Appendix D Arborist Report – Bear Valley Parkway (March 2016)

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Arborist Report – Bear Valley Parkway, Escondido

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1 INTRODUCTION

This arborist report summarizes Dudek's field evaluation of trees within and adjacent to the proposed Bear Valley Parkway residential development project (project) site located in Escondido, California. Evaluated trees, including native oak trees, meeting the City of Escondido's definition of trees when measured at four-and-one-half feet (DBH) above the tree's natural grade as required by Chapter 33 (Zoning), Article 55 (Grading and Erosion Control) of the City of Escondido's Municipal Code (Ordinance 2001-21). Oaks measuring more than 4 inches in DBH and ornamental trees more than 8 inches in DBH were included in the evaluation. This report includes a discussion of tree evaluation methods, a summary of findings, identification of anticipated impacts, and tree impact mitigation recommendations consistent with the City of Escondido's Municipal Code (Ordinance 2001-21) and the tree removal permit process for the City of Escondido (City). The primary focus of Dudek's field evaluation was to evaluate trees located on the project site that are considered "protected" or "mature" based on the definition in the City's Municipal Code and that would be affected by the proposed development.

Dudek staff certified by the International Society of Arboriculture (ISA) as Certified Arborists completed the field evaluations on April 17, 2015. The survey area includes 182 protected trees and 307 "mature" trees, 110 of which would require removal for project-related improvements. Based on the City's Municipal Code (City of Escondido 2014) and the site's conditions of approval, a minimum of 195 replacement trees would be required to mitigate project-related tree impacts.

1.1 Site Description

The project site is located off Bear Valley Parkway at 661 Bear Valley Parkway near Zlatibor Ranch Road in Escondido, San Diego County, California (Figure 1). The property encompasses approximately 40.9 acres and is located on the U.S. Geological Survey 7.5-minute Escondido quadrangle map in Section 26, Township 12S, and Range 2W. The majority of the project site was once an avocado orchard, but the orchard was removed and now the site is considered disturbed habitat. There is one residence on site in the central portion of the property that is currently occupied. The remaining portions of the site are undeveloped. Southern coast live oak riparian forest and southern cactus scrub in the southern portion of the project site are the only areas that support native vegetation.

1.2 Project Description

The project would consist of a proposed subdivision of 40.9 acres into 55 residential lots, each containing a minimum of 10,000 square feet. In addition to the residential lots, the project proposes two private street lots, seven open space lots, and one recreation lot. Private open space would occupy 19.47 acres. A main recreation area would be constructed near the secondary

access point. Pedestrian linkages would be via non-curb-adjacent private streets where walkways would be separated from vehicle traffic by privately maintained parkways. This system would tie into the public Bear Valley Parkway sidewalk system.

The project would take access from Bear Valley Parkway at the intersection of Zlatibor Ranch Road and Bear Valley Parkway. A secondary, gated emergency ingress and egress would be provided on the east side of Bear Valley Parkway, northerly of the intersection of Bear Valley Parkway and Encino. The project would include frontage right-of-way dedication to complete a 51-foot-wide right-of-way from the center line of the existing Bear Valley Parkway right-of-way. In addition, the project would be obligated to construct frontage improvements along Bear Valley Parkway consisting of a curb, gutter, sidewalk, parkway, bike lane, and one full travel lane with transitions that would tie into existing improvements. A portion of these frontage improvement would be located off site of the subject property (Figure 2).

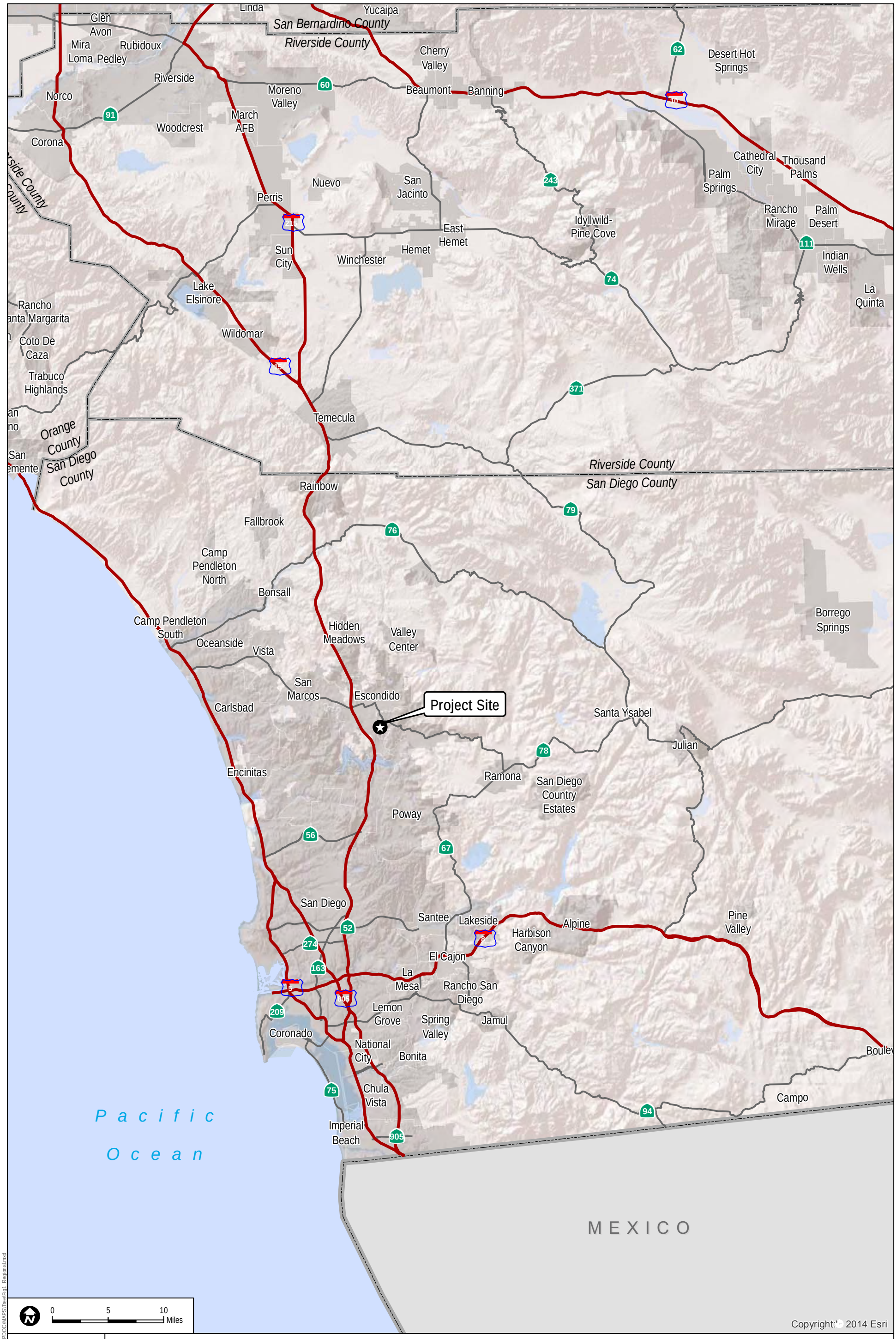

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FIGURE 1

Regional Map

Bear Valley Parkway Project - Arborist Report

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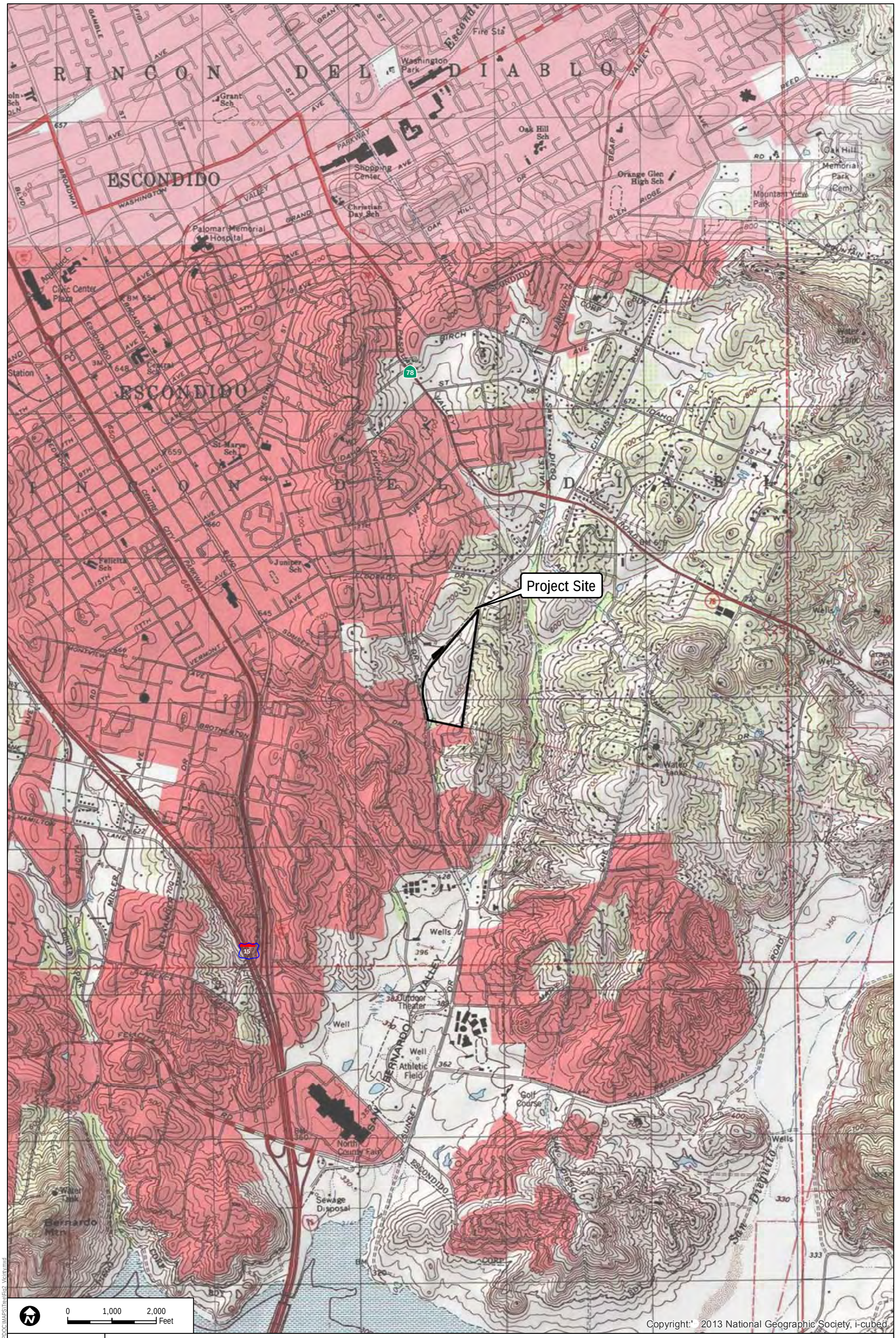

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SOURCE: USGS 7.5-Minute Series Escondido Quadrangle.

FIGURE 2

Vicinity Map

Bear Valley Parkway Project - Arborist Report

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2 METHODS

2.1 Individual Tree Evaluation

Consistent with Chapter 33 (Zoning), Article 55 (Grading and Erosion Control) of the City's Municipal Code (Ordinance 2001-21), this arborist report is based on information compiled through field reconnaissance and a review of appropriate site reference materials, including aerial photography, U.S. Geological Survey topographic maps, and digital ortho-quarter quadrangle data. Dudek ISA Certified Arborists conducted a tree survey on the project site on April 17, 2015.

The City's Municipal Code protects all "mature" trees, as defined in Section 33-1502. Mature trees, according to Section 33-1502, include all native oak trees larger than 4 inches DBH and ornamental trees larger than 8 inches DBH.

All trees meeting the City's definition of "mature" or "native" located on the project site were assessed, tagged, inventoried, mapped, and plotted on a tree location exhibit (Appendix A). A representative sample of trees was photographed (Appendix B) to document their current conditions. All inventoried trees were tagged with an aluminum tag bearing a unique identification number. Tree tags were placed on the trunk of each inventoried tree. These numbers correspond to the tree locations presented in Appendix A and the tree data matrix in Appendix C.

Concurrent with tree mapping efforts, Dudek arborists collected tree attribute data, including species, quantity of individual trunks, individual trunk diameters, overall height, canopy extent, and general health and structural conditions. Diameter measurements were collected using the standard protocol outlined by the Council of Tree and Landscape Appraisers in the Guide for Plant Appraisal (ISA 2000). Trunk diameter measurements were collected at 4.5 feet (54 inches) above the ground along the trunk axis, with one common exception. In cases where a tree's trunk was located on a slope, the 4.5-foot distance was approximated as the average of the shortest and longest sides of the trunk (i.e., the uphill side and downhill side of a tree's trunk, respectively), and the measurement was made at the circumference of the trunk at that point. Tree height measurements were ocular estimates made by experienced field arborists. Tree canopy diameters were typically estimated by "pacing-off" the measurement based on the investigator's knowledge of his/her stride length or by visually estimating the canopy width. The tree crown diameter measurements were made along an imaginary line intersecting the tree trunk that best approximated the average canopy diameter.

Pursuant to the Guide for Plant Appraisal (ISA 2000), tree health and structure were evaluated based on five tree components: roots, trunk(s), scaffold branches, small branches, and foliage.

Each component of the tree was assessed for health factors such as insect, fungal, or pathogen damage; fire damage; mechanical damage; presence of decay; presence of wilted or dead leaves; and wound closure. Components were graded as good, fair, poor, or dead, with "good" representing no apparent problems, and "dead" representing a dying and/or dead tree. This method of tree condition rating is comprehensive and results in ratings that are useful for determining the status of trees based on common standards. Trees in natural settings have important habitat value, as evidenced by numerous cavity nesters and insects that thrive on and within oak trees, even when they are considered in poor structural or health condition. This assessment focused on tree condition relating to health and structure to analyze potential project impacts, and, where necessary, to provide recommendations for mitigating potential tree hazards such as trees with weak limb attachments, cavities and rot, or excessive lean.

Upon completion of field data collection and mapping, raw global positioning system (GPS) data was post-processed using GPS Pathfinder Office (v 5.40), and individual tree location data were compiled and updated in geographic information systems (GIS) software. The digital tree locations were linked to individual tree identification numbers and associated tree attribute data. This data set was then evaluated using ArcGIS (v. 10.1) software to determine the position of individual trees relative to the proposed project development areas. Data resulting from this analysis were used to determine individual tree impact totals.

2.2 Scope of Work Limitations

No root crown excavations or investigations, aerial evaluations, or internal probing was performed during the tree assessment. Therefore, the presence or absence of internal decay or other hidden inferiorities in individual trees could not be confirmed. It is recommended that any large tree proposed for preservation in an area that receives human use be thoroughly inspected for internal or subterranean decay by a qualified ISA Certified Arborist before finalizing preservation plans. Because the development site will be graded and all trees removed in the direct vicinity of the residences, we do not anticipate the need for extensive tree studies. There are large trees within the riparian zone to the south of the site that will be retained. These trees are in locations that are natural and would not be typically provided extensive internal or aerial evaluations unless they would be heavily used by humans. That is not anticipated to be the case for this project.

3 OBSERVATIONS

3.1 Individual Trees

There are 489 trees representing 14 different species located within the project tree survey area that meet the City's criteria as a "mature" tree. As Table 1 indicates, most of the inventoried trees are not native to California: tree of heaven (*Ailanthus altissima*), red gum eucalyptus (*Eucalyptus camaldulensis*), common fig (*Ficus carica*), Arizona ash (*Fraxinus velutina*), jacaranda (*Jacaranda mimisifolia*), Chinese flame tree (*Koelreuteria bipinnata*), crape myrtle (*Lagertroemia indica*), Chinaberry (*Melia azedarach*), Canary Island date palm (*Phoenix canariensis*), red willow (*Salix laevigata*), Peruvian pepper (*Schinus molle*), Brazilian pepper (*Schinus terebinthifolius*), and Mexican fan palm (*Washingtonia robusta*). Mature and protected native trees found on site consist of coast live oak (*Quercus agrifolia*). Table 1 provides a summary of the 14 species mapped and evaluated within the tree survey area. The Tree Location Exhibit in Appendix A presents the location of the individual trees mapped and assessed for the project.

