*Yucca brevifolia*	7,6,4	2	13	B	Potential		
188	*Yucca brevifolia*	11	3	22	E	No	X	
189	*Yucca brevifolia*	8	2	12	B	Potential		
190	*Yucca brevifolia*	10	2	13	C	No		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
191	*Yucca brevifolia*	11	5	22	C	No	X	
192	*Yucca brevifolia*	12	4	14	C	No		
193	*Yucca brevifolia*	4.5	1	7	B	Yes		
194	*Yucca brevifolia*	5	2	10	B	Yes		
195	*Yucca brevifolia*	6	2	12	B	Potential		
196	*Yucca brevifolia*	5	1	10	B	Yes		
197	*Yucca brevifolia*	7	3	17	C	No	X	
198	*Yucca brevifolia*	6	3	10	B	Yes		
199	*Yucca brevifolia*	6	2	12	B	Potential		
200	*Yucca brevifolia*	6.5	2	15	C	No	X	lean
201	*Yucca brevifolia*	6	2	10	D	No		top of crown bent horizontally
202	*Yucca brevifolia*	5.5	2	10	C	Yes		
203	*Yucca brevifolia*	7	3	14	C	No		
204	*Yucca brevifolia*	5.5	2	12	B	Potential		
205	*Yucca brevifolia*	4	1	5	B	Yes		
206	*Yucca brevifolia*	6	2	12	B	Potential		
207	*Yucca brevifolia*	5	1	7	B	Yes		
208	*Yucca brevifolia*	6	2	19	E	No	X	
209	*Yucca brevifolia*	7	2	13	B	Potential		
210	*Yucca brevifolia*	6	3	18	C	No	X	slight lean
211	*Yucca brevifolia*	7	2	12	B	Potential		
212	*Yucca brevifolia*	7	3	14	C	No		
213	*Yucca brevifolia*	8.5	2	16	B	No	X	
214	*Yucca brevifolia*	8	3	16	B	No	X	1 clone < 1 ft
214c	*Yucca brevifolia*	5	1	8	B	Yes		clone
214c	*Yucca brevifolia*	6	2	10	B	Yes		clone
215	*Yucca brevifolia*	10	3	18	B	No	X	
216	*Yucca brevifolia*	8,7,7	4	15	B	No	X	under utility line
217	*Yucca brevifolia*	10	4	26	B	No	X	
218	*Yucca brevifolia*	6	2	13	C	No		
219	*Yucca brevifolia*	4@base	1	25	C	No	X	dead clone next to it
220	*Yucca brevifolia*	6	2	12	B	Potential		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
221	*Yucca brevifolia*	16	6	22	C	No	X	
222	*Yucca brevifolia*	5	2	9	C	Yes		lean
223	*Yucca brevifolia*	7	2	11	C	No		
224	*Yucca brevifolia*	3@base	1	1.5	B	Yes		within creosote bush
225	*Yucca brevifolia*	5	2	11	C	No		lean
226	*Yucca brevifolia*	6	2	10	B	Yes		
227	*Yucca brevifolia*	8	3	15	B	Potential	X	
228	*Yucca brevifolia*	9	3	18	C	No	X	
229	*Yucca brevifolia*	6	2	12	C	No		
230	*Yucca brevifolia*	6	2	10	B	Yes		
231	*Yucca brevifolia*	6	2	8	B	Yes		
232	*Yucca brevifolia*	5	2	9	B	Yes		
232c	*Yucca brevifolia*	4.5	1	5	B	Yes		clone
232c	*Yucca brevifolia*	4.5	1	6	B	Yes		clone
233	*Yucca brevifolia*	7	2	18	B	No	X	
234	*Yucca brevifolia*	6	2	12	D	No		
235	*Yucca brevifolia*	7	2	12	B	Potential		
236	*Yucca brevifolia*	5.5	2	15	B	Potential	X	
236c	*Yucca brevifolia*	4	1	5	B	Yes		clone
237	*Yucca brevifolia*	7	1	10	B	Yes		
238	*Yucca brevifolia*	4	2	10	C	No		lean, nearly uprooted
239	*Yucca brevifolia*	6	2	12	D	No		
240	*Yucca brevifolia*	5	2	12	B	Potential		
241	*Yucca brevifolia*	8	2	18	D	No	X	broken branches
242	*Yucca brevifolia*	7.5	3	11	B	Potential		
243	*Yucca brevifolia*	7	3	13	C	No		
244	*Yucca brevifolia*	6	2	11	B	Potential		
245	*Yucca brevifolia*	4.5	1	11	C	No		top leaning
246	*Yucca brevifolia*	4	1	4	B	Yes		
247	*Yucca brevifolia*	9	3	18	C	No	X	
248	*Yucca brevifolia*	5.5	2	12	B	Potential		2 clones < 1 ft
249	*Yucca brevifolia*	6	2	11	B	Potential		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
250	*Yucca brevifolia*	6	2	12	C	No		1 clone < 1 ft, broken branches
251	*Yucca brevifolia*	6.5	2	15	B	Potential	X	
252	*Yucca brevifolia*	6.5	2	10	B	Yes		
253	*Yucca brevifolia*	10	3	22	C	No	X	
254	*Yucca brevifolia*	6	2	10	B	Yes		
255	*Yucca brevifolia*	4	2	4	B	Yes		
256	*Yucca brevifolia*	5	1	7	B	Yes		
257	*Yucca brevifolia*	6.5	2	12	B	Potential		
258	*Yucca brevifolia*	6	3	15	C	No	X	broken branches
259	*Yucca brevifolia*	8.5	3	20	C	No	X	
260	*Yucca brevifolia*	6	2	16	C	No	X	broken branches
260c	*Yucca brevifolia*	5	1	5	B	Yes		clone
260c	*Yucca brevifolia*	6	2	6	B	Yes		clone
261	*Yucca brevifolia*	6	3	15	B	Potential	X	
262	*Yucca brevifolia*	4	1	5	B	Yes		
263	*Yucca brevifolia*	8	3	24	C	No	X	
264	*Yucca brevifolia*	6	2	13	B	Potential		
265	*Yucca brevifolia*	10	3	24	C	No	X	
266	*Yucca brevifolia*	7.5	2	20	D	No	X	damage to trunk
267	*Yucca brevifolia*	5	2	13	B	Potential		1 clone < 1 ft
268	*Yucca brevifolia*	5	2	11	B	Potential		
269	*Yucca brevifolia*	6	2	10	C	Yes		
270	*Yucca brevifolia*	5.5	2	10	C	Yes		
271	*Yucca brevifolia*	6	1	12	B	Potential		
271c	*Yucca brevifolia*	6	1	12	B	Potential		clone
272	*Yucca brevifolia*	6.5	2	20	C	No	X	
273	*Yucca brevifolia*	5.5	2	10	C	Yes		
274	*Yucca brevifolia*	4	1	4	B	Yes		
275	*Yucca brevifolia*	6	2	10	B	Yes		
276	*Yucca brevifolia*	6	2	10	C	Yes		2 clones < 1 ft
276c	*Yucca brevifolia*	5	2	8	B	Yes		clone
277	*Yucca brevifolia*	4.5	1	5	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
278	*Yucca brevifolia*	4	1	3	B	Yes		
279	*Yucca brevifolia*	5	1	8	C	Yes		
280	*Yucca brevifolia*	4	1	5	B	Yes		clone, main dead
280c	*Yucca brevifolia*	4	1	5	B	Yes		clone
281	*Yucca brevifolia*	8	3	17	C	No	X	
282	*Yucca brevifolia*	4	1	4	B	Yes		
283	*Yucca brevifolia*	5	1	10	B	Yes		
284	*Yucca brevifolia*	4	1	3	B	Yes		
285	*Yucca brevifolia*	6	2	12	B	Potential		
286	*Yucca brevifolia*	6.5	2	18	D	No	X	
287	*Yucca brevifolia*	10	3	23	B	No	X	
288	*Yucca brevifolia*	5	1	6	E	No		
289	*Yucca brevifolia*	6	2	12	C	No		
290	*Yucca brevifolia*	7	2	13	B	Potential		
291	*Yucca brevifolia*	6	2	12	B	Potential		
291c	*Yucca brevifolia*	4.5	1	6	B	Yes		clone
292	*Yucca brevifolia*	10	2	15	B	Potential	X	
293	*Yucca brevifolia*	14	6	22	D	No	X	
294	*Yucca brevifolia*	7.5	2	15	B	Potential	X	
295	*Yucca brevifolia*	8	2	21	B	No	X	
296	*Yucca brevifolia*	6.5	2	11	B	Potential		
297	*Yucca brevifolia*	10	3	16	C	No	X	
298	*Yucca brevifolia*	4.5	2	10	D	No		lean
299	*Yucca brevifolia*	15	6	25	D	No	X	
300	*Yucca brevifolia*	4	1	4	B	Yes		
301	*Yucca brevifolia*	8	2	18	C	No	X	
302	*Yucca brevifolia*	10	2	27	C	No	X	bird nest, photo 1
303	*Yucca brevifolia*	6.5	2	18	C	No	X	
304	*Yucca brevifolia*	7	2	14	C	No		
305	*Yucca brevifolia*	6	1	8	B	Yes		
306	*Yucca brevifolia*	6	2	9	B	Yes		
307	*Yucca brevifolia*	7.5	3	12	B	Potential		
308	*Yucca brevifolia*	4	1	4	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
309	*Yucca brevifolia*	4@base	1	2	D	No		main dead, clone, 1 clone < 1 ft
310	*Yucca brevifolia*	6.5	2	10	B	Yes		
311	*Yucca brevifolia*	6	2	11	B	Potential		
312	*Yucca brevifolia*	6.5	2	18	B	No	X	
313	*Yucca brevifolia*	6.5	2	10	B	Yes		dead one next to it
314	*Yucca brevifolia*	7	2	11	B	Potential		1 clone < 1 ft
315	*Yucca brevifolia*	5.5	1	5	B	Yes		
316	*Yucca brevifolia*	5	1	6	B	Yes		
317	*Yucca brevifolia*	4	1	6	B	Yes		
318	*Yucca brevifolia*	6.5	2	18	B	No	X	
319	*Yucca brevifolia*	7	2	12	C	No		broken branches
320	*Yucca brevifolia*	6	2	6	B	Yes		2 clones < 1 ft
321	*Yucca brevifolia*	5.5	1	5.5	B	Yes		
322	*Yucca brevifolia*	5	1	8	B	Yes		
322c	*Yucca brevifolia*	3@base	1	2	B	Yes		clone
322c	*Yucca brevifolia*	3@base	1	4	B	Yes		clone
323	*Yucca brevifolia*	6	2	17	B	No	X	
324	*Yucca brevifolia*	6	2	12	B	Potential		slight lean
325	*Yucca brevifolia*	5	1	10	B	Yes		
326	*Yucca brevifolia*	6	2	12	B	Potential		
327	*Yucca brevifolia*	6	2	12	B	Potential		
328	*Yucca brevifolia*	10,8	5	25	E	No	X	broken branches
329	*Yucca brevifolia*	5	1	6	B	Yes		
330	*Yucca brevifolia*	5	2	11	D	No		
331	*Yucca brevifolia*	6	1	10	B	Yes		
332	*Yucca brevifolia*	6	1	10	F	No		2 clones < 1 ft
333	*Yucca brevifolia*	6	1	10	B	Yes		
334	*Yucca brevifolia*	6	2	12	B	Potential		
335	*Yucca brevifolia*	6	2	5	B	Yes		
336	*Yucca brevifolia*	8	2	12	C	No		broken branches
337	*Yucca brevifolia*	5	1	10	C	Yes		
338	*Yucca brevifolia*	5	1	5	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
339	*Yucca brevifolia*	6	2	9	B	Yes		
340	*Yucca brevifolia*	6	2	8	B	Yes		
341	*Yucca brevifolia*	5.5	1	8	B	Yes		
342	*Yucca brevifolia*	2,2@base	1	2	B	Yes		
343	*Yucca brevifolia*	4	1	10	C	Yes		
344	*Yucca brevifolia*	5	1	8	B	Yes		
345	*Yucca brevifolia*	3@base	1	3	B	Yes		
346	*Yucca brevifolia*	5	1	9	C	Yes		broken branches
347	*Yucca brevifolia*	6	2	11	C	No		
348	*Yucca brevifolia*	5	1	5	B	Yes		
349	*Yucca brevifolia*	5	1	7	B	Yes		
350	*Yucca brevifolia*	6	2	10	C	Yes		lean
351	*Yucca brevifolia*	6	1	12	B	Potential		
352	*Yucca brevifolia*	6	2	15	C	No	X	
353	*Yucca brevifolia*	5.5	1	12	C	No		
354	*Yucca brevifolia*	6	2	6	B	Yes		
355	*Yucca brevifolia*	7	2	15	C	No	X	
356	*Yucca brevifolia*	8	3	27	C	No	X	
357	*Yucca brevifolia*	8	2	26	C	No	X	
358	*Yucca brevifolia*	9	3	18	C	No	X	
359	*Yucca brevifolia*	9	2	17	C	No	X	
360	*Yucca brevifolia*	7	2	12	D	No		1 clone < 1 ft
361	*Yucca brevifolia*	16	4	30	D	No	X	
362	*Yucca brevifolia*	11	3	18	C	No	X	
363	*Yucca brevifolia*	6	2	15	D	No	X	2 clones < 1 ft
364	*Yucca brevifolia*	6	2	12	D	No		
365	*Yucca brevifolia*	3@base	1	1	B	Yes		
366	*Yucca brevifolia*	7	2	16	B	No	X	
367	*Yucca brevifolia*	7	2	15	C	No	X	
368	*Yucca brevifolia*	6,6	1	6	B	Yes		
369	*Yucca brevifolia*	10	3	18	D	No	X	broken branches
370	*Yucca brevifolia*	10,6	2	18	C	No	X	
371	*Yucca brevifolia*	7	2	16	B	No	X	1 clone < 1 ft