Overall, the trees exhibit growth and structural conditions that are typical of their locations as both landscape and natural trees. The trees include various trunk and branch maladies, as well as varying health and structural conditions. As presented in the Tree Information Matrix in Appendix C, most of the individually mapped trees, 85.89% (420 trees), exhibit fair health condition; 7.16% (35 trees) are in good health condition; and 6.95% (34 trees) are in poor health. Dead trees were not evaluated during the tree inventory. Structurally, 2.04% (10 trees) of the individually mapped trees are considered to exhibit good structure, 93.05 % (455 trees) exhibit fair structure, and 4.9% (24 trees) exhibit poor structure. Good condition trees exhibit acceptable vigor, healthy foliage, and adequate structure, and lack of any major maladies. Fair condition trees are typical, with few maladies but declining vigor. Poor condition trees exhibit declining vigor, unhealthy foliage, poor branch structure, and/or excessive lean.

Table 1
Summary of Trees at Project Site

Scientific Name	Common Name	Number of Trees
Ailanthus altissima	Tree of heaven	1
Eucalyptus camaldulensis	Red gum eucalyptus	2
Ficus carica	Common fig	1
Fraxinus velutina	Arizona ash	2
Jacaranda mimisifolia	Jacaranda	2
Koelreuteria bipinnata	Chinese flame tree	2
Lagertroemia indica	Crape myrtle	3
Melia azedarach	Chinaberry	4

Table 1
Summary of Trees at Project Site

Scientific Name	Common Name	Number of Trees
Phoenix canariensis	Canary Island date palm	27
Quercus agrifolia	Coast live oak	327
Salix laevigata	Red willow	23
Schinus molle	Peruvian pepper	2
Schinus terebinthifolius	Brazilian pepper	13
Washingtonia robusta	Mexican fan palm	80
	Total	**489**

Trees within the tree survey area vary in size and stature according to species and available growing space. The coast live oak trees on site are primarily single-stemmed with trunk diameters ranging from 4 to 43 inches dbh. Multi-stemmed oak trees with two to five stems have diameters of up to 34 inches dbh. Single- and multi-stemmed ornamental landscape tree species have combined trunk diameters between 4 and 56 inches dbh. Tree heights vary from 3 to 75 feet. The immature Mexican fan palms found on site are the smallest trees. Taller trees (40-plus feet) are represented primarily by red gum eucalyptus, coast live oak, Peruvian pepper, red willow, Canary Island palm, Chinese flame tree, Arizona ash, and Mexican fan palm. Tree canopy extents range from 1 foot to nearly 60 feet. Nearly 45% of the trees on site exhibit canopy spreads that are greater than 20 feet across at their widest points.

4 POTENTIAL TREE IMPACTS

4.1 Regulatory Definitions and Requirements

The following section summarizes the relevant policies regulating tree impact and removal associated with the project.

4.1.1 City of Escondido

Tree protection, removal, and replacement standards are included in the City's General Plan (City of Escondido 2012) and in Chapter 33 (Zoning), Article 55 (Grading and Erosion Control) of the City's Municipal Code (Ordinance 2001-21). The Escondido General Plan recognizes oak trees and other mature trees, as defined below, as significant aesthetic and ecological resources deserving protection within the boundaries of the City. Sections 33-1502 and 33-1068 of the City's Municipal Code set forth rules and standards related to mature tree removal, protection, and replacement.

Section 33-1502 (Definitions)

1. A ***mature tree*** is any self-supporting woody perennial plant, native or ornamental, with a single well-defined stem or multiple stems supporting a crown of branches.
   a. The single stem, or one of multiple stems, of any oak tree (*Quercus* species) shall have a DBH of 4 inches or greater.
   b. All other mature trees shall have a DBH of 8 inches, or greater, for a single stem or one of the multiple stems.
2. A ***protected tree*** is any oak (*Quercus* species) that has a ten-inch or greater DBH, or any other tree species or individual specimen listed on the historic register, or determined to substantially contribute to the historic character of a property or structure listed on the local historic register, pursuant to Article 40 of the Escondido Zoning Code.

Section 33-1068 (Vegetation Clearing and Protection)

The purpose of Section 33-1068 is to establish regulations and standards for the preservation, protection, and selected removal of mature and protected trees. A vegetation removal permit is required prior to clearing, pruning, or destroying vegetation, and prior to any encroachments by construction activities that disturb the root system within the dripline[1] of mature trees. Issuance

[1] The dripline is the area directly under the outer circumference of the tree branches. This is where the feeder roots are located that take up water and nutrients for the tree.

of a vegetation removal permit requires the submittal of a tree survey and a tree replacement and/or protection plan.

Section 33-1069 (Vegetation Protection and Replacement)

Pursuant to Section 33-1069, every feasible effort and measure to avoid damage to existing trees to remain on site must be taken by the owner and developer during clearing, grading, and construction activities. If mature trees cannot be preserved on site, they must be replaced at a minimum ratio of 1:1. Protected oak trees must be replaced at a minimum ratio of 2:1. However, the number, size, and species of replacement trees can be determined on a case-by-case basis by the City's Director of Planning and Building.

4.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 requires tree removal and potentially disturbing construction activities to occur during certain months to avoid harassment of nesting birds. According to this act, no construction or other disturbing activities can occur within 500 feet of an active bird nest from January through June each year. Biological surveys are typically required to provide clearance for project initiation.

4.2 Impacts

Tree impacts were determined through use of GIS technology to determine the locations of trees relative to the project impact areas (limits of grading). Impacts were further determined based on Dudek arborists' experience with native and non-native trees, and the typical reactions of trees to disturbances such as soil compaction, excavation, and remedial grading. The impact analysis results presented herein were used for developing appropriate mitigation measures for the project.

Impacts to trees can be classified as either direct or indirect. Direct impacts to trees related to site improvements are typically the result of physical injuries or changes caused by construction machinery. Direct impacts include tree removal, root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds, among others. Indirect impacts to trees are the result of changes to the site that may cause tree decline, even when the tree is not directly injured. Indirect impacts include alterations to stream flow rates, diversion of groundwater flow, introduction of exotic plant species, and alterations to disturbance regimes. Wider-scale alterations to the area near trees and specific changes that occur around the trees are important considerations.

In general, there is a great deal of variation in tolerance to construction impacts among tree species, ages, and conditions. It is important to know how a certain tree, based on its species, age, and condition, will respond to different types of disturbance. The trees in the proposed project area are of varying ages and conditions. Mature specimens are typically more sensitive to

root disturbance and grade changes. In general, healthy trees will respond better to changes in their growing environment. Trees of poor health or stressed conditions may not be vigorous enough to cope with direct or indirect impacts from construction activities.

Impacts totals presented herein are based on conceptual disturbance limits and development plans as of the date of this Arborist Report. As such, the actual number of trees that are subject to direct and indirect impacts may change as the detailed site planning process proceeds.

4.2.1 Project Direct Tree Impacts

For the purposes of this report, direct impacts are those associated with tree removal or encroachment within the dripline. Tree removal is expected to be required when the trunk is located inside or within 2 feet of the proposed limits of grading. Encroachment is expected when soil and roots are disturbed within the tree protected zone (canopy drip line plus 5 feet or 15 feet from trunk, whichever is greater). Table 2 summarizes the total number of trees by species that are expected to be subject to direct construction-related impacts. The locations of impacted trees, by impact type, are presented in the map in Appendix D. Measures to minimize the extent of impact to preserved trees are provided in Appendix E.

Table 2
Summary of All Direct Tree Impacts – Bear Valley Parkway, Escondido

Scientific Name	Common Name	Removal	Encroachment
Ailanthus altissima	Tree of heaven	1	0
Eucalyptus camaldulensis	Red gum	2	0
Jacaranda mimisifolia	Jacaranda	2	0
Koelreuteria bipinnata	Chinese flame tree	1	1
Lagerstroemia indica	Crape myrtle	3	0
Melia azedarach	Chinaberry	4	0
Phoenix canariense	Canary Island date palm	1	1
Quercus agrifolia	Coast live oak	60 (32)*	32 (14)*
Salix laevigata	Red willow	1	0
Schinus molle	Peruvian pepper	0	1
Schinus terebinthifolious	Brazilian pepper	13	0
Washingtonia robusta	Mexican fan palm	22	4
	Totals	**110 (32)***	**39 (14)***

* Number in parenthesis represents the quantity of removals that meet the City's criteria of a "protected tree" and is included in the totals.

4.2.1.1 Tree Impact Summary

Based on proposed project development plans (including road and walkway improvements), it is estimated that 110 (22.5%) mature trees will require removal, 39 (7.9%) will experience

encroachment into the tree protected zone, 81 (16.6%) will be indirectly impacted, and 259 (53.0%) will be preserved in place with no direct impacts. Of the 110 trees identified for removal, 32 meet the criteria for classification as a protected tree, as defined by the City. Of the 39 encroached upon trees, 14 meet size criteria to be classified as protected trees.

Of the 60 trees identified for removal in the Bear Valley Parkway road and walkway improvements (on-site impacts excluded), 29 meet the criteria for classification as a protected tree, as defined by the City. Of the 28 encroached upon trees, 14 meet size criteria to be classified as protected trees. Table 3 presents only the number of trees expected to be directly impacted by the Bear Valley Parkway road and walkway improvements.

Table 3
Summary of Direct Tree Impacts from Bear Valley Parkway Road and Walkway Improvements

Scientific Name	Common Name	Removal	Encroachment
Koelreuteria bipinnata	Chinese flame tree	1	1
Phoenix canariensis	Canary Island palm	0	1
Quercus agrifolia	Coast live oak	55 (29)	22 (14)
Salix laevigata	Red willow	1	0
Washingtonia robusta	Mexican fan palm	3	4
Totals		**60 (29)***	**28 (14)***

* Number in parenthesis represents the quantity of removals that meet the City's criteria of a "protected tree" and is included in the cell total.

4.2.2 Indirect Tree Impacts

Indirect impacts to trees are the result of changes to the site that may cause tree decline, even when the tree is not directly injured. Site-wide changes affecting trees include diverting runoff and stormwater, creating retention and detention ponds, relocating streams or making improvements to streams, lowering or raising water tables, altering the capacity for soil moisture recharge, removing vegetation, and damming underground water flow (Matheny and Clark 1998). For the purposes of this report, indirect tree impacts are expected for trees within 25 feet of the project's limits of grading and not subject to removal or encroachment. Trees located in fuel modification zones are also typically considered indirectly impacted; however, no trees are located in proposed fuel modification zones that would not be otherwise impacted (removal or encroachment).

Other potential indirect impacts may include firewood harvesting, vandalism, and deliberate or accidental wildfire ignition in oak-willow woodland drainage areas. These potential indirect impacts are not typically considered significant and can be minimized by implementing woodland management and protection measures, including educational material provided to

homeowners and long-term management of oak-willow-dominated habitat on the site. For this project, the educational materials along with on-going management and maintenance that will be provided to this biological area are considered adequate to reduce the potential indirect impacts to less than significant.

Table 4 presents the number of trees expected to be indirectly impacted by the proposed project on site and road and walkway improvements. If any encroached-upon trees fail during the 5-year monitoring period, it will be replaced at City replacement ratios.

Table 4
Summary of Indirect Tree Impacts – Bear Valley Parkway, Escondido

Scientific Name	Common Name	Indirect Impacts
Phoenix canariensis	Canary Island palm	5
Quercus agrifolia	Coast live oak	52 (14)*
Salix laevigata	Red willow	4
Washingtonia robusta	Mexican fan palm	20
	Total	**81**

* Number in parenthesis represents the quantity of removals that meet the City's criteria of a "protected tree" and is included in the cell total.

4.2.3 Total Project Tree Impacts

For comparison, Table 5 summarizes the total number of trees, by species, that are expected to be subject to direct construction-related impacts, encroachments, and indirect impacts. Based on the proposed project and Bear Valley Parkway road and walkway improvements, it is estimated that 110 trees would require removal and an additional 39 trees would be preserved in place with protections, but encroached upon. In addition, it is estimated that 81 trees could be indirectly impacted by the proposed project. The locations of impacted trees, by impact type, for the proposed improvements, are presented in the map in Appendix D. Measures to minimize the extent of impacts to preserved trees are provided in Appendix E.

Table 5
Summary of All Direct Tree Impacts – Bear Valley Creek, Escondido

Scientific Name	Common Name	Removal	Encroachment	Indirect Impacts
Ailanthus altissima	Tree of heaven	1	0	0
Eucalyptus camaldulensis	Red gum	2	0	0
Jacaranda mimisifolia	Jacaranda	2	0	0
Koelreuteria bipinnata	Chinese flame tree	1	1	0
Lagerstroemia indica	Crape myrtle	3	0	0
Melia azedarach	Chinaberry	4	0	0
Phoenix canariense	Canary Island date palm	1	1	5
Quercus agrifolia	Coast live oak	60 (32)*	32 (14)*	52 (14)*

Table 5
Summary of All Direct Tree Impacts – Bear Valley Creek, Escondido

Scientific Name	Common Name	Removal	Encroachment	Indirect Impacts
Salix laevigata	Red willow	1	0	4
Schinus molle	Peruvian pepper	0	1	0
Schinus terebinthifolious	Brazilian pepper	13	0	0
Washingtonia robusta	Mexican fan palm	22	4	20
	Totals	**110 (32)***	**39 (14)***	**81 (14)***

* Number in parenthesis represents the quantity of removals that meet the City's criteria of a "protected tree" and is included in the cell total.

5 MITIGATION

Section 33-1069 of the City's Municipal Code identifies tree replacement standards for projects affecting mature and/or protected trees. Minimum mitigation planting requirements for removal and encroachment on 103 mature trees (1:1 replacement ratio) and 46 protected trees (2:1 replacement ratio) is 195 trees (138 coast live oaks and 57 other suitable native or ornamental species).

The proposed project's tree mitigation program focuses on preservation (the project will preserve more than 69.6% of the trees on site), restoration and enhancement of preserved oak trees/stands through sustainable tree plantings, and native tree planting in the transition area between open space and developed areas throughout the proposed project site.

5.1 Proposed Mitigation Program

The proposed mitigation program was designed to provide mitigation for direct impacts to 103 mature trees and 46 protected trees associated with the Bear Valley Parkway Project. The goal of the proposed mitigation program is to offset tree impacts through a sustainable, customized plan that is suitable for the site's unique opportunities for oak tree preservation, enhancement, and establishment. Dudek recommends that the tree mitigation program focus on the inclusion of native and ornamental trees (e.g., larger container sizes (15-gallon), deep tree pots, "D40" pots, 24-inch boxes) within project landscape areas. Tree species recommended for individual mitigation include coast live oak, blue elderberry (*Sambucus mexicana*), western redbud (*Cercis occidentalis*), desert museum palo verde (*Cercidium* "desert museum"), flowering pear (*Pyrus calleryana* "Chanticleer"), and New Zealand Christmas tree (*Metrosideros excels*). Use of a variety of species will result in a more robust tree population that is less susceptible to pests and disease that typically are host-species-specific.

5.2 Mitigation Details

As indicated in Table 6, the total number of plantings required to meet the intent of the City's tree protection and replacement requirements is 195 trees. Therefore, the mitigation program proposes that a minimum of 195 trees (including coast live oak and other suitable native or ornamental species) are planted within the development landscape areas, as presented in the Landscape Concept Plan (Appendix F). Table 7 provides recommended replacement species and totals for the 149 individually impacted trees. The 773 landscape trees provide mitigation for the 149 individual tree impacts from the site at a ratio of 5.2:1. The 5.2:1 mitigation ratio exceeds the minimum required City replacement ratio of 2:1. Many of the trees being removed are either invasive species, fire hazards, or undesirable for their performance and/or susceptibility to pests. Therefore, Table 6 provides a list of species that are not invasives, are acceptable by fire agencies, and that are anticipated to perform well in the community's landscape.

Table 6
Landscape Tree Replacement Calculation

Trees Impacted				
Tree Type	*Grading Related*	*Replacement Ratio*	*Replacement Species*	*Total Number Replacement Trees*
Ailanthus altisima	1	1:1	Ornamental	1
Eucalyptus camaldulensis	2	1:1	Ornamental	2
Jacaranda mimisifolia	2	1:1	Ornamental	2
Koelreuteria bipinnata	2	1:1	Ornamental	2
Lagerstroemia indica	3	1:1	Ornamental	3
Melia azedarach	4	1:1	Ornamental	4
Phoenix canariensis	2	1:1	Ornamental	2
Quercus agrifolia	92	1:1 and 2:1	*Quercus agrifolia*	138
Salix laevigata	1	1:1	*Sambucus mexicana*	1
Schinus molle	1	1:1	Ornamental	1
Schinus terebinthifolius	13	1:1	Ornamental	13
Washingtonia robusta	26	1:1 and 2:1	Ornamental	26
Minimum Required Escondido Mitigation Tree Plantings				**195**

Table 7
Recommended Landscape Planting Quantities

Trees Impacted			
Tree Type	*Common Name*	*Size*	*Replacement Quantity*
Cercidium (desert museum)	Desert museum palo verde	15 gallons	4
Cercis occidentalis	Western redbud	15 gallons	147
Metrosideros excels	New Zealand Christmas tree	24-inch box	197
Pyrus calleryana (Chanticleer)	Flowering pear	24-inch box	57
Sambucus mexicana	Blue elderberry	15 gallons	144
Quercus agrifolia	Coast live oak	24-inch box	224
Minimum Proposed Landscape Plantings			**773**

* Replacement species will be a combination of native oak and elderberry in the riparian areas, and native oak and other landscape trees within the urbanized areas of the project site.

5.3 Mitigation Discussion

The total number of mitigation trees proposed (773 trees) for anticipated tree impacts is considered more than appropriate, and results in a minimum of 5.2:1 replacement, which is higher than the 1:1 and 2:1 replacement ratios as required by the City. Therefore, no additional mitigation is recommended. Note that the potentially indirectly impacted trees are considered to be impacted at levels that are less than significant with the inclusion of community riparian woodland educational materials and ongoing management of the area as a biological open space.

Tree Relocation

Relocation of impacted trees was analyzed during the tree assessment, and a single tree is considered a "candidate." However, tree relocation is not a requirement of the City. As the landscape plan is finalized, if the individual candidate tree can be relocated, it will be evaluated further. Tree relocation is a stressful process for native oaks, and unless they are superior specimens, it is preferable to purchase large, nursery-grown trees as a replacement.

5.4 Tree Removal Permit

Consistent with Section 33-1068 of the City's Municipal Code (City of Escondido 2014), a vegetation removal permit is required prior to clearing, pruning, or destroying vegetation, and prior to any encroachments by construction activities that disturb the root system within the dripline of mature trees.

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6 CONCLUSIONS

Dudek inventoried and evaluated 489 mature and protected trees within the Bear Valley Parkway residential redevelopment project site. A total of 149 trees would be impacted by the proposed project. Tree impacts associated with the project would be mitigated through replacement tree planting, as defined in the City's General Plan and in Chapter 33 (Zoning), Article 55 (Grading and Erosion Control) of the City's Municipal Code (Ordinance 2001-21) and in the Conditions of Approval for Sub 13-0003, Sub 13-0010, Sub 13-0011, and Tract 889. In total, 195 trees should be planted to mitigate for project-related impacts. Planting locations, types, and maintenance must be consistent with the Conditions of Approval for Sub 13-0003, Sub 13-0010, Sub 13-0011, and Tract 889. The recommended tree mitigation/replacement meets the minimum requirements of the City's Tree Protection Ordinance (City of Escondido 2014).

Arborist's Statement

This report provides conclusions and recommendations based on an examination of the trees and surrounding site by ISA Certified Arborists. Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees.

No root crown excavations or investigations or internal probing was performed during the tree assessments. Therefore, the presence or absence of internal decay or other hidden inferiorities in individual trees could not be confirmed. It is recommended that any large tree proposed for preservation in an area that receives human use be thoroughly inspected for internal or subterranean decay by a qualified arborist before finalizing preservation plans.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms that fail in ways not fully understood. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for a specified period. There are no guarantees that a tree's condition will not change over a short or long period due to weather or cultural or environmental conditions. Trees can be managed but not controlled.

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7 REFERENCES

City of Escondido. 2012. City of Escondido General Plan. May 2012. http://www.escondido.org/general-plan.aspx.

City of Escondido. 2014. Escondido Municipal Code. http://www.qcode.us/codes/escondido/.

ISA (International Society of Arboriculture). 2000. *Guide for Plant Appraisal* (9th Edition).

Matheny and Clark. 1998. Trees and Development. A Technical Guide to Preservation of Trees During Land Development. ISBN: 1-881956-20-2. International Society of Arboriculture, Champaign, Illinois. www.isa-arbor.com 183.

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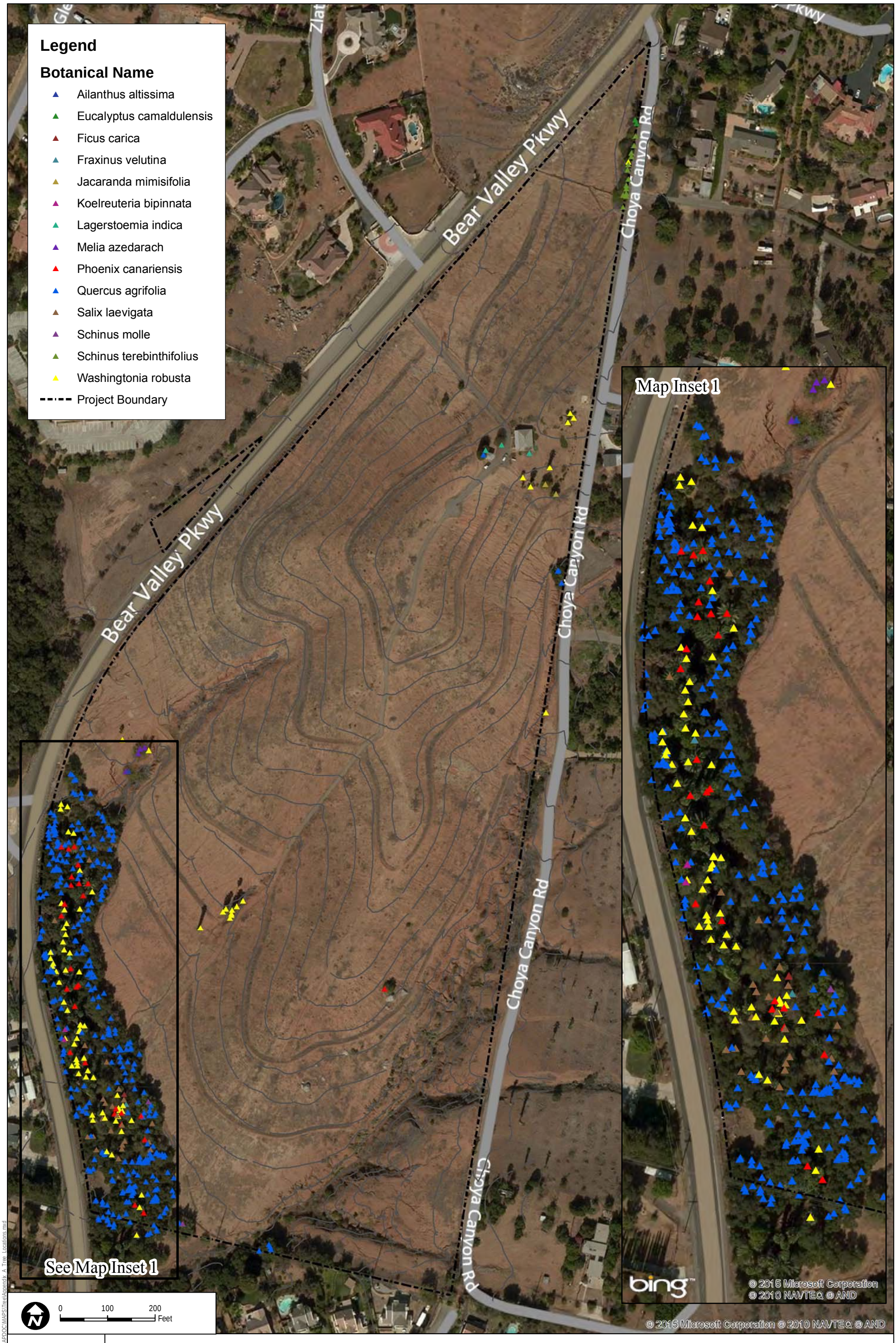
APPENDIX A

Tree Location Exhibit



DUDEK

7833

September 2015

SOURCE: World Imagery, SANGIS

Appendix A

Tree Locations

Bear Valley Parkway Project - Arborist Report

Path: Z:\Projects\7833\MAPDOC\MAPS\Tree\Appendix_A_Tree_Locations.mxd

APPENDIX B

Photograph Log

Photograph Log

Arborist Report – Bear Valley Project

Photograph 1: View of riparian woodland

Photograph 2: View of riparian woodland

Photograph 3: View of riparian woodland

Photograph 4: View of open ground and Mexican fan palms

Photograph 5: View of riparian oak woodland and open ground

Photograph 6: View of riparian oak woodland and open ground

Photograph 7: View of riparian oak woodland

Photograph 8: View of riparian oak woodland

Photograph 9: View of riparian woodland and surrounding open ground

Photograph 10: View of coast live oak and buildings

Photograph 11: View of riparian oak woodland

Photograph 12: View of riparian oak woodland

APPENDIX C

Tree Data Matrix

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
1	*Eucalyptus camaldulensis*	Red gum eucalyptus	1	13	13					50	20	Fair	Poor		Remove - Grading	1		6315084.04	1981608.96
2	*Eucalyptus camaldulensis*	Red gum eucalyptus	2	11.4018	11	3				30	20	Fair	Poor		Remove - Grading	1		6315086.96	1981601.22
3	*Schinus terebinthifolius*	Brazillian pepper	5	5.19615	1	2	3	3	2	10	16	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315084.58	1981575.56
4	*Schinus terebinthifolius*	Brazillian pepper	5	7.87401	6	2	3	3	2	10	16	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315081.62	1981555.47
5	*Schinus terebinthifolius*	Brazillian pepper	2	8.48528	6	6				12	16	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315076.03	1981540.07
6	*Schinus terebinthifolius*	Brazillian pepper	5	6.32456	3	3	3	2	3	12	16	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315075.76	1981532.11
7	*Washingtonia robusta*	Mexican fan palm	1	16	16					40	12	Fair	Fair		Remove - Grading	1		6315069.55	1981520.75
8	*Schinus terebinthifolius*	Brazillian pepper	5	6.08276	4	3	2	2	2	13	12	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315069.78	1981514.88
9	*Schinus terebinthifolius*	Brazillian pepper	2	7.2111	6	4				13	12	Poor	Poor		Remove - Grading	1	Multi-stemmed	6315067.82	1981503.89
10	*Schinus terebinthifolius*	Brazillian pepper	5	4.47214	2	2	2	2	2	13	12	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315069.57	1981484.48
11	*Schinus terebinthifolius*	Brazillian pepper	5	5.91608	3	3	3	2	2	13	12	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315065.21	1981471.39
12	*Schinus terebinthifolius*	Brazillian pepper	5	6.85565	4	3	3	3	2	14	16	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315065.44	1981465.15
13	*Schinus terebinthifolius*	Brazillian pepper	5	6.85565	4	3	3	3	2	14	16	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315065.11	1981454.38
14	*Schinus terebinthifolius*	Brazillian pepper	5	6.85565	4	3	3	3	2	14	16	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315058.41	1981451.2
15	*Schinus terebinthifolius*	Brazillian pepper	5	6.85565	4	3	3	3	2	14	16	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315064.46	1981449.83
16	*Schinus terebinthifolius*	Brazillian pepper	5	6.85565	4	3	3	3	2	12	14	Fair	Fair		Remove - Grading	1	Multi-stemmed	6315058.64	1981425.33
17	*Washingtonia robusta*	Mexican fan palm	1	13	13					10	10	Fair	Fair		Remove - Grading	1		6314946.7	1980990.92
18	*Washingtonia robusta*	Mexican fan palm	1	13	13					10	10	Fair	Fair		Remove - Grading	1		6314954.25	1980980.72
19	*Washingtonia robusta*	Mexican fan palm	1	13	13					12	10	Fair	Fair		Remove - Grading	1		6314941.85	1980971.73
20	*Washingtonia robusta*	Mexican fan palm	1	17	17					35	10	Fair	Fair		Remove - Grading	1		6314904.21	1980876.49
21	*Jacaranda mimisifolia*	Jacaranda	4	10.3923	9	3	3	3		18	15	Fair	Fair		Remove - Grading	1		6314916.8	1980820.43
22	*Jacaranda mimisifolia*	Jacaranda	1	8.2	8.2					18	15	Fair	Fair		Remove - Grading	1		6314894.41	1980840.89
23	*Washingtonia robusta*	Mexican fan palm	1	15	15					30	10	Fair	Fair		Remove - Grading	1		6314863.52	1980835.92
24	*Washingtonia robusta*	Mexican fan palm	1	16	16					8	9	Fair	Fair		Remove - Grading	1		6314847.1	1980854.8
25	*Lagerstoemia indica*	Lagerstoemia indica	3	7.07107	4	3	5			16	14	Fair	Fair		Remove - Grading	1		6314861.09	1980907.59
26	*Lagerstoemia indica*	Lagerstoemia indica	5	9.43398	4	5	4	4	4	16	16	Good	Fair		Remove - Grading	1		6314802.61	1980924.61
27	*Lagerstoemia indica*	Lagerstoemia indica	5	9.43398	4	5	4	4	4	16	16	Good	Fair		Remove - Grading	1		6314768.82	1980913.29
28	*Quercus agrifolia*	Coast live oak	1	14	14					24	20	Good	Fair	Yes	Remove - Grading	2	Relocation candidate	6314764.59	1980904.36
29	*Quercus agrifolia*	Coast live oak	1	6	6					9	8	Fair	Poor		Remove - Grading	1		6314920.59	1980657.95
30	*Quercus agrifolia*	Coast live oak	1	25.8	25.8					20	33	Good	Fair	Yes	Remove - Grading	2		6314922.76	1980659.09
31	*Quercus agrifolia*	Coast live oak	2	10.6301	8	7				18	16	Good	Fair	Yes	Remove - Grading	2		6314928.57	1980633.18
32	*Washingtonia robusta*	Mexican fan palm	1	8	8					7	8	Good	Fair		Remove - Grading	2		6314896.08	1980359.47
33	*Phoenix canariensis*	Canary island date palm	1	36	36					4	20	Good	Fair		Remove - Grading	2		6314555.32	1979776.07
34	*Washingtonia robusta*	Mexican fan palm	1	12	12					10	10	Good	Good		Remove - Grading	2		6314256.98	1979962.48
35	*Washingtonia robusta*	Mexican fan palm	1	12	12					20	12	Good	Good		Remove - Grading	2		6314243.72	1979951.31
36	*Washingtonia robusta*	Mexican fan palm	1	19	19					40	12	Good	Good		Remove - Grading	1		6314234.14	1979943.54
37	*Washingtonia robusta*	Mexican fan palm	1	19	19					25	12	Good	Good		Remove - Grading	2		6314232.88	1979936.58
38	*Washingtonia robusta*	Mexican fan palm	1	10	10					23	12	Good	Good		Remove - Grading	1		6314232.89	1979933.1
39	*Washingtonia robusta*	Mexican fan palm	1	12	12					23	12	Good	Good		Remove - Grading	2		6314229.46	1979926.69
40	*Washingtonia robusta*	Mexican fan palm	1	12	12					23	12	Good	Good		Remove - Grading	2		6314220.63	1979946.47
41	*Washingtonia robusta*	Mexican fan palm	1	12	12					23	12	Good	Good		Remove - Grading	2		6314214.85	1979940.28