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
372	*Yucca brevifolia*	7	2	16	C	No	X	
373	*Yucca brevifolia*	9	2	15	C	No	X	
374	*Yucca brevifolia*	7	1	10	B	Yes		
375	*Yucca brevifolia*	7	2	12	C	No		
376	*Yucca brevifolia*	5	1	6	C	Yes		dead main, clone, lean
377	*Yucca brevifolia*	10	3	15	C	No	X	
378	*Yucca brevifolia*	13	2	13	B	Potential		
379	*Yucca brevifolia*	6	2	10	C	Yes		
380	*Yucca brevifolia*	7	2	14	B	Potential		
381	*Yucca brevifolia*	6.5	2	10	B	Yes		
382	*Yucca brevifolia*	4	1	6	B	Yes		
383	*Yucca brevifolia*	5	1	12	B	Potential		1 clone < 1 ft
383c	*Yucca brevifolia*	4@base	1	2	B	Yes		clone
383c	*Yucca brevifolia*	4@base	1	4	B	Yes		clone
384	*Yucca brevifolia*	7	2	15	B	Potential	X	
385	*Yucca brevifolia*	5	1	5	B	Yes		
386	*Yucca brevifolia*	6	1	11	B	Potential		1 clone < 2 ft
387	*Yucca brevifolia*	6	2	8	B	Yes		
388	*Yucca brevifolia*	10	2	20	D	No	X	5 clones < 3 ft
389	*Yucca brevifolia*	13	2	12	D	No		2 clones < 1 ft
390	*Yucca brevifolia*	5	2	10	B	Yes		1 clone < 1 ft
391	*Yucca brevifolia*	13	3	26	D	No	X	
392	*Yucca brevifolia*	7.5	2	15	C	No	X	
393	*Yucca brevifolia*	7,10,6	4	22	E	No	X	
394	*Yucca brevifolia*	4@base	1	3	B	Yes		
395	*Yucca brevifolia*	4.5	1	5	B	Yes		
396	*Yucca brevifolia*	4.5	1	6	B	Yes		
397	*Yucca brevifolia*	6	1	12	B	Potential		
398	*Yucca brevifolia*	7	2	12	D	No		broken branches
399	*Yucca brevifolia*	5	1	6	B	Yes		
400	*Yucca brevifolia*	7	3	15	D	No	X	
401	*Yucca brevifolia*	6	2	12	C	No		
402	*Yucca brevifolia*	10	3	22	B	No	X	

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
403	*Yucca brevifolia*	7	2	12	B	Potential		
404	*Yucca brevifolia*	8	2	17	B	No	X	
405	*Yucca brevifolia*	12	3	17	C	No	X	broken branches
406	*Yucca brevifolia*	6	2	12	C	No		slight lean
407	*Yucca brevifolia*	6	1	8	B	Yes		
408	*Yucca brevifolia*	8	2	14	B	Potential		
409	*Yucca brevifolia*	7	2	13	B	Potential		
410	*Yucca brevifolia*	11	2	18	C	No	X	broken branches
411	*Yucca brevifolia*	7	2	12	C	No		lean
412	*Yucca brevifolia*	12	3	18	B	No	X	
413	*Yucca brevifolia*	12,11	3	22	E	No	X	broken branches, cavity
414	*Yucca brevifolia*	13	3	20	D	No	X	drooping crown
415	*Yucca brevifolia*	7	2	18	B	No	X	
416	*Yucca brevifolia*	8.5	2	14	B	Potential		
417	*Yucca brevifolia*	6.5	2	10	B	Yes		
418	*Yucca brevifolia*	6.5	2	11	E	No		broken branches
419	*Yucca brevifolia*	13	3	17	E	No	X	
420	*Yucca brevifolia*	13	4	15	B	No	X	photo 4 @420 looking at 416
420c	*Yucca brevifolia*	6	2	8	D	No		clone, lean
421	*Yucca brevifolia*	7	2	17	E	No	X	dead 2nd stem
422	*Yucca brevifolia*	9	2	18	C	No	X	lean
422c	*Yucca brevifolia*	8	2	16	C	No	X	clone
423	*Yucca brevifolia*	17	5	25	D	No	X	photo 5
424	*Yucca brevifolia*	7	2	11	B	Potential		
425	*Yucca brevifolia*	7	2	13	B	Potential		
426	*Yucca brevifolia*	6	2	11	B	Potential		
427	*Yucca brevifolia*	5	1	8	B	Yes		
428	*Yucca brevifolia*	6.5	1	14	B	Potential		
429	*Yucca brevifolia*	8.5	2	16	B	No	X	
430	*Yucca brevifolia*	8.5	2	15	B	Potential	X	
431	*Yucca brevifolia*	10	2	15	B	Potential	X	