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
42	*Washingtonia robusta*	Mexican fan palm	1	12	12					28	12	Good	Good		Remove - Grading	1		6314166.95	1979905.99
43	*Washingtonia robusta*	Mexican fan palm	1	9	9					30	12	Good	Good		Remove - Grading	2		6314057.88	1980280.53
44	*Melia azedarach*	Chinaberry	3	14.0712	9	9	6			30	30	Good	Fair		Remove - Grading	1		6314049.92	1980286.25
45	*Melia azedarach*	Chinaberry	4	10.0995	5	5	6	4		30	30	Good	Fair		Remove - Grading	1		6314040.25	1980283.19
46	*Melia azedarach*	Chinaberry	5	15	10	8	6	4	3	18	30	Good	Fair		Remove - Grading	1		6314036.24	1980274.35
48	*Melia azedarach*	Chinaberry	2	10.3923	6	6			6	18	30	Good	Fair		Remove - Grading	1		6314009.83	1980235.99
49	*Quercus agrifolia*	Coast live oak	1	10	10					12	18	Fair	Fair		Indirect - BVP	N/A		6313935.03	1980188.6
50	*Quercus agrifolia*	Coast live oak	1	10	10					28	20	Fair	Fair		Indirect - BVP	N/A		6313917.12	1980179.23
51	*Quercus agrifolia*	Coast live oak	1	10	10					28	20	Fair	Fair		Indirect - BVP	N/A		6313904.8	1980186.59
52	*Quercus agrifolia*	Coast live oak	1	10	10					28	20	Fair	Fair		Indirect - BVP	N/A		6313916.23	1980189.06
53	*Quercus agrifolia*	Coast live oak	2	7.61577	7	3				30	15	Fair	Fair		Indirect - BVP	N/A		6313899.16	1980191.08
55	*Quercus agrifolia*	Coast live oak	2	14.1421	10	10				20	30	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313900.97	1980216.54
54	*Quercus agrifolia*	Coast live oak	2	5.65685	4	4				6	12	Fair	Fair		Indirect - BVP	N/A		6313904.86	1980217.76
56	*Quercus agrifolia*	Coast live oak	4	16.8819	12	10	4	5		25	30	Fair	Fair		Remove - Bear Valley Parkway	1		6313897.52	1980228.89
57	*Quercus agrifolia*	Coast live oak	3	14.4568	8	8	9			30	30	Fair	Fair		Remove - Bear Valley Parkway	1		6313893.28	1980230.99
47	*Ailanthus altissima*	Tree of heaven	4	5.56776	3	3	3	2		16	16	Poor	Fair		Remove - Grading	1		6314015.47	1980236.91
48	*Washingtonia robusta*	Mexican fan palm	1	10	10					8	8	Good	Fair		Remove - Grading	2		6314002.57	1980302.33
59	*Washingtonia robusta*	Mexican fan palm	5	23.8537	10	10	9	12	12	20	30	Good	Fair		Remove - Bear Valley Parkway	1		6313886.87	1980161.82
60	*Washingtonia robusta*	Mexican fan palm	1	10	10					14	12	Good	Fair		Remove - Bear Valley Parkway	1		6313873.55	1980166.96
61	*Washingtonia robusta*	Mexican fan palm	1	9	9					7	10	Good	Fair		Remove - Bear Valley Parkway	2		6313872.43	1980157.07
62	*Quercus agrifolia*	Coast live oak	1	12	12					25	24	Good	Fair	Yes	Remove - Bear Valley Parkway	2		6313852.09	1980149.33
63	*Quercus agrifolia*	Coast live oak	2	8.48528	6	6				12	18	Good	Fair	Yes	Remove - Bear Valley Parkway	2		6313859.53	1980143.6
64	*Quercus agrifolia*	Coast live oak	2	13.4536	10	9				23	24	Good	Fair		Remove - Bear Valley Parkway	1		6313862.06	1980131.94
65	*Quercus agrifolia*	Coast live oak	1	4	4					10	10	Good	Fair	Yes	Remove - Bear Valley Parkway	2		6313849.02	1980120.55
66	*Quercus agrifolia*	Coast live oak	1	5	5					10	10	Good	Fair	Yes	Remove - Bear Valley Parkway	2		6313860.1	1980122.79
67	*Quercus agrifolia*	Coast live oak	2	4.24264	3	3				10	10	Good	Fair	Yes	Remove - Bear Valley Parkway	2		6313859.65	1980114.02
68	*Quercus agrifolia*	Coast live oak	1	9	9					23	12	Good	Fair	Yes	Remove - Bear Valley Parkway	2		6313857.61	1980115.77
69	*Quercus agrifolia*	Coast live oak	1	9	9					23	12	Poor	Poor		Remove - Bear Valley Parkway	1		6313855.98	1980108.9
70	*Quercus agrifolia*	Coast live oak	1	8	8					28	12	Fair	Fair		Encroachment - Bear Valley Parkway	1		6313861.5	1980110.47
71	*Quercus agrifolia*	Coast live oak	1	8	8					22	12	Fair	Fair		Encroachment - Bear Valley Parkway	1		6313862.41	1980103.89
72	*Quercus agrifolia*	Coast live oak	1	6	6					23	12	Fair	Fair		Encroachment - Bear Valley Parkway	1		6313859.22	1980100.76
73	*Quercus agrifolia*	Coast live oak	1	5	5					15	12	Fair	Poor		Remove - Bear Valley Parkway	1		6313847.08	1980108.22
74	*Quercus agrifolia*	Coast live oak	3	16.7631	10	10	9			15	18	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313846.77	1980101.51
75	*Quercus agrifolia*	Coast live oak	1	8	8					17	10	Poor	Fair	Yes	Remove - Bear Valley Parkway	2		6313848.56	1980093.62
76	*Quercus agrifolia*	Coast live oak	1	9	9					17	10	Poor	Fair	Yes	Remove - Bear Valley Parkway	2		6313845.37	1980077.18
77	*Quercus agrifolia*	Coast live oak	1	4	4					16	5	Fair	Fair		Indirect - BVP	N/A		6313868.86	1980084.57
78	*Quercus agrifolia*	Coast live oak	1	6	6					16	5	Poor	Fair		Indirect - BVP	N/A		6313865.65	1980087.2
79	*Quercus agrifolia*	Coast live oak	2	21.9317	15	16				40	20	Poor	Poor		Encroachment - Bear Valley Parkway	1	Bees	6313867.73	1980085.65
80	*Quercus agrifolia*	Coast live oak	1	4	4					12	8	Poor	Poor	Yes	Indirect - BVP	N/A		6313870.2	1980078.23
81	*Quercus agrifolia*	Coast live oak	1	6	6					18	8	Fair	Fair		Indirect - BVP	N/A		6313864.92	1980077.38
82	*Phoenix canariensis*	Canary island date palm	1	18	18					6	20	Fair	Fair		Indirect - BVP	N/A		6313874.26	1980076
83	*Quercus agrifolia*	Coast live oak	1	12	12					25	20	Fair	Fair		Preservation	N/A		6313889.64	1980085.64

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
84	*Phoenix canariensis*	Canary island date palm	1	19	19					10	20	Fair	Fair		Preservation	N/A		6313900.95	1980076.78
85	*Phoenix canariensis*	Canary island date palm	1	19	19					12	20	Fair	Fair		Preservation	N/A		6313889.49	1980071.29
86	*Quercus agrifolia*	Coast live oak	1	10	10					20	12	Fair	Fair		Indirect - BVP	N/A		6313881.56	1980079.98
87	*Quercus agrifolia*	Coast live oak	1	10	10					30	15	Fair	Fair		Preservation	N/A		6313887.07	1980060.91
88	*Quercus agrifolia*	Coast live oak	1	4	4					20	4	Poor	Poor		Indirect - BVP	N/A		6313871.03	1980059.39
89	*Quercus agrifolia*	Coast live oak	1	12	12					30	25	Good	Fair	Yes	Remove - Bear Valley Parkway	2		6313853.53	1980067.08
90	*Quercus agrifolia*	Coast live oak	1	10	10					30	23	Fair	Fair		Remove - Bear Valley Parkway	1		6313853.21	1980064.76
91	*Quercus agrifolia*	Coast live oak	4	13.3791	8	4	3	9	3	24	20	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313857.53	1980052.95
92	*Quercus agrifolia*	Coast live oak	2	16.2788	12	11				28	30	Fair	Fair		Remove - Bear Valley Parkway	1		6313848.38	1980040.48
93	*Quercus agrifolia*	Coast live oak	1	8	8					30	14	Fair	Fair	Yes	Indirect - BVP	N/A		6313865.91	1980049.8
94	*Quercus agrifolia*	Coast live oak	1	7	7					26	12	Fair	Fair	Yes	Indirect - BVP	N/A		6313877.02	1980047.82
95	*Quercus agrifolia*	Coast live oak	1	4	4					22	8	Poor	Fair		Preservation	N/A		6313885.38	1980045.64
96	*Quercus agrifolia*	Coast live oak	1	8	8					20	8	Fair	Fair	Yes	Indirect - BVP	N/A		6313863.93	1980033.85
97	*Quercus agrifolia*	Coast live oak	1	4	4					16	8	Fair	Fair		Indirect - BVP	N/A		6313857.09	1980027.24
98	*Quercus agrifolia*	Coast live oak	1	17	17					30	45	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313862.58	1980027.77
99	*Quercus agrifolia*	Coast live oak	1	10	10					20	20	Fair	Fair	Yes	Indirect - BVP	N/A		6313868.76	1980028.58
100	*Quercus agrifolia*	Coast live oak	1	10	10					20	20	Fair	Fair	Yes	Indirect - BVP	N/A		6313870.96	1980027.71
101	*Quercus agrifolia*	Coast live oak	1	7	7					20	12	Fair	Fair	Yes	Indirect - BVP	N/A		6313873.56	1980011.56
102	*Quercus agrifolia*	Coast live oak	1	7	7					20	12	Fair	Fair	Yes	Preservation	N/A		6313898.64	1980031.09
103	*Washingtonia robusta*	Mexican fan palm	1	14	14					35	12	Fair	Fair		Preservation	N/A		6313912.69	1980027.25
104	*Quercus agrifolia*	Coast live oak	1	9	9					20	12	Fair	Fair		Preservation	N/A		6313912.83	1980018.6
105	*Phoenix canariensis*	Canary island date palm	2	24.7588	18	17				20	30	Fair	Fair		Preservation	N/A		6313895.51	1980013.43
106	*Quercus agrifolia*	Coast live oak	1	22	22					55	53	Fair	Fair		Preservation	N/A		6313908.8	1980009.91
107	*Phoenix canariensis*	Canary island date palm	1	36	36					18	20	Fair	Fair		Preservation	N/A		6313910.83	1979998.94
108	*Phoenix canariensis*	Canary island date palm	1	30	30					8	20	Fair	Fair		Preservation	N/A		6313894.09	1979995.39
109	*Quercus agrifolia*	Coast live oak	1	6	6					12	10	Fair	Fair	Yes	Indirect - BVP	N/A		6313872.02	1980002.64
110	*Quercus agrifolia*	Coast live oak	1	14	14					30	20	Fair	Fair	Yes	Indirect - BVP	N/A		6313866.26	1979994.29
111	*Quercus agrifolia*	Coast live oak	1	9	9					18	20	Fair	Fair	Yes	Indirect - BVP	N/A		6313864.2	1979997.76
112	*Quercus agrifolia*	Coast live oak	1	14	14					22	20	Fair	Fair	Yes	Preservation	N/A		6313884.68	1979996.96
113	*Quercus agrifolia*	Coast live oak	1	17	17					40	20	Fair	Fair	Yes	Preservation	N/A		6313873.65	1979979.85
114	*Washingtonia robusta*	Mexican fan palm	1	9	9					6	12	Fair	Fair		Preservation	N/A		6313873.95	1979957.97
115	*Washingtonia robusta*	Mexican fan palm	1	13	13					70	12	Fair	Fair		Preservation	N/A		6313880.62	1979944.31
116	*Phoenix canariensis*	Canary island date palm	1	32	32					12	20	Fair	Fair		Preservation	N/A		6313880.71	1979956.43
117	*Phoenix canariensis*	Canary island date palm	2	45.2548	32	32				45	40	Fair	Fair		Indirect - BVP	N/A		6313873.33	1979931.78
118	*Quercus agrifolia*	Coast live oak	1	4	4					16	13	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313842.71	1979978.81
119	*Quercus agrifolia*	Coast live oak	1	9	9					20	12	Fair	Fair		Remove - Bear Valley Parkway	1		6313828.68	1979985.23
120	*Quercus agrifolia*	Coast live oak	1	6	6					10	8	Poor	Fair		Remove - Bear Valley Parkway	1		6313834.74	1979972.68
121	*Quercus agrifolia*	Coast live oak	1	15	15					30	20	Poor	Fair		Remove - Bear Valley Parkway	1		6313826.98	1979969.65
122	*Quercus agrifolia*	Coast live oak	1	8	8					20	12	Poor	Fair	Yes	Remove - Bear Valley Parkway	2		6313834.77	1979899.04
123	*Quercus agrifolia*	Coast live oak	2	14.4222	8	12				35	30	Fair	Fair		Remove - Bear Valley Parkway	1		6313833.97	1979901.15
124	*Quercus agrifolia*	Coast live oak	2	4.47214	4	2				12	8	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313830.97	1979925.53
125	*Salix laevigata*	Red willow	1	20	20					30	30	Fair	Fair		Indirect - BVP	N/A		6313860.03	1979922.03