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
432	*Yucca brevifolia*	10	2	20	B	No	X	
433	*Yucca brevifolia*	6	1	11	B	Potential		
434	*Yucca brevifolia*	12	3	21	C	No	X	broken branches, 1 clone < 1 ft
435	*Yucca brevifolia*	10	3	21	C	No	X	
436	*Yucca brevifolia*	6	2	16	C	No	X	
437	*Yucca brevifolia*	10	3	18	C	No	X	broken branches
438	*Yucca brevifolia*	6	2	15	B	Potential	X	
439	*Yucca brevifolia*	10	3	20	C	No	X	
440	*Yucca brevifolia*	9	3	22	C	No	X	
441	*Yucca brevifolia*	8.5	2	12	B	Potential		clone along ground
442	*Yucca brevifolia*	13	4	21	C	No	X	clone
443	*Yucca brevifolia*	7	2	18	C	No	X	slight lean
444	*Yucca brevifolia*	4	2	12	C	No		
445	*Yucca brevifolia*	8	2	15	B	Potential	X	
446	*Yucca brevifolia*	5	2	10	B	Yes		2 clones < 1 ft
447	*Yucca brevifolia*	5.5	2	8	B	Yes		
448	*Yucca brevifolia*	6	2	20	C	No	X	3 clones < 1 ft
448c	*Yucca brevifolia*	5	2	10	B	Yes		clone
449	*Yucca brevifolia*	6.5	2	10	C	Yes		lean
450	*Yucca brevifolia*	4@base	1	2.5	B	Yes		
451	*Yucca brevifolia*	4	1	9	D	No		lean
452	*Yucca brevifolia*	6.5	2	11	B	Potential		
453	*Yucca brevifolia*	6	1	8	B	Yes		
454	*Yucca brevifolia*	6	2	12	B	Potential		
455	*Yucca brevifolia*	6.5	3	18	C	No	X	
456	*Yucca brevifolia*	5,5	1	5	B	Yes		
457	*Yucca brevifolia*	4@base	1	4	B	Yes		
458	*Yucca brevifolia*	5@base	1	4	B	Yes		
459	*Yucca brevifolia*	6	1	6	C	Yes		
459c	*Yucca brevifolia*	6	1	6	C	Yes		clone
460	*Yucca brevifolia*	8	2	16	C	No	X	
461	*Yucca brevifolia*	12	3	16	C	No	X	

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
462	*Yucca brevifolia*	7	3	22	B	No	X	
463	*Yucca brevifolia*	7	3	20	B	No	X	
464	*Yucca brevifolia*	7	2	15	C	No	X	
465	*Yucca brevifolia*	7	2	12	C	No		lean
466	*Yucca brevifolia*	6	2	15	C	No	X	
467	*Yucca brevifolia*	7	2	15	C	No	X	
468	*Yucca brevifolia*	7	2	11	B	Potential		1 clone < 1 ft
469	*Yucca brevifolia*	6	2	9	D	No		broken branches, 4 clones < 2 ft
470	*Yucca brevifolia*	6.5	2	11	D	No		broken branches
471	*Yucca brevifolia*	6	1	8	C	Yes		
472	*Yucca brevifolia*	5	2	7	B	Yes		
473	*Yucca brevifolia*	6	1	10	C	Yes		
474	*Yucca brevifolia*	3@base	1	1	B	Yes		
475	*Yucca brevifolia*	10,5	3	26	C	No	X	
476	*Yucca brevifolia*	6	1	10	B	Yes		
477	*Yucca brevifolia*	3@base	1	1.5	B	Yes		
478	*Yucca brevifolia*	4	1	4	C	Yes		
479	*Yucca brevifolia*	6	2	11	B	Potential		
480	*Yucca brevifolia*	4	1	7	B	Yes		
481	*Yucca brevifolia*	6	2	10	B	Yes		
482	*Yucca brevifolia*	7	3	11	B	Potential		
483	*Yucca brevifolia*	7	2	12	B	Potential		
484	*Yucca brevifolia*	6	2	11	B	Potential		
485	*Yucca brevifolia*	8	2	16	E	No	X	lean
486	*Yucca brevifolia*	5	1	10	B	Yes		
487	*Yucca brevifolia*	6.5	2	7	B	Yes		
488	*Yucca brevifolia*	5	2	12	B	Potential		
489	*Yucca brevifolia*	10	2	18	B	No	X	
490	*Yucca brevifolia*	6	2	12	B	Potential		
491	*Yucca brevifolia*	7	2	12	C	No		
492	*Yucca brevifolia*	8	3	15	B	Potential	X	
493	*Yucca brevifolia*	7.5	2	13	B	Potential		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
494	*Yucca brevifolia*	9	2	14	B	Potential		dying clone next to it
495	*Yucca brevifolia*	6	2	8	B	Yes		
496	*Yucca brevifolia*	5	2	9	C	Yes		
497	*Yucca brevifolia*	6.5	2	15	C	No	X	
498	*Yucca brevifolia*	7	3	16	C	No	X	
499	*Yucca brevifolia*	5.5	1	12	B	Potential		
500	*Yucca brevifolia*	6	2	13	C	No		
501	*Yucca brevifolia*	5.5	1	8	C	Yes		
502	*Yucca brevifolia*	7	3	20	B	No	X	
503	*Yucca brevifolia*	5.5	1	6	C	Yes		
504	*Yucca brevifolia*	7.5	3	12	B	Potential		1 clone < 1 ft
505	*Yucca brevifolia*	8	2	12	B	Potential		
506	*Yucca brevifolia*	6	2	10	B	Yes		
507	*Yucca brevifolia*	7	2	12	D	No		
508	*Yucca brevifolia*	7,6	3	20	D	No	X	
509	*Yucca brevifolia*	7	2	12	C	No		
510	*Yucca brevifolia*	6	2	12	C	No		
511	*Yucca brevifolia*	5	1	11	C	No		
512	*Yucca brevifolia*	5.5	2	13	C	No		2 clones < 1 ft
513	*Yucca brevifolia*	5	2	12	C	No		
514	*Yucca brevifolia*	10	2	11	C	No		
515	*Yucca brevifolia*	5	2	11	C	No		3 clones < 1 ft
516	*Yucca brevifolia*	6	1	7	B	Yes		
517	*Yucca brevifolia*	7	2	10	B	Yes		
518	*Yucca brevifolia*	8	2	11	C	No		
519	*Yucca brevifolia*	7	2	11	C	No		
519c	*Yucca brevifolia*	4	1	5	B	Yes		clone
520	*Yucca brevifolia*	3	1	4	B	Yes		
520c	*Yucca brevifolia*	6	1	9	B	Yes		clone
521	*Yucca brevifolia*	6	2	10	B	Yes		
522	*Yucca brevifolia*	6	1	7	B	Yes		
523	*Yucca brevifolia*	4	1	6	B	Yes		
524	*Yucca brevifolia*	4@base	1	4	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
525	*Yucca brevifolia*	6	1	10	B	Yes		
526	*Yucca brevifolia*	8	2	13	B	Potential		
527	*Yucca brevifolia*	6	2	13	B	Potential		
528	*Yucca brevifolia*	7	2	14	B	Potential		
529	*Yucca brevifolia*	8	3	13	B	Potential		
529	*Yucca brevifolia*	4@base	1	4	B	Yes		
530	*Yucca brevifolia*	7	2	16	B	No	X	
531	*Yucca brevifolia*	7	2	8	D	No		severe lean, along ground
532	*Yucca brevifolia*	9	2	15	B	Potential	X	
533	*Yucca brevifolia*	5	1	5	C	Yes		
534	*Yucca brevifolia*	3@base	1	1.5	B	Yes		
535	*Yucca brevifolia*	4@base	1	2	B	Yes		
536	*Yucca brevifolia*	4@base	1	2	B	Yes		
537	*Yucca brevifolia*	9	2	13	C	No		broken branches
537	*Yucca brevifolia*	4	1	5	D	No		clone
538	*Yucca brevifolia*	7	3	15	B	Potential	X	
539	*Yucca brevifolia*	4@base	1	4	B	Yes		
539c	*Yucca brevifolia*	4@base	1	3	B	Yes		clone
540	*Yucca brevifolia*	5	1	7	C	Yes		dead main, clone
540c	*Yucca brevifolia*	4.5	1	7	B	Yes		clone
540c	*Yucca brevifolia*	4	1	3.5	C	Yes		clone
540c	*Yucca brevifolia*	4	1	3.5	C	Yes		clone
540c	*Yucca brevifolia*	5	1	8	C	Yes		clone
541	*Yucca brevifolia*	7	3	12	B	Potential		
541c	*Yucca brevifolia*	5	1	7	B	Yes		clone
542	*Yucca brevifolia*	7	3	20	D	No	X	
542c	*Yucca brevifolia*	5.5	2	18	D	No	X	clone
543	*Yucca brevifolia*	5	2	9	B	Yes		
544	*Yucca brevifolia*	7	2	18	C	No	X	
545	*Yucca brevifolia*	6	2	11	C	No		
546	*Yucca brevifolia*	8	2	15	D	No	X	
547	*Yucca brevifolia*	6	2	7	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
548	*Yucca brevifolia*	6	2	10	B	Yes		
549	*Yucca brevifolia*	3@base	1	1	B	Yes		
550	*Yucca brevifolia*	3@base	1	1.5	B	Yes		
551	*Yucca brevifolia*	7	2	10	B	Yes		
552	*Yucca brevifolia*	6	2	9	B	Yes		
553	*Yucca brevifolia*	4.5	2	10	B	Yes		
554	*Yucca brevifolia*	5	1	14	C	No		
555	*Yucca brevifolia*	5	1	7	B	Yes		
556	*Yucca brevifolia*	6	1	7	C	Yes		
557	*Yucca brevifolia*	7	3	15	C	No	X	
558	*Yucca brevifolia*	7	2	14	C	No		
559	*Yucca brevifolia*	6	2	20	C	No	X	
560	*Yucca brevifolia*	6	2	13	C	No		lean
561	*Yucca brevifolia*	7	2	14	C	No		
562	*Yucca brevifolia*	6	2	16	C	No	X	
563	*Yucca brevifolia*	6	2	8	B	Yes		
564	*Yucca brevifolia*	3@base	1	1	B	Yes		
565	*Yucca brevifolia*	7.5	3	20	B	No	X	
566	*Yucca brevifolia*	7	2	16	B	No	X	
566c	*Yucca brevifolia*	7	2	17	B	No	X	clone
567	*Yucca brevifolia*	6	3	13	B	Potential		
568	*Yucca brevifolia*	6	2	15	D	No	X	broken branches
569	*Yucca brevifolia*	4@base	1	4	B	Yes		
570	*Yucca brevifolia*	2@base	1	1	B	Yes		
571	*Yucca brevifolia*	6	1	8	B	Yes		
572	*Yucca brevifolia*	6	2	8	B	Yes		
573	*Yucca brevifolia*	7	2	13	B	Potential		
574	*Yucca brevifolia*	4@base	1	2	B	Yes		1 clone < 1 ft
575	*Yucca brevifolia*	7	1	12	E	No		
575c	*Yucca brevifolia*	4	1	5	D	No		clone
576	*Yucca brevifolia*	3@base	1	1	C	Yes		lean
577	*Yucca brevifolia*	4	1	3	B	Yes		
578	*Yucca brevifolia*	6.5	2	16	B	No	X	

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
579	*Yucca brevifolia*	4.5	1	8	B	Yes		
580	*Yucca brevifolia*	4.5	1	8	B	Yes		
581	*Yucca brevifolia*	4.5	1	7	B	Yes		
582	*Yucca brevifolia*	5	2	9	B	Yes		1 clone < 1 ft
583	*Yucca brevifolia*	12	3	22	D	No	X	
584	*Yucca brevifolia*	6	2	14	B	Potential		
585	*Yucca brevifolia*	8	3	17	D	No	X	
585c	*Yucca brevifolia*	4@base	1	3	B	Yes		clone
586	*Yucca brevifolia*	7	3	15	B	Potential	X	slight lean
587	*Yucca brevifolia*	5.5	1	12	E	No		main dead
588	*Yucca brevifolia*	7.5	2	17	C	No	X	
589	*Yucca brevifolia*	7	2	18	B	No	X	
590	*Yucca brevifolia*	8	2	19	B	No	X	
591	*Yucca brevifolia*	6.5	3	17	B	No	X	
592	*Yucca brevifolia*	6	2	7	C	Yes		
593	*Yucca brevifolia*	6.5	2	14	C	No		
594	*Yucca brevifolia*	4	1	9	C	Yes		slight lean
595	*Yucca brevifolia*	7	2	17	B	No	X	
596	*Yucca brevifolia*	8	3	24	B	No	X	
597	*Yucca brevifolia*	10	3	15	B	Potential	X	
598	*Yucca brevifolia*	7	2	7	B	Yes		
599	*Yucca brevifolia*	7	2	10	B	Yes		
600	*Yucca brevifolia*	13	3	22	B	No	X	
601	*Yucca brevifolia*	6.5	2	13	E	No		broken branches
602	*Yucca brevifolia*	6,8	2	16	C	No	X	
603	*Yucca brevifolia*	7	2	20	C	No	X	
604	*Yucca brevifolia*	5	2	10	B	Yes		
605	*Yucca brevifolia*	7	2	13	C	No		
606	*Yucca brevifolia*	6.5	2	13	C	No		
606c	*Yucca brevifolia*	6.5	2	12	C	No		clone
606c	*Yucca brevifolia*	6	1	12	C	No		clone, lean
607	*Yucca brevifolia*	5.5	1	11	C	No		
608	*Yucca brevifolia*	5.5	2	11	C	No		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
609	*Yucca brevifolia*	5.5	2	12	C	No		
610	*Yucca brevifolia*	5	1	6	B	Yes		
611	*Yucca brevifolia*	4.5	1	7	B	Yes		
612	*Yucca brevifolia*	12	4	20	E	No	X	broken branches
613	*Yucca brevifolia*	11	3	17	D	No	X	broken branches
614	*Yucca brevifolia*	5	1	7	B	Yes		
615	*Yucca brevifolia*	6	2	13	B	Potential		
616	*Yucca brevifolia*	7	2	15	B	Potential	X	
617	*Yucca brevifolia*	4	1	5	B	Yes		
618	*Yucca brevifolia*	5	1	7	B	Yes		
618c	*Yucca brevifolia*	4	1	6	B	Yes		clone
619	*Yucca brevifolia*	7	2	12	C	No		
620	*Yucca brevifolia*	4.5	2	12	B	Potential		
621	*Yucca brevifolia*	6.5	2	8	B	Yes		1 clone < 1 ft
621c	*Yucca brevifolia*	4	1	4	B	Yes		clone
622	*Yucca brevifolia*	6	2	14	D	No		slight lean
622c	*Yucca brevifolia*	4	1	3	B	Yes		clone
623	*Yucca brevifolia*	7	2	19	B	No	X	