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
126	*Quercus agrifolia*	Coast live oak	2	10	8	6				12	10	Poor	Fair		Remove - Bear Valley Parkway	1		6313830.21	1979887.73
127	*Quercus agrifolia*	Coast live oak	2	10	8	6				14	10	Poor	Fair	Yes	Remove - Bear Valley Parkway	2		6313828.61	1979882.42
128	*Quercus agrifolia*	Coast live oak	1	7	7					14	10	Poor	Fair	Yes	Remove - Bear Valley Parkway	2		6313841.96	1979852.17
129	*Quercus agrifolia*	Coast live oak	2	19.2094	15	12				35	30	Poor	Fair	Yes	Remove - Bear Valley Parkway	2		6313837.53	1979849.84
130	*Quercus agrifolia*	Coast live oak	1	5	5					24	18	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313841.47	1979847.95
131	*Quercus agrifolia*	Coast live oak	1	15	15					30	18	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313840.16	1979847.17
132	*Quercus agrifolia*	Coast live oak	1	12	12					30	18	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313840.56	1979843.4
133	*Quercus agrifolia*	Coast live oak	1	10	10					30	18	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313852.89	1979854.84
134	*Washingtonia robusta*	Mexican fan palm	1	14	14					35	12	Fair	Fair		Indirect - BVP	N/A		6313851.43	1979854.15
135	*Washingtonia robusta*	Mexican fan palm	2	14.1421	10	10				30	20	Fair	Fair		Encroachment - Bear Valley Parkway	2		6313851.38	1979841.49
136	*Quercus agrifolia*	Coast live oak	1	12	12					35	30	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313856	1979831.59
137	*Quercus agrifolia*	Coast live oak	2	12.7279	9	9				28	30	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313856.71	1979827.73
138	*Washingtonia robusta*	Mexican fan palm	1	12	12					65	12	Fair	Fair		Encroachment - Bear Valley Parkway	1		6313854.8	1979825.6
139	*Washingtonia robusta*	Mexican fan palm	1	12	12					65	12	Fair	Fair		Indirect - BVP	N/A		6313856.57	1979830.86
140	*Quercus agrifolia*	Coast live oak	1	9	9					20	8	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313852.1	1979818.43
141	*Quercus agrifolia*	Coast live oak	3	5.38516	4	3	2			20	12	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313845.19	1979814.18
142	*Quercus agrifolia*	Coast live oak	1	18	18					40	40	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313851.67	1979814.33
143	*Washingtonia robusta*	Mexican fan palm	1	16	16					65	12	Fair	Fair		Indirect - BVP	N/A		6313862.92	1979813.94
144	*Quercus agrifolia*	Coast live oak	1	4	4					20	8	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313856.77	1979813.37
145	*Washingtonia robusta*	Mexican fan palm	1	15	15					70	12	Fair	Fair		Indirect - BVP	N/A		6313882.84	1979817.19
146	*Quercus agrifolia*	Coast live oak	1	12	12					30	24	Fair	Fair		Remove - Bear Valley Parkway	1		6313838.48	1979795.67
147	*Quercus agrifolia*	Coast live oak	3	21.5639	14	13	10			30	30	Fair	Fair		Remove - Bear Valley Parkway	1		6313857.84	1979785.8
148	*Phoenix canariensis*	Canary island date palm	2	43.8634	32	30				20	30	Fair	Fair		Indirect - BVP	N/A		6313885.54	1979775.95
149	*Washingtonia robusta*	Mexican fan palm	1	12	12					70	12	Fair	Fair		Indirect - BVP	N/A		6313869.25	1979790.66
150	*Quercus agrifolia*	Coast live oak	1	13	13					35	20	Fair	Fair		Remove - Bear Valley Parkway	1		6313855.78	1979749.96
151	*Quercus agrifolia*	Coast live oak	1	14	14					30	25	Fair	Fair		Remove - Bear Valley Parkway	1		6313861.3	1979753.03
152	*Quercus agrifolia*	Coast live oak	1	12	12					16	12	Fair	Fair		Encroachment - Bear Valley Parkway	1		6313872.65	1979755.92
153	*Washingtonia robusta*	Mexican fan palm	1	32	32					20	24	Fair	Fair		Indirect - BVP	N/A		6313879.12	1979748.9
154	*Washingtonia robusta*	Mexican fan palm	1	25	25					30	20	Fair	Fair		Indirect - BVP	N/A		6313886.8	1979731.88
155	*Quercus agrifolia*	Coast live oak	1	13	13					16	30	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313874.42	1979736.3
156	*Quercus agrifolia*	Coast live oak	2	17.6918	13	12				25	30	Fair	Fair		Remove - Bear Valley Parkway	1		6313865.79	1979714.34
157	*Quercus agrifolia*	Coast live oak	1	8	8					30	16	Fair	Fair		Remove - Bear Valley Parkway	1		6313867.77	1979694.58
158	*Quercus agrifolia*	Coast live oak	1	4	4					20	8	Fair	Fair	Yes	Indirect - BVP	N/A		6313886.03	1979694.61
159	*Koelreuteria bipinnata*	Chinese flame tree	1	10	10					50	30	Poor	Fair		Encroachment - Bear Valley Parkway	2		6313881.9	1979691.42
160	*Washingtonia robusta*	Mexican fan palm	1	32	32					30	30	Good	Fair		Encroachment - Bear Valley Parkway	2		6313881.5	1979672.63
161	*Quercus agrifolia*	Coast live oak	1	14	14					35	28	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313874.9	1979673.1
162	*Koelreuteria bipinnata*	Chinese flame tree	1	11	11					45	20	Fair	Fair		Remove - Bear Valley Parkway	1		6313879.96	1979669.99
163	*Washingtonia robusta*	Mexican fan palm	1	16	16					30	12	Fair	Fair		Preservation	N/A		6313912.6	1979691.81
164	*Washingtonia robusta*	Mexican fan palm	1	16	16					30	12	Fair	Fair		Indirect - BVP	N/A		6313910.9	1979687.15
165	*Washingtonia robusta*	Mexican fan palm	1	13	13					60	12	Fair	Fair		Preservation	N/A		6313913.73	1979701.44
166	*Washingtonia robusta*	Mexican fan palm	1	13	13					60	12	Fair	Fair		Preservation	N/A		6313914.75	1979700.96
167	*Washingtonia robusta*	Mexican fan palm	1	13	13					25	12	Fair	Fair		Preservation	N/A		6313923.02	1979699.71

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
168	*Quercus agrifolia*	Coast live oak	1	25	25					30	30	Fair	Fair		Preservation	N/A		6313916.99	1979685.07
169	*Salix laevigata*	Red willow	1	13	13					45	30	Fair	Fair		Preservation	N/A		6313923.2	1979657.4
170	*Quercus agrifolia*	Coast live oak	1	15	15					30	28	Fair	Fair		Preservation	N/A		6313935.14	1979646.11
171	*Washingtonia robusta*	Mexican fan palm	1	12	12					75	12	Fair	Fair		Preservation	N/A		6313941.56	1979591.03
172	*Washingtonia robusta*	Mexican fan palm	1	13	13					75	12	Fair	Fair		Indirect - BVP	N/A		6313926.23	1979592.52
173	*Washingtonia robusta*	Mexican fan palm	1	13	13					75	12	Fair	Fair		Indirect - BVP	N/A		6313910.68	1979599.28
174	*Phoenix canariensis*	Canary island date palm	1	40	40					24	30	Fair	Fair		Indirect - BVP	N/A		6313924.2	1979622.11
175	*Washingtonia robusta*	Mexican fan palm	1	12	12					25	12	Fair	Fair		Indirect - BVP	N/A		6313921.91	1979631.42
176	*Washingtonia robusta*	Mexican fan palm	1	14	14					70	12	Fair	Fair		Indirect - BVP	N/A		6313905.15	1979628.92
177	*Washingtonia robusta*	Mexican fan palm	1	14	14					70	12	Fair	Fair		Indirect - BVP	N/A		6313906.91	1979622.77
178	*Washingtonia robusta*	Mexican fan palm	1	14	14					40	12	Fair	Fair		Indirect - BVP	N/A		6313907.76	1979615.09
179	*Washingtonia robusta*	Mexican fan palm	1	14	14					65	12	Fair	Fair		Preservation	N/A		6313929.93	1979605.43
180	*Washingtonia robusta*	Mexican fan palm	1	13	13					65	12	Fair	Fair		Encroachment - Bear Valley Parkway	1		6313896.12	1979615.2
181	*Phoenix canariensis*	Canary island date palm	1	32	32					10	25	Fair	Fair		Encroachment - Bear Valley Parkway	2		6313892.01	1979643.13
182	*Washingtonia robusta*	Mexican fan palm	1	10	10					70	12	Fair	Fair		Indirect - BVP	N/A		6313906.61	1979672.59
183	*Washingtonia robusta*	Mexican fan palm	1	11	11					70	12	Fair	Fair		Indirect - BVP	N/A		6313900.74	1979660.87
184	*Quercus agrifolia*	Coast live oak	1	6	6					24	8	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313879.15	1979648.4
185	*Quercus agrifolia*	Coast live oak	1	6	6					14	6	Fair	Fair		Remove - Bear Valley Parkway	1		6313879.33	1979642.81
186	*Quercus agrifolia*	Coast live oak	1	9	9					24	12	Fair	Fair		Remove - Bear Valley Parkway	1		6313877.56	1979638.73
187	*Quercus agrifolia*	Coast live oak	1	13	13					28	16	Fair	Fair		Remove - Bear Valley Parkway	1		6313876.76	1979625.69
188	*Quercus agrifolia*	Coast live oak	3	9.43398	9	2	2			12	12	Fair	Poor		Remove - Bear Valley Parkway	1		6313883.04	1979603.18
189	*Quercus agrifolia*	Coast live oak	2	16.9706	12	12				25	25	Fair	Fair		Remove - Bear Valley Parkway	1		6313893.89	1979566.54
190	*Quercus agrifolia*	Coast live oak	2	15.2643	13	8				30	16	Fair	Fair		Remove - Bear Valley Parkway	1		6313895.18	1979548.39
191	*Quercus agrifolia*	Coast live oak	1	8	8					20	14	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313906.67	1979564.94
192	*Quercus agrifolia*	Coast live oak	1	10	10					40	20	Fair	Fair		Indirect - BVP	N/A		6313922.18	1979572.19
193	*Quercus agrifolia*	Coast live oak	2	18.3848	13	13				40	30	Fair	Fair		Indirect - BVP	N/A		6313932.58	1979536.45
194	*Quercus agrifolia*	Coast live oak	1	11	11					38	28	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313925.8	1979528.03
195	*Quercus agrifolia*	Coast live oak	1	10	10					32	20	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313928.09	1979515.67
196	*Quercus agrifolia*	Coast live oak	1	12	12					20	20	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313919.35	1979520.18
197	*Quercus agrifolia*	Coast live oak	3	13.1529	10	8	3			20	20	Fair	Fair		Remove - Bear Valley Parkway	1		6313911.7	1979526.06
198	*Washingtonia robusta*	Mexican fan palm	1	12	12					65	12	Fair	Fair		Indirect - BVP	N/A		6313940.38	1979500.47
199	*Washingtonia robusta*	Mexican fan palm	1	12	12					65	12	Fair	Fair		Indirect - BVP	N/A		6313938.84	1979511.11
200	*Quercus agrifolia*	Coast live oak	1	15	15					30	25	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313905.32	1979512.98
201	*Quercus agrifolia*	Coast live oak	2	17.0294	13	11				35	35	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313906.53	1979509.3
202	*Salix laevigata*	Red willow	1	12	12					5	30	Fair	Fair		Indirect - BVP	N/A		6313940.89	1979465.69
203	*Quercus agrifolia*	Coast live oak	1	36	36					45	50	Fair	Fair		Encroachment - Bear Valley Parkway	1		6313936.71	1979466.73
204	*Salix laevigata*	Red willow	1	32	32					25	35	Fair	Fair		Remove - Bear Valley Parkway	2		6313929.21	1979464.15
205	*Salix laevigata*	Red willow	1	15	15					30	35	Fair	Fair		Indirect - BVP	N/A		6313947.67	1979436.89
206	*Quercus agrifolia*	Coast live oak	1	15	15					38	35	Fair	Fair	Yes	Preservation	N/A		6313965.23	1979430.23
207	*Quercus agrifolia*	Coast live oak	1	16	16					35	30	Fair	Fair		Indirect - BVP	N/A		6313960.14	1979432.94
208	*Quercus agrifolia*	Coast live oak	1	6	6					6	20	Fair	Poor		Indirect - BVP	N/A		6313961.78	1979429.9
209	*Quercus agrifolia*	Coast live oak	1	11	11					40	25	Fair	Fair	Yes	Preservation	N/A		6313965.2	1979426.8

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
210	*Washingtonia robusta*	Mexican fan palm	1	15	15					70	12	Fair	Fair		Preservation	N/A		6313969.55	1979433.25
211	*Quercus agrifolia*	Coast live oak	1	14	14					30	28	Fair	Fair		Encroachment - Bear Valley Parkway	1		6313943.74	1979416.99
212	*Washingtonia robusta*	Mexican fan palm	1	13	13					65	12	Fair	Fair		Preservation	N/A		6313980.14	1979426.39
213	*Salix laevigata*	Red willow	3	17	12	9	8			35	40	Fair	Fair		Preservation	N/A		6313994.83	1979418.03
214	*Quercus agrifolia*	Coast live oak	2	14.2127	11	9				30	28	Fair	Poor	Yes	Preservation	N/A		6314002.37	1979394.83
215	*Quercus agrifolia*	Coast live oak	3	22.561	14	13	12			37	45	Fair	Fair	Yes	Indirect - BVP	N/A		6313979.7	1979393.53
216	*Quercus agrifolia*	Coast live oak	2	10.6301	8	7				20	12	Fair	Fair	Yes	Indirect - BVP	N/A		6313984.02	1979372.49
217	*Quercus agrifolia*	Coast live oak	1	11	11					22	18	Fair	Fair	Yes	Indirect - BVP	N/A		6313981.63	1979375.39
218	*Quercus agrifolia*	Coast live oak	3	4.89898	4	2	2			16	12	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313941.47	1979397.22
219	*Quercus agrifolia*	Coast live oak	4	7.07107	4	4	3	3		16	15	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313934.81	1979392.9
220	*Quercus agrifolia*	Coast live oak	2	7.2111	6	4				16	15	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313930.45	1979396.45
221	*Quercus agrifolia*	Coast live oak	2	7.28011	7	2	0	0	0	16	18	Fair	Fair	Yes	Remove - Bear Valley Parkway	2		6313947.18	1979331.01
222	*Quercus agrifolia*	Coast live oak	5	23.8118	14	9	15	4	7	30	36	Fair	Fair		Remove - Bear Valley Parkway	1		6313945.98	1979329.83
223	*Quercus agrifolia*	Coast live oak	2	3.16228	3	1				12	8	Fair	Fair		Encroachment - Bear Valley Parkway	1		6313960.86	1979328.55
224	*Quercus agrifolia*	Coast live oak	1	7	7					24	8	Fair	Fair	Yes	Encroachment - Bear Valley Parkway	2		6313960.99	1979322.63
225	*Quercus agrifolia*	Coast live oak	2	3.60555	3	2				12	8	Poor	Fair	Yes	Preservation	N/A		6313970.62	1979321.26
226	*Quercus agrifolia*	Coast live oak	1	7	7					18	16	Poor	Fair		Preservation	N/A		6313973.53	1979307.18
227	*Quercus agrifolia*	Coast live oak	1	9	9					20	16	Fair	Fair		Preservation	N/A		6313983.46	1979301.6
228	*Quercus agrifolia*	Coast live oak	1	11	11					24	16	Fair	Fair	Yes	Preservation	N/A		6313995.83	1979297.58
229	*Quercus agrifolia*	Coast live oak	1	5	5					18	8	Fair	Fair		Preservation	N/A		6314010.71	1979303.42
230	*Quercus agrifolia*	Coast live oak	1	5	5					20	8	Fair	Fair	Yes	Preservation	N/A		6314010.27	1979302.94
231	*Quercus agrifolia*	Coast live oak	4	34.4964	25	12	14	15		35	40	Good	Fair	Yes	Preservation	N/A		6314010.5	1979327.41
232	*Quercus agrifolia*	Coast live oak	1	14	14					30	25	Fair	Fair	Yes	Preservation	N/A		6314022.4	1979341.05
233	*Quercus agrifolia*	Coast live oak	1	10	10					20	12	Fair	Fair		Preservation	N/A		6314017.21	1979328.1
235	*Phoenix canariensis*	Canary island date palm	2	45.9674	32	33				25	40	Fair	Fair		Preservation	N/A		6314028.94	1979321.18
234	*Quercus agrifolia*	Coast live oak	1	12	12					35	20	Fair	Fair		Preservation	N/A		6314011.81	1979328.04
236	*Washingtonia robusta*	Mexican fan palm	1	14	14					30	12	Fair	Fair		Preservation	N/A		6314039.06	1979315.85
237	*Phoenix canariensis*	Canary island date palm	1	32	32					20	25	Fair	Fair		Preservation	N/A		6314047.43	1979304.74
238	*Quercus agrifolia*	Coast live oak	2	4.24264	3	3				12	8	Poor	Fair	Yes	Preservation	N/A		6314024.42	1979346.34
239	*Quercus agrifolia*	Coast live oak	1	4	4					16	6	Poor	Fair	Yes	Preservation	N/A		6314026.16	1979349.22
240	*Quercus agrifolia*	Coast live oak	1	4	4					16	6	Fair	Fair		Preservation	N/A		6314024.57	1979352.41
241	*Quercus agrifolia*	Coast live oak	1	4	4					28	8	Fair	Fair		Preservation	N/A		6314022.84	1979354.46
242	*Quercus agrifolia*	Coast live oak	1	11	11					36	22	Fair	Fair	Yes	Preservation	N/A		6314017.96	1979352.33
243	*Quercus agrifolia*	Coast live oak	1	8	8					24	16	Fair	Fair	Yes	Preservation	N/A		6314013.42	1979351.78
244	*Quercus agrifolia*	Coast live oak	1	4	4					20	10	Fair	Fair		Preservation	N/A		6314003.8	1979350.01
245	*Quercus agrifolia*	Coast live oak	1	4	4					20	10	Fair	Fair		Preservation	N/A		6314002.57	1979346.41
246	*Quercus agrifolia*	Coast live oak	1	9	9					28	16	Fair	Fair	Yes	Preservation	N/A		6314018.12	1979360.17
247	*Quercus agrifolia*	Coast live oak	1	5	5					20	8	Poor	Poor		Preservation	N/A		6314027.05	1979359.57
248	*Quercus agrifolia*	Coast live oak	3	10.4881	9	5	2			38	35	Fair	Fair	Yes	Preservation	N/A		6314030.19	1979361.44
249	*Quercus agrifolia*	Coast live oak	1	16	16					40	45	Fair	Fair	Yes	Preservation	N/A		6314027.56	1979348.88
250	*Quercus agrifolia*	Coast live oak	1	5	5					13	8	Fair	Fair	Yes	Preservation	N/A		6314017.77	1979372.88
251	*Quercus agrifolia*	Coast live oak	2	12.8062	8	10				30	24	Fair	Fair	Yes	Preservation	N/A		6314015.43	1979385.94