Source: PCR Services Corporation, 2009

APPENDIX B
JOSHUA TREE SURVEY PLOT 2

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
624	*Yucca brevifolia*	13	1	20	B	No	X	
625	*Yucca brevifolia*	7	2	12	C	No		
626	*Yucca brevifolia*	8	2	12	B	Potential		
627	*Yucca brevifolia*	8	3	9	B	Yes		
628	*Yucca brevifolia*	6	2	8	C	Yes		
629	*Yucca brevifolia*	6	2	10	B	Yes		
630	*Yucca brevifolia*	11	3	16	B	No	X	
631	*Yucca brevifolia*	7	2	11	C	No		
632	*Yucca brevifolia*	8	2	7	C	No		
633	*Yucca brevifolia*	9	4	14	B	No		
634	*Yucca brevifolia*	9	5	16	B	No	X	
635	*Yucca brevifolia*	14	5	20	B	No	X	
636	*Yucca brevifolia*	9	4	15	C	No	X	
637	*Yucca brevifolia*	6	2	7	C	No		
638	*Yucca brevifolia*	12	4	18	B	No	X	
639	*Yucca brevifolia*	11	4	16	C	No	X	
640	*Yucca brevifolia*	8	3	11	C	No		
640c	*Yucca brevifolia*	10	3	16	C	No	X	clone
641	*Yucca brevifolia*	8	2	8	C	No		
642	*Yucca brevifolia*	7	2	15	B	Potential	X	
643	*Yucca brevifolia*	6	1	7	B	Yes		
643c	*Yucca brevifolia*	6	2	11	B	Potential		clone
644	*Yucca brevifolia*	5	1	8	B	Yes		
645	*Yucca brevifolia*	13	5	22	C	No	X	
646	*Yucca brevifolia*	8	3	11	C	No		
647	*Yucca brevifolia*	6	1	7	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
648	*Yucca brevifolia*	10	5	14	C	No		
649	*Yucca brevifolia*	9	2	15	B	Potential	X	
650	*Yucca brevifolia*	8	2	11	C	No		
651	*Yucca brevifolia*	7	2	10	B	Yes		
652	*Yucca brevifolia*	8	2	13	C	No		
653	*Yucca brevifolia*	6	2	8	C	Yes		
654	*Yucca brevifolia*	8	2	13	C	No		
655	*Yucca brevifolia*	9	4	14	B	No		
656	*Yucca brevifolia*	7	2	10	C	Yes		
657	*Yucca brevifolia*	7	2	7	B	Yes		
658	*Yucca brevifolia*	8	2	14	B	Potential		
659	*Yucca brevifolia*	7	2	8	B	Yes		
660	*Yucca brevifolia*	7	2	9	C	Yes		
661	*Yucca brevifolia*	8	2	8	C	Yes		
662	*Yucca brevifolia*	12	3	12	B	Potential		
663	*Yucca brevifolia*	8	2	11	B	Potential		
664	*Yucca brevifolia*	6	2	7	B	Yes		
665	*Yucca brevifolia*	11	5	16	D	No	X	
666	*Yucca brevifolia*	11	3	9	B	Yes		
667	*Yucca brevifolia*	6	2	6	C	Yes		
668	*Yucca brevifolia*	10	3	14	B	Potential		
669	*Yucca brevifolia*	9	3	10	B	Yes		
670	*Yucca brevifolia*	11	2	10	C	Yes		
671	*Yucca brevifolia*	14	5	18	B	No	X	
672	*Yucca brevifolia*	16	6	18	B	No	X	
673	*Yucca brevifolia*	6	1	8	D	No		
674	*Yucca brevifolia*	11	3	16	C	No	X	
675	*Yucca brevifolia*	7	2	12	C	No		
676	*Yucca brevifolia*	8	2	12	B	Potential		
677	*Yucca brevifolia*	7	3	8	C	Yes		
678	*Yucca brevifolia*	9	2	9	B	Yes		
678c	*Yucca brevifolia*	8	2	8	B	Yes		clone
679	*Yucca brevifolia*	8	2	11	B	Potential		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
680	*Yucca brevifolia*	7	2	9	B	Yes		
681	*Yucca brevifolia*	9	3	10	B	Yes		
682	*Yucca brevifolia*	7	2	11	B	Potential		
683	*Yucca brevifolia*	8	2	8	C	No		
684	*Yucca brevifolia*	7	2	10	C	Yes		
684c	*Yucca brevifolia*	8	3	14	C	No		clone
685	*Yucca brevifolia*	9	2	12	B	Potential		
686	*Yucca brevifolia*	10	4	16	C	No	X	
687	*Yucca brevifolia*	8	3	14	C	No		
688	*Yucca brevifolia*	7	2	14	C	No		
689	*Yucca brevifolia*	10	3	11	D	No		
690	*Yucca brevifolia*	7	2	11	B	Potential		
691	*Yucca brevifolia*	10	3	15	B	Potential	X	
692	*Yucca brevifolia*	7	3	12	D	No		
693	*Yucca brevifolia*	8	2	13	B	Potential		
694	*Yucca brevifolia*	6	2	8	C	Yes		
695	*Yucca brevifolia*	9	2	11	B	Potential		
696	*Yucca brevifolia*	9	4	15	C	No	X	
697	*Yucca brevifolia*	6	2	9	C	Yes		
698	*Yucca brevifolia*	15	5	17	C	No	X	
699	*Yucca brevifolia*	8	2	13	C	No		
700	*Yucca brevifolia*	11	4	15	C	No	X	
701	*Yucca brevifolia*	3	1	2	B	Yes		
702	*Yucca brevifolia*	9	3	13	B	Potential		
703	*Yucca brevifolia*	9	3	14	B	Potential		
703c	*Yucca brevifolia*	5	1	8	C	Yes		
704	*Yucca brevifolia*	9	15	C	No	X		
705	*Yucca brevifolia*	7	2	10	C	Yes		
706	*Yucca brevifolia*	14	6	16	D	No	X	
707	*Yucca brevifolia*	7	3	11	C	No		
708	*Yucca brevifolia*	8	3	9	C	Yes		
709	*Yucca brevifolia*	10	5	16	C	No	X	
710	*Yucca brevifolia*	6	2	10	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
711	*Yucca brevifolia*	4	1	3	B	Yes		
712	*Yucca brevifolia*	6	1	7	D	No		
713	*Yucca brevifolia*	9	4	15	B	No	X	
714	*Yucca brevifolia*	8	2	9	B	Yes		
715	*Yucca brevifolia*	7	2	10	D	No		
716	*Yucca brevifolia*	9	2	9	B	Yes		
717	*Yucca brevifolia*	8	2	7	B	Yes		
718	*Yucca brevifolia*	5	1	6	B	Yes		
719	*Yucca brevifolia*	9	2	12	B	Potential		
720	*Yucca brevifolia*	8	2	9	C	Yes		
721	*Yucca brevifolia*	8	3	15	C	No	X	
722	*Yucca brevifolia*	9	2	10	C	Yes		
723	*Yucca brevifolia*	5	1	6	D	No		
724	*Yucca brevifolia*	6	2	10	C	Yes		
725	*Yucca brevifolia*	9	3	14	B	Potential		
726	*Yucca brevifolia*	9	2	8	B	Yes		
727	*Yucca brevifolia*	7	2	13	C	No		
728	*Yucca brevifolia*	6	1	6	B	Yes		
729	*Yucca brevifolia*	9	2	12	B	Potential		
730	*Yucca brevifolia*	10	3	14	B	Potential		
731	*Yucca brevifolia*	10	4	12	B	No		
732	*Yucca brevifolia*	10	3	14	B	Potential		
733	*Yucca brevifolia*	3	1	2	B	Yes		
734	*Yucca brevifolia*	5	1	6	B	Yes		
735	*Yucca brevifolia*	8	2	8	B	Yes		
736	*Yucca brevifolia*	7	2	11	C	No		
737	*Yucca brevifolia*	6	2	9	B	Yes		
738	*Yucca brevifolia*	8	2	9	B	Yes		
739	*Yucca brevifolia*	9	3	12	C	No		
740	*Yucca brevifolia*	11	4	16	B	No	X	
741	*Yucca brevifolia*	7	2	9	C	Yes		
742	*Yucca brevifolia*	8	2	14	B	Potential		
743	*Yucca brevifolia*	9	2	7	B	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
744	*Yucca brevifolia*	8	2	14	B	Potential		
745	*Yucca brevifolia*	12	3	16	D	No	X	
746	*Yucca brevifolia*	8	2	14	C	No		
747	*Yucca brevifolia*	7	1	8	C	No		
748	*Yucca brevifolia*	5	1	6	B	Yes		
749	*Yucca brevifolia*	9	2	10	B	Yes		
750	*Yucca brevifolia*	10	3	14	D	No		
751	*Yucca brevifolia*	12	4	14	B	No		
752	*Yucca brevifolia*	8	2	9	B	Yes		
753	*Yucca brevifolia*	8	3	14	D	No		
754	*Yucca brevifolia*	7	2	10	C	Yes		
755	*Yucca brevifolia*	5	1	6	C	Yes		
756	*Yucca brevifolia*	7	2	10	D	No		
757	*Yucca brevifolia*	10	3	13	B	Potential		
758	*Yucca brevifolia*	7	2	10	C	No		
759	*Yucca brevifolia*	6	2	8	C	No		
760	*Yucca brevifolia*	8	3	14	C	No		
761	*Yucca brevifolia*	9	2	14	C	No		
762	*Yucca brevifolia*	9	4	13	C	No		
763	*Yucca brevifolia*	8	2	11	B	Potential		
764	*Yucca brevifolia*	9	3	14	C	No		
765	*Yucca brevifolia*	10	3	15	B	Potential	X	
766	*Yucca brevifolia*	8	2	11	B	Potential		
767	*Yucca brevifolia*	8	2	8	C	Yes		
768	*Yucca brevifolia*	5	1	6	C	No		
769	*Yucca brevifolia*	5	1	7	C	Yes		
770	*Yucca brevifolia*	9	2	13	B	Potential		
771	*Yucca brevifolia*	6	1	7	B	Yes		
772	*Yucca brevifolia*	7	2	10	C	No		
773	*Yucca brevifolia*	8	2	14	C	No		
774	*Yucca brevifolia*	8	3	13	C	No		
775	*Yucca brevifolia*	8	2	12	C	No		
776	*Yucca brevifolia*	8	3	14	C	No		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
777	*Yucca brevifolia*	4	1	5	B	Yes		
778	*Yucca brevifolia*	9	3	15	C	No	X	
779	*Yucca brevifolia*	8	3	17	C	No	X	
780	*Yucca brevifolia*	4	1	4	B	Yes		
781	*Yucca brevifolia*	12	4	14	C	No		
782	*Yucca brevifolia*	5	1	6	D	No		
783	*Yucca brevifolia*	10	1	12	C	No		
784	*Yucca brevifolia*	7	2	11	C	No		
785	*Yucca brevifolia*	8	2	14	C	No		
786	*Yucca brevifolia*	8	2	14	C	No		
787	*Yucca brevifolia*	9	4	12	C	No		
788	*Yucca brevifolia*	6	1	10	C	No		
789	*Yucca brevifolia*	10	3	16	B	No	X	
790	*Yucca brevifolia*	12	3	15	B	Potential	X	
791	*Yucca brevifolia*	9	2	10	C	No		
792	*Yucca brevifolia*	11	4	14	B	No		
793	*Yucca brevifolia*	10	3	13	D	No		
794	*Yucca brevifolia*	7	2	11	C	No		
795	*Yucca brevifolia*	8	3	11	C	No		
796	*Yucca brevifolia*	9	2	11	C	No		
797	*Yucca brevifolia*	7	1	15	C	No	X	
798	*Yucca brevifolia*	5	1	10	D	No		
799	*Yucca brevifolia*	9	4	14	C	No		
800	*Yucca brevifolia*	13	6	18	B	No	X	
801	*Yucca brevifolia*	7	1	9	C	Yes		
802	*Yucca brevifolia*	9	2	12	C	No		
803	*Yucca brevifolia*	8	2	9	C	Yes		
804	*Yucca brevifolia*	7	2	9	C	Yes		
805	*Yucca brevifolia*	8	2	8	C	Yes		
806	*Yucca brevifolia*	7	2	13	B	Potential		
807	*Yucca brevifolia*	7	1	9	B	Yes		
808	*Yucca brevifolia*	4	1	4	B	Yes		
809	*Yucca brevifolia*	5	1	7	C	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
810	*Yucca brevifolia*	7	1	8	B	Yes		
811	*Yucca brevifolia*	8	2	11	C	No		
812	*Yucca brevifolia*	6	2	9	C	Yes		
813	*Yucca brevifolia*	7	1	8	B	Yes		
814	*Yucca brevifolia*	5	1	5	C	Yes		
815	*Yucca brevifolia*	7	2	10	C	Yes		
816	*Yucca brevifolia*	7	2	8	C	Yes		
817	*Yucca brevifolia*	4	1	4	C	Yes		
817c	*Yucca brevifolia*	7	1	9	C	Yes		clone
818	*Yucca brevifolia*	7	2	7	B	Yes		
819	*Yucca brevifolia*	7	2	11	C	No		
820	*Yucca brevifolia*	7	1	11	C	No		
821	*Yucca brevifolia*	4	1	5	B	Yes		
822	*Yucca brevifolia*	10	3	16	D	No	X	
823	*Yucca brevifolia*	9	2	13	B	Potential		
824	*Yucca brevifolia*	10	3	13	B	Potential		
825	*Yucca brevifolia*	8	2	12	C	No		
826	*Yucca brevifolia*	14	4	20	C	No	X	
827	*Yucca brevifolia*	4	1	5	B	Yes		
828	*Yucca brevifolia*	4	1	2	B	Yes		
829	*Yucca brevifolia*	6	1	7	C	No		
830	*Yucca brevifolia*	11	6	16	C	No	X	
831	*Yucca brevifolia*	9	2	11	B	Potential		
832	*Yucca brevifolia*	8	2	9	B	Yes		
833	*Yucca brevifolia*	14	5	18	C	No	X	
833c	*Yucca brevifolia*	12	5	17	C	No	X	clone
834	*Yucca brevifolia*	9	3	12	B	Potential		
835	*Yucca brevifolia*	8	3	13	C	No		
836	*Yucca brevifolia*	10	4	17	C	No	X	
837	*Yucca brevifolia*	9	4	16	C	No	X	
838	*Yucca brevifolia*	9	3	15	C	No	X	
839	*Yucca brevifolia*	8	2	12	C	No		
840	*Yucca brevifolia*	8	3	13	B	Potential		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
841	*Yucca brevifolia*	6	2	11	C	No		
842	*Yucca brevifolia*	7	2	10	B	Yes		
843	*Yucca brevifolia*	7	1	8	C	Yes		
844	*Yucca brevifolia*	8	2	9	B	Yes		
845	*Yucca brevifolia*	8	2	11	B	Potential		
846	*Yucca brevifolia*	5	1	5	C	Yes		
847	*Yucca brevifolia*	9	3	12	B	Potential		
848	*Yucca brevifolia*	9	2	10	B	Yes		
849	*Yucca brevifolia*	5	1	6	B	Yes		
850	*Yucca brevifolia*	7	1	10	B	Yes		
851	*Yucca brevifolia*	9	2	10	B	Yes		
852	*Yucca brevifolia*	8	1	14	C	No		
853	*Yucca brevifolia*	7	2	10	D	No		
854	*Yucca brevifolia*	7	2	7	C	Yes		
855	*Yucca brevifolia*	5	2	5	C	Yes		
856	*Yucca brevifolia*	7	1	12	C	No		
857	*Yucca brevifolia*	6	2	6	C	Yes		
858	*Yucca brevifolia*	8	3	11	B	Potential		
858	*Yucca brevifolia*	9	2	14	C	No		
859	*Yucca brevifolia*	8	2	12	C	No		
859c	*Yucca brevifolia*	9	2	14	C	No		