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
252	*Quercus agrifolia*	Coast live oak	1	8	8					35	18	Fair	Fair	Yes	Preservation	N/A		6314026.78	1979391.77
253	*Quercus agrifolia*	Coast live oak	1	6	6					28	18	Fair	Fair		Preservation	N/A		6314035.14	1979384.74
254	*Quercus agrifolia*	Coast live oak	1	24	24					38	40	Fair	Fair		Preservation	N/A		6314052.39	1979370.63
255	*Quercus agrifolia*	Coast live oak	1	7	7					24	12	Fair	Fair	Yes	Preservation	N/A		6314066.54	1979382.96
256	*Quercus agrifolia*	Coast live oak	1	9	9					30	24	Fair	Fair		Preservation	N/A		6314075.17	1979374.25
257	*Quercus agrifolia*	Coast live oak	1	22	22					40	33	Fair	Fair	Yes	Preservation	N/A		6314077.05	1979355.38
258	*Quercus agrifolia*	Coast live oak	1	9	9					35	20	Fair	Fair	Yes	Preservation	N/A		6314072.06	1979352.93
259	*Quercus agrifolia*	Coast live oak	1	4	4					18	8	Fair	Fair	Yes	Preservation	N/A		6314056.08	1979344.01
260	*Quercus agrifolia*	Coast live oak	1	14	14					45	30	Fair	Fair	Yes	Preservation	N/A		6314072.51	1979338.89
261	*Quercus agrifolia*	Coast live oak	1	4	4					16	8	Fair	Fair		Preservation	N/A		6314075.58	1979336.81
262	*Quercus agrifolia*	Coast live oak	1	4	4					16	8	Fair	Fair	Yes	Preservation	N/A		6314075.38	1979333.29
263	*Quercus agrifolia*	Coast live oak	1	6	6					22	14	Fair	Fair	Yes	Preservation	N/A		6314075.62	1979329.92
264	*Quercus agrifolia*	Coast live oak	1	6	6					22	14	Fair	Fair	Yes	Preservation	N/A		6314067.83	1979331.78
265	*Quercus agrifolia*	Coast live oak	1	4	4					22	14	Fair	Fair	Yes	Preservation	N/A		6314067.13	1979331.07
266	*Quercus agrifolia*	Coast live oak	1	4	4					22	14	Fair	Fair	Yes	Preservation	N/A		6314065.65	1979329.3
267	*Washingtonia robusta*	Mexican fan palm	1	10	10					16	12	Fair	Fair		Preservation	N/A		6314043	1979342.12
268	*Quercus agrifolia*	Coast live oak	3	20.7123	14	13	8			33	40	Fair	Fair	Yes	Preservation	N/A		6314098.34	1979390.2
269	*Quercus agrifolia*	Coast live oak	1	4	4					10	8	Fair	Fair		Preservation	N/A		6314111.37	1979378.7
270	*Quercus agrifolia*	Coast live oak	1	5	5					10	8	Fair	Fair		Preservation	N/A		6314108.25	1979351.52
271	*Quercus agrifolia*	Coast live oak	1	14	14					30	32	Fair	Fair		Preservation	N/A		6314110.22	1979341.32
272	*Quercus agrifolia*	Coast live oak	1	11	11					23	24	Fair	Fair		Preservation	N/A		6314095.28	1979314.7
273	*Quercus agrifolia*	Coast live oak	2	14.2127	11	9				23	24	Fair	Fair		Preservation	N/A		6314095.49	1979314.44
274	*Quercus agrifolia*	Coast live oak	1	6	6					15	8	Fair	Fair	Yes	Preservation	N/A		6314091.32	1979305.67
275	*Quercus agrifolia*	Coast live oak	2	14.8661	10	11				18	24	Fair	Fair		Preservation	N/A		6314082.21	1979298.1
276	*Quercus agrifolia*	Coast live oak	1	14	14					35	40	Fair	Fair	Yes	Preservation	N/A		6314069.27	1979279.04
277	*Quercus agrifolia*	Coast live oak	1	16	16					24	27	Fair	Fair		Preservation	N/A		6314075.2	1979270.38
278	*Quercus agrifolia*	Coast live oak	2	16.9706	12	12				24	27	Fair	Fair	Yes	Preservation	N/A		6314076.09	1979267.31
279	*Quercus agrifolia*	Coast live oak	1	5	5					24	8	Fair	Fair	Yes	Preservation	N/A		6314061.83	1979263.22
280	*Quercus agrifolia*	Coast live oak	2	8.544	8	3				22	20	Fair	Fair	Yes	Preservation	N/A		6314055.32	1979259.78
281	*Washingtonia robusta*	Mexican fan palm	1	12	12					75	12	Fair	Fair		Preservation	N/A		6314032.8	1979258.22
282	*Quercus agrifolia*	Coast live oak	1	12	12					30	20	Fair	Fair	Yes	Preservation	N/A		6314018.75	1979285.58
283	*Quercus agrifolia*	Coast live oak	1	12	12					35	20	Fair	Fair	Yes	Preservation	N/A		6313984	1979275.43
284	*Quercus agrifolia*	Coast live oak	1	11	11					35	20	Fair	Fair	Yes	Preservation	N/A		6313985.36	1979281.61
285	*Quercus agrifolia*	Coast live oak	1	4	4					20	12	Fair	Fair	Yes	Preservation	N/A		6313975.18	1979281.38
286	*Quercus agrifolia*	Coast live oak	1	5	5					20	12	Fair	Fair	Yes	Preservation	N/A		6313971.33	1979289.07
287	*Quercus agrifolia*	Coast live oak	1	14	14					30	38	Fair	Fair		Preservation	N/A		6313971.38	1979292.53
288	*Quercus agrifolia*	Coast live oak	1	4	4					20	38	Fair	Fair		Preservation	N/A		6313962.36	1979296.9
289	*Quercus agrifolia*	Coast live oak	1	5	5					16	12	Fair	Fair	Yes	Preservation	N/A		6313953.27	1979290.47
290	*Quercus agrifolia*	Coast live oak	1	12	12					20	18	Fair	Fair	Yes	Preservation	N/A		6313951.84	1979294.47
291	*Quercus agrifolia*	Coast live oak	2	17.0294	13	11				30	28	Fair	Fair	Yes	Preservation	N/A		6314122.5	1979283.45
292	*Schinus molle*	Peruvian pepper	2	42.9418	38	20				30	40	Fair	Fair		Preservation	N/A		6314129.89	1979282.05
293	*Quercus agrifolia*	Coast live oak	2	10	8	6				28	30	Fair	Fair		Preservation	N/A		6314291.16	1979224.14

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
294	*Quercus agrifolia*	Coast live oak	1	14	14					20	25	Fair	Fair	Yes	Preservation	N/A		6314311.63	1979237.28
295	*Quercus agrifolia*	Coast live oak	1	22	22					38	45	Fair	Fair	Yes	Preservation	N/A		6314314.33	1979233.45
296	*Quercus agrifolia*	Coast live oak	1	19	19					30	38	Fair	Fair	Yes	Preservation	N/A		6314315.87	1979227.24
297	*Quercus agrifolia*	Coast live oak	2	16.4012	13	10				24	30	Fair	Fair		Preservation	N/A		6314090.19	1979421.82
298	*Quercus agrifolia*	Coast live oak	1	13	13					28	30	Fair	Fair	Yes	Preservation	N/A		6314080.84	1979425.57
299	*Quercus agrifolia*	Coast live oak	3	17.3781	11	10	9			30	34	Fair	Fair		Preservation	N/A		6314062.28	1979422.3
300	*Quercus agrifolia*	Coast live oak	1	14	14					34	36	Fair	Fair	Yes	Preservation	N/A		6314056.28	1979416.71
301	*Quercus agrifolia*	Coast live oak	3	5.83095	4	3	3			20	16	Fair	Fair	Yes	Preservation	N/A		6314056.35	1979411.78
302	*Quercus agrifolia*	Coast live oak	2	5.83095	5	3				20	16	Fair	Fair	Yes	Preservation	N/A		6314052.79	1979416.53
303	*Quercus agrifolia*	Coast live oak	2	12.8062	10	8				20	26	Fair	Fair		Preservation	N/A		6314049.51	1979413
304	*Quercus agrifolia*	Coast live oak	1	11	11					20	26	Fair	Fair	Yes	Preservation	N/A		6314046.84	1979410.17
305	*Quercus agrifolia*	Coast live oak	1	7	7					20	12	Fair	Fair	Yes	Preservation	N/A		6314036.05	1979411.7
306	*Quercus agrifolia*	Coast live oak	1	8	8					18	12	Fair	Fair	Yes	Preservation	N/A		6314036.79	1979413.03
307	*Quercus agrifolia*	Coast live oak	1	12	12					30	25	Fair	Fair		Preservation	N/A		6314040.64	1979412.16
308	*Quercus agrifolia*	Coast live oak	1	8	8					10	12	Fair	Fair		Preservation	N/A		6314039.62	1979421.46
309	*Quercus agrifolia*	Coast live oak	2	13.8924	12	7				45	40	Fair	Fair		Preservation	N/A		6314023.29	1979411.83
310	*Quercus agrifolia*	Coast live oak	1	10	10					25	40.02	Fair	Fair	Yes	Preservation	N/A		6314008.28	1979412.88
311	*Salix laevigata*	Red willow	1	9	9					35	14	Fair	Fair		Preservation	N/A		6314001.42	1979438.97
312	*Salix laevigata*	Red willow	2	13.4536	9	10				35	30	Fair	Fair		Preservation	N/A		6314002.4	1979447.07
313	*Salix laevigata*	Red willow	3	13.3041	7	8	8			35	50	Fair	Fair		Preservation	N/A		6314007.39	1979455.35
314	*Phoenix canariensis*	Canary island date palm	2	50.9117	36	36				18	45	Fair	Fair		Preservation	N/A		6314049.68	1979458.08
315	*Salix laevigata*	Red willow	1	18	18					45	40	Fair	Fair		Preservation	N/A		6314058.61	1979453.51
316	*Quercus agrifolia*	Coast live oak	1	12	12					25	20	Fair	Fair	Yes	Preservation	N/A		6314055.37	1979449.57
317	*Quercus agrifolia*	Coast live oak	1	9	9					30	20	Fair	Fair	Yes	Preservation	N/A		6314067.34	1979444.97
318	*Salix laevigata*	Red willow	1	11	11					38	25	Fair	Fair		Preservation	N/A		6314061.58	1979437.33
319	*Quercus agrifolia*	Coast live oak	1	8	8					30	18	Fair	Fair		Preservation	N/A		6314060.89	1979429.36
320	*Quercus agrifolia*	Coast live oak	1	4	4					18	6	Fair	Fair		Preservation	N/A		6314066.1	1979419.81
321	*Quercus agrifolia*	Coast live oak	1	8	8					28	20	Fair	Fair	Yes	Preservation	N/A		6314073.45	1979428.71
322	*Quercus agrifolia*	Coast live oak	1	8	8					28	18	Fair	Fair	Yes	Preservation	N/A		6314073.86	1979430.33
323	*Quercus agrifolia*	Coast live oak	1	10	10					20	16	Fair	Fair	Yes	Preservation	N/A		6314075.8	1979430.87
324	*Quercus agrifolia*	Coast live oak	1	14	14					38	20	Fair	Fair	Yes	Preservation	N/A		6314086.71	1979427.5
325	*Quercus agrifolia*	Coast live oak	1	9	9					5	6	Poor	Poor		Preservation	N/A		6314092.63	1979425.72
326	*Quercus agrifolia*	Coast live oak	1	7	7					20	6	Fair	Fair	Yes	Preservation	N/A		6314056.27	1979478.94
327	*Salix laevigata*	Red willow	1	12	12					30	25	Fair	Fair		Indirect - Grading	N/A		6314065.81	1979493.86
328	*Quercus agrifolia*	Coast live oak	2	16.4012	13	10				20	24	Fair	Fair		Encroachment - Grading	1		6314070.43	1979510.88
329	*Quercus agrifolia*	Coast live oak	1	12	12					22	20	Fair	Fair		Encroachment - Grading	1		6314073.31	1979515.35
330	*Quercus agrifolia*	Coast live oak	1	8	8					24	24	Fair	Fair		Indirect - Grading	N/A		6314060.74	1979520.38
331	*Quercus agrifolia*	Coast live oak	1	6	6					20	12	Fair	Fair	Yes	Preservation	N/A		6314059.53	1979509.66
332	*Quercus agrifolia*	Coast live oak	1	15	15					40	45	Fair	Fair	Yes	Preservation	N/A		6314048.92	1979516.2
333	*Quercus agrifolia*	Coast live oak	2	8.48528	6	6				12	10	Poor	Poor		Preservation	N/A		6314046.08	1979507.6
334	*Phoenix canariensis*	Canary island date palm	1	38	38					10	20	Poor	Poor		Preservation	N/A		6314042.12	1979509.46
335	*Quercus agrifolia*	Coast live oak	1	13	13					38	22	Poor	Poor	Yes	Preservation	N/A		6314036.53	1979538.58