Source: PCR Services Corporation, 2009

APPENDIX C
JOSHUA TREE SURVEY PLOT 3

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
301	*Yucca brevifolia*	11	17	15	C	No	X	
302	*Yucca brevifolia*	12	19	20	B	No	X	
304	*Yucca brevifolia*	11	8	14	B	No		
305	*Yucca brevifolia*	9	5	10	D	Yes		
306	*Yucca brevifolia*	10	4	11	C	Yes		
307	*Yucca brevifolia*	12	16	18	C	No	X	
308	*Yucca brevifolia*	5	4	4	D	Yes		clone, main dead
309	*Yucca brevifolia*	6	3	10	C	Yes		
310	*Yucca brevifolia*	9	15	14	C	Potential		
313	*Yucca brevifolia*	8	3	8	D	No		
314	*Yucca brevifolia*	7	6	12	C	Potential		
315	*Yucca brevifolia*	7	2	8	D	No		
325	*Yucca brevifolia*	11	7	16	C	No	X	
327	*Yucca brevifolia*	9	13	20	C	No	X	
328	*Yucca brevifolia*	10	10	12	C	Potential		nest
329	*Yucca brevifolia*	11	10	22	B	No	X	
334	*Yucca brevifolia*	11	7	14	C	Potential		
336	*Yucca brevifolia*	12	8	15	D	No	X	
337	*Yucca brevifolia*	11	4	12	C	Yes		
338	*Yucca brevifolia*	8	1	9	C	Yes		
303	*Yucca brevifolia*	5	1	5	B	Yes		
304	*Yucca brevifolia*	7	3	8	B	Yes		
309	*Yucca brevifolia*	4	1	3	B	Yes		
311	*Yucca brevifolia*	5	1	6	C	Yes		

Tree No.	Tree Species	DBH	# of branches	Height (ft)	Health	Transferability	Specimen	Comments
312	*Yucca brevifolia*	4	2	4	C	Yes		
316	*Yucca brevifolia*	7	8	9	C	Yes		
317	*Yucca brevifolia*	5	1	6	B	Yes		
318	*Yucca brevifolia*	6	1	6	B	Yes		
319	*Yucca brevifolia*	7	1	7	B	Yes		
320	*Yucca brevifolia*	6	1	7	B	Yes		
321	*Yucca brevifolia*	8	2	7	B	Yes		
322	*Yucca brevifolia*	7	2	7	B	Yes		
323	*Yucca brevifolia*	5	1	4	B	Yes		
324	*Yucca brevifolia*	7,5,5,4	5	11	A	Yes		clones
326	*Yucca brevifolia*	6	1	6	B	Yes		
330	*Yucca brevifolia*	10	7	14	B	Potential		
331	*Yucca brevifolia*	7	2	12	B	Yes		
332	*Yucca brevifolia*	5	1	6	B	Yes		
333	*Yucca brevifolia*	10	2	12	B	Yes		
335	*Yucca brevifolia*	10	4	12	C	Potential		
339	*Yucca brevifolia*	8	4	12	C	Potential		
340	*Yucca brevifolia*	9	3	9	C	Yes		

Source: PCR Services Corporation, 2009

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HACIENDA AT FAIRVIEW VALLEY
JOSHUA TREE MANAGEMENT PROGRAM

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November 2008 (Revised March 2009)

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JOSHUA TREE MANAGEMENT PROGRAM

1.0 PURPOSE AND INTENT

The "Hacienda at Fairview Valley Joshua Tree Management Program" (the "Management Program" or the "Program") provides regulations and guidelines for the management of desert native plants, as outlined in the *San Bernardino County Development Code, Division 8, Chapter* 88.01.060(c), *Desert Native Plant Protection*, ("County Code") with an emphasis on Joshua trees within the Hacienda at Fairview Valley Specific Plan Area (the "Specific Plan Area"). The provisions are intended to coordinate with, and augment the County Code specifically for development within the Specific Plan Area. Whenever the provisions contained herein conflict with those contained in the County Code, the provisions of the County Code shall take precedence unless the provisions of the Program are more restrictive and do not conflict with the County Code.

It is the intent of this Management Program to preserve and protect all Joshua trees and regulated desert native plants to the maximum extent possible while balancing the region's need for quality growth and the development rights of private property owners. To achieve this balance, anyone submitting a subdivision or permit application that would allow for land disturbance shall use all reasonable means necessary to retain and preserve such trees in their existing locations to the maximum extent feasible. All land use applications permitting land disturbance shall consider lot configuration, potential property development (building envelope), circulation system, and all associated infrastructure, as further described in this Management Program, to achieve this preservation.

2.0 APPLICABILITY

The provisions in this Management Program apply to the removal of Joshua trees and regulated desert native plants on all private land within the Hacienda at Fairview Valley Specific Plan Area, as defined within the Specific Plan, unless otherwise specified. All Tentative Tract Map and Final Tract Map submittals shall be reviewed in accordance with this Management Program and the Hacienda at Fairview Valley Specific Plan.

This requirement does not apply to the application and approval of Tentative Parcel Maps, when prepared for financial purposes that do not provide any rights for land disturbance.

Nothing in this Program shall relieve nor be interpreted to exempt a development within the Specific Plan Area from complying with applicable State or Federal laws and regulations.

3.0 DEFINITIONS

"Desert Native Plant Specialist" means one of the following: a) County certified plant expert; b) State of California Agricultural Biologist; c) State of California registered forester; d) I.S.A certified arborist; e) Others approved by Director.

"Director" means County of San Bernardino Director of Land Use Services or their designees.

"Growing season" means the time period each year generally between November through May.

"Joshua tree" means a living tree with botanical name of *Yucca brevifolia* var. *brevifolia*.

"Land disturbance" means grading, surface clearance, trenching or other construction-related activity authorized by the approval of a County permit.

"Protection zone" refers to a zone five feet beyond each Joshua tree's canopy dripline.

"Regulated Desert Native Plants" refers to all plant species referenced under the County Code Chapter 88.01.060(c)(1 through 5).

"Tree Disturbance" means human activity including land disturbance that changes the environmental setting of an existing regulated tree to the extent that the amount of sun, water or wind the tree traditionally receives or substances are introduced which may be unhealthy for the tree, interferes with the tree's growth potential or causes direct physical damage to the tree.

4.0 EXEMPTIONS

The provisions of this Management Program shall not apply to the exempt activities provided in County Code Section 88.01.030 (*Exempt Activities*).

5.0 TREE REMOVAL PERMITS

A Tree Removal Permit shall be required for the removal of a Joshua tree or other regulated desert native plant. The Director may approve the removal of a Joshua tree or other regulated desert native plant when requested in conjunction with a land use application (e.g. Tentative Tract Map, Final Tract Map, grading permit, building permit and all other development permits).

This requirement does not apply to the application and approval of Tentative Parcel Maps when prepared for financial purposes that do not provide any rights for land disturbance.

The Fire Chief may approve a Tree Removal Permit for the removal of regulated trees when requested for the purposes of mitigating fire hazards and independent of a land use or development permit application.

An approved land use application and/or development permit shall be considered to include a Tree Removal Permit, if the land use or permit application specifically reviews and approves the tree removals subject to compliance with the applicable provisions of the County Code and this Management Program. Compliance with the County Code and this Management Program includes a Joshua tree survey and the preparation of a Joshua tree survey report and engineering plot plan consistent with County submittal requirements and the provisions of this Program.

5.1 Joshua Tree Survey and Report

A Joshua tree survey and report shall be completed and submitted with a land use application for Tentative Tract Map(s). The Joshua tree survey and report shall encompass the entire property area within the Tentative Tract Map boundaries and any off-site improvement areas required for development of the subject Tract Map.[1]

A land use application for Final Tract Map shall also include a Joshua tree survey and report. This application may utilize the previously completed Survey as that submitted and approved with the Tentative Tract Map application for the same property. If the property boundaries of the Final Tract Map differ from the Tentative Tract Map, the Director shall review the application and deem if an additional survey is necessary for the area(s) that are different.

[1] *If an overall Joshua tree survey has been previously completed for the Specific Plan Area, a phase thereof, or a portion which covers the entire property comprising the Tract Map or offsite areas which may be impacted by the construction of the subject Tract Map, this Survey may be used for the application submittal.*

The required Joshua tree survey and report shall be prepared by a Desert Native Plant Specialist and will include a field inventory of Joshua trees throughout the site, indicating their approximate height, age, health rating, transferability, and whether they are a clone or single-trunked tree. The report shall include a plot plan showing the on-site locations of all Joshua trees.[2] The Joshua tree report shall also identify any applicable desert native plants, as defined in Section 3.0 of this Program, if identified during any Joshua tree survey conducted on Specific Plan area.