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
336	*Quercus agrifolia*	Coast live oak	1	11	11					25	1	Fair	Fair		Encroachment - Grading	1		6314063.09	1979531.24
337	*Schinus molle*	Peruvian pepper	1	42	42					45	50	Fair	Fair		Encroachment - Grading	1		6314057.62	1979538.77
338	*Washingtonia robusta*	Mexican fan palm	1	15	15					65	12	Fair	Fair		Preservation	N/A		6314021.85	1979500.27
339	*Quercus agrifolia*	Coast live oak	1	10	10					12	30	Fair	Fair		Preservation	N/A		6314014.59	1979516.96
340	*Fraxinus velutina*	Arizona ash	1	12	12					50	30	Fair	Fair		Preservation	N/A		6314010.73	1979532.85
341	*Washingtonia robusta*	Mexican fan palm	1	10	10					12	10	Fair	Fair		Preservation	N/A		6314003.78	1979530.53
342	*Washingtonia robusta*	Mexican fan palm	1	12	12					12	10	Fair	Fair		Preservation	N/A		6314002.37	1979519.13
343	*Washingtonia robusta*	Mexican fan palm	1	12	12					65	12	Fair	Fair		Preservation	N/A		6313996.29	1979521.3
344	*Salix laevigata*	Red willow	1	14	14					30	20	Fair	Fair		Preservation	N/A		6313981.58	1979529.06
345	*Washingtonia robusta*	Mexican fan palm	1	13	13					3	12	Fair	Fair		Preservation	N/A		6313993.84	1979508.56
346	*Phoenix canariensis*	Canary island date palm	1	32	32					25	18	Fair	Fair		Preservation	N/A		6314000.47	1979515.53
347	*Washingtonia robusta*	Mexican fan palm	1	14	14					20	12	Fair	Fair		Preservation	N/A		6313994.63	1979525.58
348	*Phoenix canariensis*	Canary island date palm	1	38	38					12	12	Fair	Fair		Preservation	N/A		6313989.14	1979524.27
349	*Washingtonia robusta*	Mexican fan palm	1	14	14					65	12	Fair	Fair		Preservation	N/A		6313960.61	1979516.38
350	*Salix laevigata*	Red willow	1	32	32					20	25	Fair	Fair		Preservation	N/A		6313961	1979503.86
351	*Washingtonia robusta*	Mexican fan palm	1	15	15					12	10	Fair	Fair		Preservation	N/A		6313965.97	1979504.68
352	*Phoenix canariensis*	Canary island date palm	1	36	36					12	18	Fair	Fair		Preservation	N/A		6313985.92	1979513.81
353	*Salix laevigata*	Red willow	1	32	32					55	40	Fair	Fair		Preservation	N/A		6313991.55	1979510.17
354	*Washingtonia robusta*	Mexican fan palm	2	21.2132	15	15				30	24	Fair	Fair		Preservation	N/A		6313988.7	1979499
355	*Phoenix canariensis*	Canary island date palm	1	36	36					18	28	Fair	Fair		Preservation	N/A		6314000.6	1979491.42
356	*Salix laevigata*	Red willow	1	18	18					30	25	Fair	Fair		Preservation	N/A		6314001.86	1979489.72
357	*Washingtonia robusta*	Mexican fan palm	1	18	18					12	12	Fair	Fair		Preservation	N/A		6314001.04	1979476.89
358	*Salix laevigata*	Red willow	1	11	11					20	30	Fair	Fair		Preservation	N/A		6313978.19	1979478.1
359	*Salix laevigata*	Red willow	1	15	15					45	28	Fair	Fair		Preservation	N/A		6313966.46	1979535.47
360	*Salix laevigata*	Red willow	1	10	10					12	10	Fair	Fair		Preservation	N/A		6313962.28	1979544.36
361	*Salix laevigata*	Red willow	1	25	25					60	30	Fair	Fair		Preservation	N/A		6314005.62	1979542.85
362	*Washingtonia robusta*	Mexican fan palm	1	12	12					20	12	Fair	Fair		Preservation	N/A		6313991.88	1979552.34
363	*Salix laevigata*	Red willow	1	18	18					15	15	Fair	Fair		Preservation	N/A		6313995.11	1979565.55
364	*Ficus carica*	Fig tree	1	8	8					30	20	Fair	Fair		Preservation	N/A		6314006.29	1979554.39
365	*Quercus agrifolia*	Coast live oak	1	12	12					34	18	Fair	Fair		Preservation	N/A		6314029.1	1979566.1
366	*Quercus agrifolia*	Coast live oak	2	19.2094	12	15				30	50	Fair	Fair		Preservation	N/A		6314023.92	1979586.03
367	*Quercus agrifolia*	Coast live oak	1	9	9					25	18	Fair	Fair		Encroachment - Grading	1		6314048.64	1979558.59
368	*Quercus agrifolia*	Coast live oak	1	5	5					40	15	Fair	Fair		Preservation	N/A		6313974.81	1979566.79
369	*Quercus agrifolia*	Coast live oak	1	14	14					35	15	Fair	Fair		Preservation	N/A		6313992.32	1979579.57
370	*Quercus agrifolia*	Coast live oak	1	6	6					35	20	Fair	Fair		Preservation	N/A		6314008.77	1979600.66
371	*Quercus agrifolia*	Coast live oak	1	15	15					35	30	Fair	Fair		Preservation	N/A		6314009.21	1979585.59
372	*Quercus agrifolia*	Coast live oak	2	13.4536	10	9				30	40	Fair	Fair		Indirect - Grading	N/A		6314013.87	1979623.86
373	*Quercus agrifolia*	Coast live oak	1	13	13					30	28	Fair	Fair		Preservation	N/A		6314004.07	1979613.9
374	*Quercus agrifolia*	Coast live oak	1	36	36					40	60	Fair	Fair		Preservation	N/A		6313980	1979623.18
375	*Salix laevigata*	Red willow	1	12	12					14	15	Fair	Fair		Preservation	N/A		6313969.45	1979623.2
376	*Quercus agrifolia*	Coast live oak	1	4	4					14	8	Fair	Fair		Preservation	N/A		6313997.75	1979633.92
377	*Quercus agrifolia*	Coast live oak	1	10	10					30	24	Fair	Fair		Preservation	N/A		6313998.04	1979624.58

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
378	*Quercus agrifolia*	Coast live oak	1	10	10					30	24	Fair	Fair		Indirect - Grading	N/A		6314025.39	1979608.51
379	*Quercus agrifolia*	Coast live oak	1	13	13					30	24	Fair	Fair		Encroachment - Grading	1		6314028.18	1979619.63
380	*Quercus agrifolia*	Coast live oak	1	11	11					35	22	Fair	Fair		Remove - Grading	1		6314038.77	1979639.5
381	*Quercus agrifolia*	Coast live oak	1	13	13					28	16	Fair	Fair		Encroachment - Grading	1		6314020	1979650.32
382	*Quercus agrifolia*	Coast live oak	1	11	11					32	18	Fair	Fair		Encroachment - Grading	1		6314021.17	1979652.52
383	*Quercus agrifolia*	Coast live oak	1	13	13					32	28	Fair	Fair		Encroachment - Grading	1		6314019.74	1979664.83
384	*Quercus agrifolia*	Coast live oak	1	4	4					14	8	Fair	Fair		Indirect - Grading	N/A		6314014.03	1979660.81
385	*Quercus agrifolia*	Coast live oak	1	9	9					25	12	Fair	Fair		Indirect - Grading	N/A		6314011.13	1979649.75
386	*Quercus agrifolia*	Coast live oak	2	5.65685	4	4				20	12	Fair	Fair		Indirect - Grading	N/A		6313995.74	1979654.46
387	*Quercus agrifolia*	Coast live oak	1	4	4					14	8	Fair	Fair		Indirect - Grading	N/A		6314000.12	1979648.23
388	*Quercus agrifolia*	Coast live oak	1	8	8					22	14	Fair	Fair		Preservation	N/A		6313986.62	1979646.78
389	*Quercus agrifolia*	Coast live oak	1	12	12					35	28	Fair	Fair		Preservation	N/A		6313965.11	1979650.46
390	*Quercus agrifolia*	Coast live oak	1	9	9					12	14	Fair	Fair		Indirect - Grading	N/A		6313988.42	1979683.08
391	*Quercus agrifolia*	Coast live oak	1	16	16					30	30	Fair	Fair		Indirect - Grading	N/A		6313987.69	1979691.05
392	*Quercus agrifolia*	Coast live oak	1	6	6					14	8	Fair	Fair		Preservation	N/A		6313976.52	1979680.28
393	*Quercus agrifolia*	Coast live oak	1	13	13					38	32	Fair	Fair		Preservation	N/A		6313974.87	1979688.74
394	*Quercus agrifolia*	Coast live oak	1	14	14					30	22	Fair	Fair		Preservation	N/A		6313972.27	1979682.01
395	*Quercus agrifolia*	Coast live oak	1	15	15					45	20	Fair	Fair		Preservation	N/A		6313961.93	1979675.76
396	*Quercus agrifolia*	Coast live oak	2	11.3137	8	8				30	28	Fair	Fair		Preservation	N/A		6313945.37	1979679.21
397	*Quercus agrifolia*	Coast live oak	4	28.5132	14	14	14	15		28	35	Fair	Fair		Preservation	N/A		6313973.09	1979694.42
398	*Quercus agrifolia*	Coast live oak	3	21.6564	15	10	12			30	30	Poor	Poor		Indirect - Grading	N/A		6313978.28	1979714.83
399	*Quercus agrifolia*	Coast live oak	1	22	22					45	50	Poor	Poor		Preservation	N/A		6313951.92	1979739.18
400	*Phoenix canariensis*	Canary island date palm	1	32	32					20	20	Poor	Poor		Indirect - BVP	N/A		6313902.32	1979739.85
401	*Quercus agrifolia*	Coast live oak	1	16	16					30	20	Fair	Fair		Preservation	N/A		6313941.09	1979755.59
402	*Quercus agrifolia*	Coast live oak	1	10	10					12	20	Fair	Fair		Preservation	N/A		6313952.79	1979759.9
403	*Quercus agrifolia*	Coast live oak	3	3	2	1	2			10	6	Fair	Fair		Preservation	N/A		6313959.04	1979765.74
404	*Quercus agrifolia*	Coast live oak	1	6	6					30	20	Fair	Fair		Preservation	N/A		6313936.52	1979774.59
405	*Quercus agrifolia*	Coast live oak	1	12	12					20	20	Fair	Fair		Preservation	N/A		6313944.61	1979778.83
406	*Quercus agrifolia*	Coast live oak	1	14	14					35	40	Fair	Fair		Preservation	N/A		6313930.91	1979786.08
407	*Phoenix canariensis*	Canary island date palm	1	32	32					20	20	Fair	Fair		Preservation	N/A		6313909.5	1979784.08
408	*Phoenix canariensis*	Canary island date palm	1	32	32					20	20	Fair	Fair		Preservation	N/A		6313905.6	1979780.39
409	*Quercus agrifolia*	Coast live oak	3	16.7929	13	8	7			25	20	Fair	Fair		Preservation	N/A		6313943.88	1979803.35
410	*Quercus agrifolia*	Coast live oak	1	16	16					40	30	Fair	Fair		Preservation	N/A		6313938.05	1979802.28
411	*Quercus agrifolia*	Coast live oak	1	4	4					16	8	Fair	Fair		Preservation	N/A		6313929.64	1979808.09
412	*Washingtonia robusta*	Mexican fan palm	1	12	12					60	12	Fair	Fair		Preservation	N/A		6313911.38	1979813.54
413	*Phoenix canariensis*	Canary island date palm	1	32	32					25	25	Fair	Fair		Preservation	N/A		6313893.37	1979820.14
414	*Quercus agrifolia*	Coast live oak	1	13	13					24	25	Fair	Fair		Preservation	N/A		6313933.6	1979811.66
415	*Quercus agrifolia*	Coast live oak	2	10.7703	10	4				35	20	Fair	Fair		Preservation	N/A		6313938.14	1979812.28
416	*Quercus agrifolia*	Coast live oak	1	11	11					20	18	Fair	Fair		Preservation	N/A		6313936.32	1979826.02
417	*Quercus agrifolia*	Coast live oak	3	9.38083	6	6	4			20	22	Fair	Fair		Preservation	N/A		6313932.65	1979836.53
418	*Quercus agrifolia*	Coast live oak	2	14.8661	10	11				28	30	Fair	Fair		Preservation	N/A		6313933.15	1979838.67
419	*Quercus agrifolia*	Coast live oak	1	9	9					20	12	Fair	Fair		Preservation	N/A		6313926.04	1979825.68

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
420	*Quercus agrifolia*	Coast live oak	1	15	15					45	40	Fair	Fair		Preservation	N/A		6313906.54	1979851.96
421	*Fraxinus velutina*	Arizona ash	1	10	10					45	20	Fair	Fair		Preservation	N/A		6313890.79	1979844.08
422	*Washingtonia robusta*	Mexican fan palm	2	16.4012	13	10				45	12	Fair	Fair		Preservation	N/A		6313891.95	1979852.5
423	*Washingtonia robusta*	Mexican fan palm	1	13	13					75	12	Fair	Fair		Indirect - BVP	N/A		6313879.64	1979858.81
424	*Washingtonia robusta*	Mexican fan palm	1	13	13					75	12	Fair	Fair		Preservation	N/A		6313877.49	1979875.92
425	*Washingtonia robusta*	Mexican fan palm	1	15	15					75	12	Fair	Fair		Preservation	N/A		6313879.09	1979905.33
426	*Washingtonia robusta*	Mexican fan palm	1	15	15					55	12	Fair	Fair		Preservation	N/A		6313884.64	1979915.84
427	*Washingtonia robusta*	Mexican fan palm	1	15	15					55	12	Fair	Fair		Preservation	N/A		6313882.76	1979891.36
428	*Quercus agrifolia*	Coast live oak	2	19.105	14	13				30	25	Fair	Fair		Preservation	N/A		6313902.61	1979878.78
429	*Quercus agrifolia*	Coast live oak	1	14	14					30	20	Fair	Fair		Preservation	N/A		6313905.41	1979877.63
430	*Quercus agrifolia*	Coast live oak	1	6	6					8	6	Poor	Poor		Preservation	N/A		6313917.56	1979852.61
431	*Quercus agrifolia*	Coast live oak	1	10	10					14	4	Poor	Poor		Preservation	N/A		6313923.36	1979864.77
432	*Quercus agrifolia*	Coast live oak	5	24.779	14	15	11	6	6	30	35	Poor	Poor		Preservation	N/A		6313927.14	1979860.13
433	*Quercus agrifolia*	Coast live oak	1	12	12					30	16	Poor	Poor		Preservation	N/A		6313920.27	1979865.52
434	*Quercus agrifolia*	Coast live oak	2	3.16228	3	1				16	12	Fair	Fair		Preservation	N/A		6313914.9	1979899.65
435	*Quercus agrifolia*	Coast live oak	1	6	6					20	8	Fair	Fair		Preservation	N/A		6313900.53	1979907.82
436	*Quercus agrifolia*	Coast live oak	1	6	6					20	8	Fair	Fair		Preservation	N/A		6313910.04	1979914.6
437	*Quercus agrifolia*	Coast live oak	1	20	20					45	55	Fair	Fair		Preservation	N/A		6313917.08	1979923.32
438	*Quercus agrifolia*	Coast live oak	1	14	14					24	18	Fair	Fair		Preservation	N/A		6313920.84	1979933.8
439	*Quercus agrifolia*	Coast live oak	1	16	16					38	40	Fair	Fair		Preservation	N/A		6313930.47	1979926.39
440	*Washingtonia robusta*	Mexican fan palm	1	12	12					16	12	Fair	Fair		Preservation	N/A		6313912.71	1979946.52
441	*Quercus agrifolia*	Coast live oak	1	15	15					35	25	Fair	Fair		Preservation	N/A		6313931.26	1979944.26
442	*Quercus agrifolia*	Coast live oak	2	19.105	13	14				30	25	Fair	Fair		Preservation	N/A		6313930.13	1979956.24
443	*Quercus agrifolia*	Coast live oak	1	14	14					12	25	Fair	Fair		Preservation	N/A		6313937.89	1979960.18
444	*Quercus agrifolia*	Coast live oak	1	14	14					38	25	Fair	Fair		Indirect - Grading	N/A		6313957.06	1979966.15
445	*Quercus agrifolia*	Coast live oak	1	11	11					18	12	Fair	Fair		Indirect - Grading	N/A		6313960.74	1979974.49
446	*Quercus agrifolia*	Coast live oak	2	13.9284	13	5				18	15	Fair	Fair		Indirect - Grading	N/A		6313959.25	1979977.45
447	*Quercus agrifolia*	Coast live oak	1	6	6					8	4	Fair	Fair		Indirect - Grading	N/A		6313960.08	1979985.7
448	*Washingtonia robusta*	Mexican fan palm	1	14	14					65	12	Fair	Fair		Preservation	N/A		6313938.84	1979981.79
449	*Phoenix canariensis*	Canary island date palm	1	32	32					18	20	Fair	Fair		Preservation	N/A		6313919.55	1979973.44
450	*Phoenix canariensis*	Canary island date palm	1	32	32					24	20	Fair	Fair		Preservation	N/A		6313930.35	1979999.39
451	*Quercus agrifolia*	Coast live oak	1	7	7					22	8	Fair	Fair		Indirect - Grading	N/A		6313966.65	1979992.79
452	*Quercus agrifolia*	Coast live oak	1	19	19					35	40	Fair	Fair		Encroachment - Grading	1		6313975.67	1980018.01
453	*Quercus agrifolia*	Coast live oak	1	22	22					30	38	Fair	Fair		Indirect - Grading	N/A		6313965.43	1980012.27
454	*Quercus agrifolia*	Coast live oak	1	18	18					28	30	Fair	Fair		Encroachment - Grading	1.00		6313975.11	1980036
455	*Quercus agrifolia*	Coast live oak	2	13.4536	10	9				25	28	Fair	Fair		Preservation	N/A		6313963.9	1980040.69
456	*Quercus agrifolia*	Coast live oak	1	6	6					14	8	Fair	Fair		Preservation	N/A		6313951.73	1980044.04
457	*Quercus agrifolia*	Coast live oak	1	15	15					35	20	Fair	Fair		Preservation	N/A		6313940.6	1980038.77
458	*Quercus agrifolia*	Coast live oak	2	14.4222	12	8				30	24	Fair	Fair		Preservation	N/A		6313949.9	1980048.35
459	*Salix laevigata*	Red willow	1	14	14					25	20	Fair	Fair		Preservation	N/A		6313933.1	1980049.14
460	*Phoenix canariensis*	Canary island date palm	1	14	14					6	18	Fair	Fair		Preservation	N/A		6313909.21	1980039.35
461	*Quercus agrifolia*	Coast live oak	1	9	9					35	14	Fair	Fair		Preservation	N/A		6313915.53	1980048.32