5.2 Engineering Plot Plan

Prior to the issuance of a Tree Removal Permit in conjunction with a development permit and/or approval of a land use application which authorizes such removal(s), a plot plan or grading plan shall be reviewed and approved by the applicable review authority for each site indicating exactly which trees are authorized to be removed and/or replaced (as indicated in the Transplanting Plan). The plot plan shall incorporate the exact locations of existing trees per the Joshua tree survey and report.

6.0 CONDITIONS OF APPROVAL

A Tree Removal Permit may be subject to the following conditions of approval, when conditions are deemed appropriate in consultation with the retained Desert Native Plant Specialist for the project:

1. When applicable, conditions of approval shall include criteria, methods and persons authorized to conduct the proposed activities in addition to, but in conformance with, the Development Code and the requirements in this Program.

2. Where conditions are determined appropriate, proposed mitigation shall include the transplantation of suitable trees slated for removal to a designated preservation area. Trees selected for transplantation may be stockpiled on site for future transplanting and/or placed in the adoption program. Proposed transplantation shall be conducted per the requirements outlined in Section 12 of this Program.

3. The approved land use application shall be conditioned to provide the required Adoption Program fees per Section 14 of this Management Program

[2] *The use of Global Positioning System (GPS) technology for tree locations is not required, but is strongly encouraged in order to more accurately position the existing Trees within the engineering plot plans.*

4. The review authority may require posting and maintenance of a monetary security deposit where necessary to ensure the completion of any required mitigation measures. If the project is otherwise required to post a bond for landscape maintenance requirements, this requirement may be incorporated into the same bond.

5. Any specific conditions of approval prescribed by the Director, and not agreed to by the applicant, may be first challenged before the Director, then the Planning Commission. If still unresolved, the condition(s) in question may be appealed before the County Board of Supervisors following County procedures for appeals. The decision of the Board of Supervisors shall be final.

7.0 FINDINGS FOR REMOVAL OR TRANSPLANT

The applicable review authority may authorize the removal of a Joshua tree or other regulated desert native plant only if the following findings are made:

1. The Director shall deem that Tentative Tract Map and Final Map applications are in substantial conformance with the provisions of this Program as a necessary finding for map approval by the applicable review authority.

2. Joshua trees that are proposed to be removed will be transplanted, or stockpiled for future transplanting whenever possible.

3. When stockpiling occurs, the permittee shall comply with the requirements of Section 12.0 of this Management Program to ensure the maximum survivability of the stockpiled plant material. Transplanting shall comply with the provisions of the Development Code.

4. No other reasonable alternative exists for the development of the land when the removal of specimen size Joshua tree(s) is requested. Specimen size trees are defined as meeting one of the following criteria:

    a. A circumference measurement equal to or greater than 50 inches measured at 4.5 feet above natural grade;

    b. Total tree height of 15 feet or greater;

    c. Trees possessing bark-like trunk;

    d. A cluster of 10 or more individual trees, greater than 3 feet, growing in close proximity to each other.

The removal of a Joshua tree or other regulated desert native plant is justified for at least one of the following reasons:

1. The location of the tree and/or its dripline interferes with an allowed structure, paved area, utility service, sewage disposal area, or other approved improvement or ground disturbing activity and there is no other feasible alternative location for the improvement.

2. The location of the tree and/or its dripline interferes with the planned improvement of a street or development of an approved access to the subject or adjoining property and there is no other feasible alternative location for the improvement.

3. The location of the tree is hazardous to pedestrian or vehicular travel or safety.

4. The tree interferes with or is causing extensive damage to utility services, roadways, sidewalks, curbs, gutters, drainage, flood control improvements, foundations, existing structures, or municipal improvements.

5. The condition or location of the tree is adjacent to and in such close proximity to an existing or proposed structure that the regulated tree has or will sustain significant damage.

8.0 DURATION OF REMOVAL PERMIT

The duration of a Tree Removal Permit issued in conjunction with a land use application and/or a development permit, shall have the same duration of the associated application or permit, unless otherwise specified at the time of application approval.

9.0 SITE PLANNING DESIGN STANDARDS

Land use applications, including Tentative Tract Map and Final Tract Map shall comply with all appropriate standards and guidelines contained in the Specific Plan and applicable County Development Codes. To achieve the maximum retention in place of existing Joshua trees or other regulated desert native plants, the following planning design standards and guidelines shall be considered and incorporated into site plans to the maximum extent feasible:

1. The Conceptual Land Use Plan of the Specific Plan illustrates the approximate boundaries of each land use designation. As noted in the Specific Plan, the final delineation of the boundaries between adjoining land use areas will be determined

during preparation of subsequent land use applications. Final delineation of the Open Space Conservation (OS-C) land use area boundaries shall be determined following review of the required Joshua tree survey and report, as specified in Section 5.0 of this Program.

The delineation of the boundary between residential land uses and adjoining OS-C land use areas should consider high density areas of Joshua trees and should locate these high density areas within OS-C land uses to the maximum extent feasible.

2. Subdivisions of ¾ acre and larger lot sizes shall not be mass graded or cleared of all native vegetation including existing healthy Joshua trees or other regulated desert native plants. Land disturbance shall be limited to the installation of building pads, driveways, utilities, fire clearance areas, property line fences and other reasonable accessory uses associated with the primary land use.

3. Segments of the project's multi-use (hiking, equestrian) trail system located in Open Space Conservation areas (OS-C) should avoid alignments which would require the removal of Joshua trees or other regulated desert native plants. Trail width standards may be modified for short lengths, as approved by the Director, when specifically employed to retain tree(s) in their existing location(s).

4. When an existing specimen Joshua tree or stand of Joshua trees are located within an Open Space Recreation (OS-R) land use area, the design of the recreational facilities within that parcel should incorporate these trees into the overall design to the maximum extent feasible.

5. Development should incorporate preserved in place or transplanted trees to landscape on-site detention basins, entry statement areas, transition areas, open space buffers and other open space sites whenever possible, where xeric landscaping is appropriate and appropriate conditions exist for viable Joshua tree growth.

10.0 DEVELOPMENT STANDARDS DEVIATION

In the event that the supporting documentation submitted with the land use application and/or development permit illustrates reasonable means and best efforts were attempted to preserve existing Joshua trees and other regulated desert native plants in their existing on-site locations, and it can be demonstrated that the plant materials cannot be retained and preserved in place or without disturbance unless a required Development Standard (per the applicable Specific Plan or County Development Code Sections) is modified, the following deviations may be granted by the Director when specifically employed to retain the Joshua trees or other regulated desert native plants in their existing locations:

1. **Front Yard Setback:** the required minimum front yard setback may be reduced by the least distance necessary to preserve an existing tree in its present location by no more than fifteen percent (15%) of the required setback.

2. **Side Yard Setback:** the required minimum side yard setback may be reduced by the least distance necessary to preserve an existing tree in its present location by no more than twenty percent (20%) of the required setback.

3. **Rear Yard Setback:** the required minimum rear yard setback may be reduced by the least distance necessary to preserve an existing tree in its present location by no more than twenty percent (20%) of the required setback.

4. **Lot Width:** the Planning Commission at the Director's recommendation, in its consideration of a subdivision request, may, to preserve an existing tree in its present location, reduce the required minimum lot width by up to a maximum of ten percent (10%), but in no case shall this lot width reduction be granted for more than fifteen percent (15%) of the total number of lots within the subject subdivision under review.

5. **Lot Depth:** the Planning Commission at the Director's recommendation, in its consideration of a subdivision request, may, to preserve an existing tree in its present location, reduce the required minimum lot depth by up to a maximum of ten percent (10%), but in no case shall this lot depth reduction be granted for more than fifteen percent (15%) of the total number of lots within the subject subdivision under review.

6. **Lot Area:** the Planning Commission at the Director's recommendation, in its consideration of a subdivision request, may, to preserve an existing tree in its present location, reduce the required minimum lot area by up to a maximum of eight percent (8%), but in no case shall this lot area reduction be granted for more than fifteen percent (15%) of the total number of lots within the subject subdivision under review.

11.0 CONSTRUCTION STANDARDS

During construction, and prior to final inspection under a development permit, the following construction standards shall apply, unless otherwise approved in writing by a Desert Native Plant Specialist and submitted to the applicable review authority:

1. The trunks of regulated trees shall not be enclosed within roof lines or decking.

2. Utilities, construction signs, or other hardware shall not be attached so as to penetrate or scrape the bark from any living regulated tree.

3. No grade alterations shall bury any portion of the protection zone of a regulated tree or significantly undercut the root system within the dripline of the tree.

4. "Trap fencing" shall be utilized to prevent compaction damage to the root zone of preserved-in-place or transplanted trees and shall be installed along the tree's protection zone to the maximum extent practicable.

5. It is recommended that the proposed tree salvage occur outside of the nesting season (typically February 15 to August 30) to avoid any potential construction related impacts to nesting birds, which are protected under the federal Migratory Bird Treaty Act. In addition, nests and eggs are protected under Fish and Game Code Section 3503. If work cannot be scheduled outside of the nesting season, a preconstruction nesting bird survey should be conducted by a qualified biologist within seven (7) days prior to the start of work. If an active nest is identified within the project area, a no-work zone shall be established within 100 feet from the nest (300 feet for raptors). The no-work zone shall be maintained until the young are fully fledged from the nest, as determined by a qualified biologist.

12.0 RELOCATION OR TRANSPLANTATION REQUIREMENTS

Trees may be transplanted to another location on the same property, to another location within the Specific Plan Area, or may be made available for adoption through the Joshua Tree Adoption Program as described in Section 14.0 of this Management Program.

Transplanting of trees within the boundaries of the Specific Plan, and approved by the Tree Removal Permit, must be completed under the supervision of a Desert Native Plant Specialist. Transplanting must take into consideration the time of year, the tree's original and transplanted physical orientation, prevailing wind direction, soil type of the original and transplanted location, and other related microclimate characteristics that may affect the successful transplantation as determined by the retained Desert Native Plant Specialist.

When transplanting is proposed, a Joshua Tree Transplantation Plan shall be prepared outlining steps that will be undertaken to ensure the survival of the stockpiled and transplanted trees. The Transplantation Plan may be included as an addendum to the original Joshua tree report.

The Transplantation Plan shall provide the following:

1. The Transplantation Plan shall identify the number and location of each tree proposed to be transplanted, and shall designate the location of the proposed transplantation site.

2. The Transplantation Plan shall identify the party responsible for salvaging the on-site Joshua trees within its respective project phase. Retaining a professional tree moving company with experience and success moving Joshua trees is recommended.

3. A timeframe that the proposed removal and replanting will occur. Please note that it is recommended, although not necessary, that tree removals occur during the wetter winter months (between November through March). However, low temperatures may negatively impact stockpiled trees and may increase rates of mortality. Ambient nighttime temperatures should be a consideration for the timing of the transplantation.

4. An outline of all actions determined necessary for the optimum survivability of the transplanted trees. These actions should address the following considerations (information that is recommended for inclusion within the Transplantation Plan is provided below, where applicable):

    a. Method of salvage:

        i. Front end loader or hydraulic tree spade are recommended. A tree spade is only recommended for smaller specimens with few branches and within sandy or silty soils.

        ii. Excavation with hand tools may be recommended to prepare the tress for salvage. If hand excavation is warranted it shall be outlined within the Transplantation Plan.

        iii. The northern face of each tree shall be marked in the field prior to salvage.

        iv. All trees shall be tagged with a uniquely numbered, metal tree tag.

        v. Only trees less than 10-feet in height, and in good condition, shall be selected for transplant.

    b. Post-salvage care:

        i. Including trimming damaged roots.

        ii. Application of fungicide or sulfur to roots to minimize infections risks.

        iii. Proper sterilization of equipment.

iv. Proper storage during stockpiling (see below).

c. Stockpiling:

i. Stockpiling is defined as the short-term, on-site storage of salvaged Joshua trees for later replanting elsewhere on the project site or as part of an approved Joshua tree adoption program (off-site replanting).

ii. Stabilizing and supporting larger trees. Stakes or boulders are recommended.

iii. Shading of trees. A minimum of a (30 percent) shade cloth recommended.

iv. Duration of stockpiling. A minimum of three days is recommended to allow for root callusing. A maximum of two weeks without boxing or ditching stockpiled trees.

For extended stockpiling (longer than 2 weeks) specimens should be temporarily stored in tree box containers or within shallow earthen ditch(es), backfilled with native soils, and tamped down. Extended stockpiling (over 45 days) is not recommended.

v. Watering frequency. Depending on ambient day time temperatures, it is recommended that stockpiled trees should be watered one to two times per week.

d. Replanting:

i. Expected time frames for replanting.

ii. Proposed replanting location(s).

iii. Site/soil preparation. Including if soil or biological amendments will be utilized.

iv. Irrigation installation, use and maintenance.

v. Methods of stabilization. Staking or guying is recommended.

vi. Long term maintenance and monitoring. The Transplantation Plan should identify the party responsible for future care and maintenance of all relocated Joshua trees (see below).

5. Monitoring and Reporting:

    a. Oversight: A Desert Native Plant Specialist shall be on-site to oversee all phases of the plant salvage, stockpiling, maintenance and watering, and replanting.

    b. Reporting: Status reports shall be prepared following salvage and replanting activities, and as outlined in Section 13.0 of this Program.

    c. Long term mitigation monitoring requirements. An annual inspection and report for at four years is recommended (see below). Reports of all monitoring should be submitted to the County.

13.0 MAINTENANCE REQUIREMENTS

Upon completion of construction, and after final inspection and acceptance by the County, the following provisions shall be made, such that the trees preserved-in-place or transplanted within on-site common areas, in landscape easements, or landscape assessment districts are maintained in a healthy condition for a minimum of two growing seasons to ensure maximum long-term survivability.

13.1 Inspections and Reporting

1. An initial inspection of preserved-in-place or transplanted Joshua trees, or other regulated desert native plants shall be conducted by a Desert Native Plant Specialist, annually for at least four years after transplantation. The inspection shall include an assessment of the health and condition of all preserved-in-place and transplanted trees on-site. Transplanted trees that are determined to be dead or in severe decline shall be identified and mapped. Designated preserved-in-place trees that are determined to be damaged, dead, or in severe decline shall also be identified and mapped.

    A status report of each year's inspection shall be submitted to the County. The report shall include recommendations for any mitigation measures determined necessary to improve any sub-standard conditions identified during the evaluation, as warranted.

13.2 Transplantation Success Criteria

Transplantation shall be considered successful if, following four growing seasons, including two growing seasons with artificial irrigation supplied to the transplanted trees, and two additional growing seasons without irrigation, the transplanted trees and regulated desert native plants maintain a minimum of 80% survivability. This percentage shall be based on all

trees transplanted within each approved Tract Map (phase). If this rate of survival is not attained following these four growing seasons, additional nursery grown stock, or trees acquired from another un-related adoption program, shall be transplanted to designated transplantation areas, to replace dead or dying trees at a quantity to meet or exceed the required minimum rate of survivability.

It will be the responsibility of the applicant or its designated assignees to provide replacement vegetation as determined by the Desert Native Plant Specialist and approved by the County. This subsequent transplanting shall be at the expense of the development applicant or its assignees.

13.3 Security

The County shall require posting of a bond, or other appropriate security at the time of Final Map approval to assure maintenance of trees preserved-in-place or transplanted within on-site common areas, in landscape easements, or landscape assessment districts for a period of two years. If the project is otherwise required to post a bond for landscape maintenance requirements, this requirement shall be incorporated into the same bond.

13.4 Homeowner Education

The applicant or its designated assignees shall provide initial homeowners purchasing private residential lots containing preserved-in-place or transplanted Joshua trees or other regulated desert native plants with informational literature on the proper care of these trees and/or plants. This information may be provided within Department of Real Estate documentation or by the Homeowners Association.

14.0 ADOPTION PROGRAM

Development build-out of Hacienda at Fairview Valley is anticipated to occur during a 15-20 year time period following approval of the Specific Plan by the County. This construction forecast is largely dependent upon regional housing market conditions and therefore may occur in less or more time. The Specific Plan anticipates this build out, and therefore contains several overall project phases. These phases generally will be developed from the western portion of the project to the east. As a result, the anticipated land disturbance of the project area will occur in a phased manner generally from west to east.

It is the intent of the Specific Plan, to preserve and protect all Joshua trees and other regulated desert native plants to the maximum extent feasible, while balancing the region's need

for quality growth and the development rights of private property owners. To realize this intent, the County, in cooperation with property owners and applicants within the Specific Plan, shall establish and maintain a Joshua Tree Adoption Program for Joshua Trees that are approved for removal following the provisions of this Management Program.

This Adoption Program shall be a publicly available listing of locations where property owners have applied to disturb, move, remove or destroy existing Joshua trees. The Adoption Program shall include the name and contact information for the property owner, the address and/or assessor parcel number of the property containing the Joshua trees, the number of trees to be disturbed, moved, removed or destroyed, and the approximate size, physical characteristics, and physical condition of the available tree as of the date the tree was listed on the Adoption Program.

The project's development activities over time and in distinct phases will provide ample time to notice the surrounding community of the upcoming availability of impacted Joshua trees for adoption through the project's Adoption Program.

The Adoption Program may also include an annually updated list of names and contact information of individuals who have contacted the County and expressed a desire to receive transplantable Joshua trees.

To promote awareness of the availability and disposition of impacted Joshua trees within the project, the County shall send out legal public notice per County noticing requirement, including to the individuals on the Adoption Program list. The notice shall be sent a minimum of thirty (30) days prior to start of grading or other land disturbance that may cause tree disturbance to trees within the Adoption Program. The notice shall include reference to the Adoption Program and specifically state the deadline for adoption of noted trees. Any tree included in the Tree Removal Permit may be removed after the public has had the opportunity to transplant the available trees for a time period not less than the public noticing period.

No Joshua tree shall be approved for transplantation more than once within every 12 years. The Planning Commission may, at the time of discretionary review and granting of the Tree Removal Permit, approve the transplant to an interim location, for up to eighteen (18) months for storing Joshua trees to allow for the phased development of the project.

As a condition of approval for the Tree Removal Permit issued by the appropriate review authority, the applicant shall pay a Joshua Tree Adoption Program Fee. The fees will be collected by the County and held in a separate account specifically for the Adoption Program. The fees shall partially cover the cost of maintenance, monitoring, research and administration of the Adoption Program. Fees shall be paid equal to ten dollars ($10) for each existing healthy (as

defined by a Desert Native Plant Specialist) Joshua tree and other regulated desert native plants which will not be preserved-in-place or transplanted on-site; or will otherwise be permanently removed from the project site and placed into the Adoption Program.

15.0 ENFORCEMENT

No person(s), except as provided in this Management Program, shall commence with a land disturbance (e.g. clearing or grading) without first obtaining approval to ensure that said disturbance will not result in the unnecessary removal of any Joshua tree or other regulated desert native plants. Said approval may be in the form of a development permit or a Tree Removal Permit issued by the appropriate authority.

The provisions of San Bernardino County Development Code Chapter 88.01.050(i) (Enforcement) shall apply to this section.

16.0 PENALTIES

The provisions of San Bernardino County Development Code Chapter 88.01.050(j) (Penalties) shall apply to this section.

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