Appedix C - Tree Information Matrices

Tree #	Botanical Name	Common Name	Stems	D.B.H (in.)*	Individual Stem Diameter at Breast Height (in.)					Height (ft.)	Canopy (ft.)	Health	Structure	Protected	Tree Disposition	Mitigation Requirement	Notes	X	Y
					D1	D2	D3	D4	D5										
462	*Quercus agrifolia*	Coast live oak	1	4	4					18	6	Fair	Fair		Preservation	N/A		6313921.16	1980060.22
463	*Quercus agrifolia*	Coast live oak	1	4	4					18	6	Fair	Fair		Preservation	N/A		6313908.85	1980057.6
464	*Quercus agrifolia*	Coast live oak	1	13	13					30	22	Fair	Fair		Preservation	N/A		6313918.36	1980073.59
465	*Quercus agrifolia*	Coast live oak	2	12.53	11	6				30	18	Fair	Fair		Preservation	N/A		6313911.83	1980085.03
466	*Quercus agrifolia*	Coast live oak	1	6	6					24	8	Fair	Fair		Preservation	N/A		6313912.33	1980090.77
467	*Quercus agrifolia*	Coast live oak	2	19.799	14	14				40	28	Fair	Fair		Preservation	N/A		6313925.61	1980096.09
468	*Quercus agrifolia*	Coast live oak	1	43	43					40	30	Fair	Fair		Preservation	N/A		6313933.05	1980074.97
469	*Quercus agrifolia*	Coast live oak	1	9	9					14	8	Fair	Fair		Preservation	N/A		6313944	1980071.57
470	*Washingtonia robusta*	Mexican fan palm	1	12	12					20	10	Fair	Fair		Preservation	N/A		6313899.82	1980104.86
471	*Washingtonia robusta*	Mexican fan palm	1	12	12					20	10	Fair	Fair		Indirect - BVP	N/A		6313888.46	1980107.89
472	*Quercus agrifolia*	Coast live oak	1	8	8					15	12	Fair	Fair		Indirect - BVP	N/A		6313896.6	1980121.8
473	*Quercus agrifolia*	Coast live oak	1	4	4					13	8	Fair	Fair		Preservation	N/A		6313906.82	1980112.64
474	*Quercus agrifolia*	Coast live oak	3	4.12311	3	2	2			13	8	Fair	Fair		Indirect - BVP	N/A		6313910.65	1980128.73
475	*Quercus agrifolia*	Coast live oak	1	5	5					14	10	Fair	Fair		Preservation	N/A		6313918.57	1980114.48
476	*Quercus agrifolia*	Coast live oak	1	6	6					14	5	Fair	Fair		Preservation	N/A		6313937.95	1980111.77
477	*Quercus agrifolia*	Coast live oak	1	4	4					14	5	Fair	Fair		Preservation	N/A		6313942.44	1980103.17
478	*Quercus agrifolia*	Coast live oak	4	9.64365	4	6	5	4		14	5	Fair	Fair		Indirect - Grading	N/A		6313976.71	1980070.71
479	*Quercus agrifolia*	Coast live oak	1	8	8					20	10	Fair	Fair		Indirect - Grading	N/A		6313982.59	1980090.85
480	*Quercus agrifolia*	Coast live oak	2	10	8	6				20	10	Fair	Fair		Indirect - Grading	N/A		6313984.45	1980099.48
481	*Quercus agrifolia*	Coast live oak	1	14	14					35	20	Fair	Fair		Preservation	N/A		6313974.79	1980101.64
482	*Quercus agrifolia*	Coast live oak	1	11	11					15	10	Fair	Fair		Indirect - Grading	N/A		6313982.51	1980111
483	*Quercus agrifolia*	Coast live oak	2	3.16228	3	1				12	6	Fair	Fair		Preservation	N/A		6313975.93	1980110.59
484	*Quercus agrifolia*	Coast live oak	2	17.8885	16	8				40	50	Fair	Fair		Preservation	N/A		6313960.98	1980092.52
485	*Quercus agrifolia*	Coast live oak	1	15	15					25	24	Fair	Fair		Preservation	N/A		6313976.02	1980115.14
486	*Quercus agrifolia*	Coast live oak	1	9	9					20	14	Fair	Fair		Preservation	N/A		6313970.94	1980117.97
487	*Quercus agrifolia*	Coast live oak	1	4	4					13	8	Fair	Fair		Preservation	N/A		6313963.11	1980132.77
488	*Quercus agrifolia*	Coast live oak	1	9	9					18	12	Fair	Fair		Preservation	N/A		6313960.8	1980141.19
489	*Quercus agrifolia*	Coast live oak	1	12	12					18	12	Fair	Fair		Preservation	N/A		6313952.39	1980147.98

APPENDIX D

Tree Locations by Impact Type

Choya Canyon Rd

Choya Canyon Rd

Choya Canyon Rd

Choya Canyon Rd

Bear Valley Pkwy

Bear Valley Pkwy

Basin

Encino Dr

Legend

Botanical Name

Disposition

- Encroachment - Bear Valley Parkway (28)
- Encroachment - Grading (11)
- Indirect - BVP (60)
- Indirect - Grading (21)
- Preservation (259)
- Remove - Bear Valley Parkway (60)
- Remove - Grading (50)

Impacts

Impact_Type, Impact_Category

- Development
- Fuel modification
- Off-Site
- Open Space
- No Impacts - Other Parcel

0 100 200 Feet

DUDEK

7833

SOURCE: Bing 2015

Appendix D

Tree Impact Disposition

BEAR VALLEY PARKWAYARBORIST REPORT

Path: Z:\Projects\7833\01\MAPDOC\MAPS\Tree Appendix_X_Tree Impact.mxd Disposition.mxd

APPENDIX E

Mitigation Measures

The following sections are included as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.

Tree Protection Measures Prior to Construction

Prior to any grading activity, preserved trees that fall within 500 feet of construction activity shall be protected by fencing and signage. All contractors shall be made aware of the tree protection measures.

Fencing: A 4-foot high, orange-webbing, polypropylene barricade fence with tree protection signs shall be erected around all trees (or tree groups) to be preserved. The protective fence should be installed ten feet beyond the dripline of the tree. This will delineate the tree protection area and prevent unwanted activity in and around the trees in order to reduce soil compaction in the root zones of the trees and other damage from heavy equipment. The fence webbing shall be secured to 6-foot, heavy gauge t-bar line posts, pounded in the ground a minimum of 18-inches and spaced 8-feet on-center. Fence webbing will be attached to t-bar posts with minimum 14-gage wire fastened to the top, middle and bottom of each post. Tree protection signs should be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities are complete.

Pre-Construction Meeting: A pre-construction meeting shall be held between all contractors (including grading, tree removal/pruning, builders, etc.) and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, shall provide written acknowledgement of their receiving tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

Protection and Maintenance During Construction

Once construction activities have begun the following measures shall be adhered to:

Equipment Operation and Storage: Avoid heavy equipment operation around the trees. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles should, at minimum, stay out of the fenced tree protection zone, unless where specifically approved in writing and under the supervision of a Certified Arborist.

Storage and Disposal: Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the protection zone. Remove all foreign debris within the protection zone; it is important to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as: gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked at least 50 feet away from retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

Grade Changes: Grade changes, including adding fill, are not permitted within the tree protection zone, without special written authorization and under supervision by a Certified Arborist. Lowering

the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around the tree (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red ribbon. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using ISA standards.

Root Pruning: Except where specifically approved in writing, all trenching shall be outside of the fenced protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary.

Irrigation: Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first twelve months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every two to four weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced protection zone ***but never soaking the area located within 6- feet of the tree trunk, especially during warmer months***.

Pruning: Do not prune any of the trees until all construction is completed. This will help protect the tree canopies from damage. All pruning shall be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only dead wood shall be removed from tree canopies.

Washing: During construction in summer and autumn months, wash foliage of trees adjacent to the construction sites with a strong water stream every two weeks in early hours before 10:00 a.m. to control mite and insect populations.

Inspection: An ISA Certified Arborist shall inspect the impacted preserved trees on a monthly basis during construction. A report comparing tree health and condition to the original, pre-construction baseline shall be submitted following each inspection. Photographs of representative trees are to be included in the report on a minimum annual basis.

Maintenance After Construction

Once construction is complete the fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

Mulch: Provide a 4-inch mulch layer under the canopy of trees. Mulch should include clean, organic mulch that will provide long-term soil conditioning, soil moisture retention, and soil temperature control.

Pruning: The trees will not require regular pruning. Pruning should *only* be done to maintain clearance and remove broken, dead or diseased branches. Pruning shall only take place following a

recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 15% of the canopy shall be removed at any one time. All pruning shall conform to International Society of Arboriculture standards.

Watering: The natural trees that are not disturbed should not require regular irrigation, other than the twelve months following substantial root pruning. However, soil probing will be necessary to accurately monitor moisture levels. Especially in years with low winter rainfall, supplemental irrigation for the trees that sustained root pruning and any newly planted trees may be necessary. The trees should be irrigated *only* during the winter and spring months.

Watering Adjacent Plant Material: All plants near the trees shall be compatible with water requirements of said trees. The surrounding plants should be watered infrequently with deep soaks and allowed to dry out in-between, rather than frequent light irrigation. The soil shall not be allowed to become saturated or stay continually wet. Irrigation spray shall not hit the trunk of any tree. A 60-inch dry-zone shall be maintained around all tree trunks. An above ground micro-spray irrigation system is recommended over typical underground pop-up sprays.

Washing: Periodic washing of the foliage is recommended during construction but no more than once every two weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

Spraying: If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

Inspection: All trees that were impacted during construction within the tree protection zone should be monitored by an ISA Certified Arborist for the first five years after construction completion. The Arborist shall submit an annual report, photograph each tree and compare tree health and condition to the original, pre-construction baseline.

APPENDIX F

Landscape Concept Plans

BEAR VALLEY PKWY

O.S. LOT "A"
2.39 AC

O.S. LOT "B"
1.18 AC

O.S. LOT "H"
8.05 AC

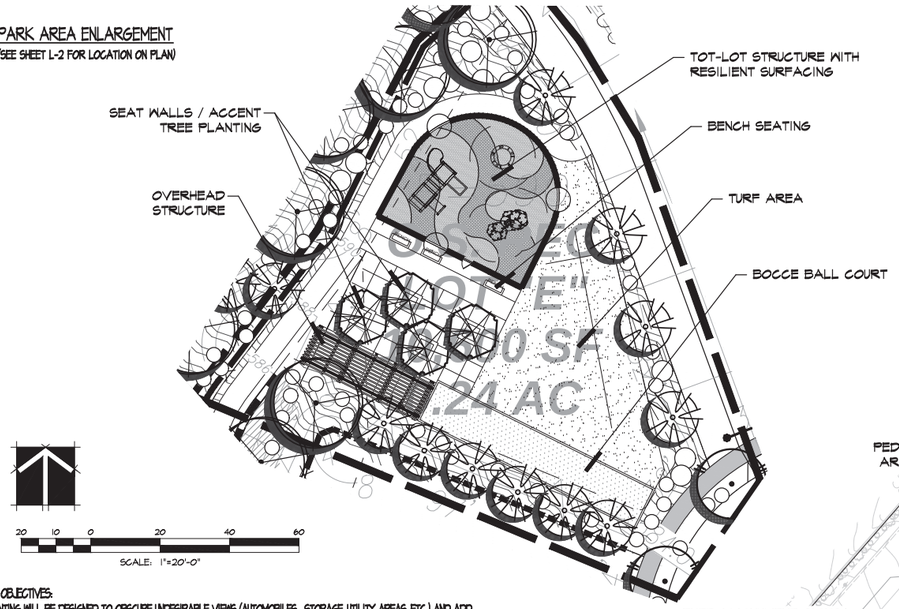
PARK

50' FUEL MOD

NOT A PART

PARK AREA ENLARGEMENT

(SEE SHEET L-2 FOR LOCATION ON PLAN)



DESIGN OBJECTIVES:

1. PLANTING WILL BE DESIGNED TO OBSCURE UNDESIRABLE VIEWS (AUTOMOBILES, STORAGE, UTILITY AREAS, ETC.) AND ADD CHARACTER AND INTEREST TO THE PROJECT.
2. ARCHITECTURAL ELEMENTS OF THE SITE WILL BE RELATED AND ENHANCED WITH PLANTING OF SIMILAR DESIGN CHARACTER.
3. ALL PLANT MATERIAL SELECTED FOR USE WILL BE OF A TYPE KNOWN TO BE SUCCESSFUL IN THE AREA OR IN SIMILAR CLIMATIC AND SOIL CONDITIONS.
4. COLOR FROM PLANT FOLIAGE, BARK OR FLOWERS WILL BE UTILIZED TO CREATE A FRIENDLY, WARM AND VISUALLY EXCITING LANDSCAPE ENVIRONMENT. THEMATIC COLOR SCHEMES WILL BE UTILIZED IN DEVELOPING PROJECT IDENTITY.
5. ALL OUTDOOR STORAGE, LOADING, REFUSE AND UTILITY AREAS WILL BE VISUALLY SCREENED ON ALL SIDES (EXCEPT AT ACCESS POINTS). PLANNING WILL BE USED TO SOFTEN HARD MATERIALS WHERE SUCH ARE USED FOR SCREENING.
6. VEHICULAR ENTRANCES WILL BE IDENTIFIED AND ACCENTED WITH SPECIAL GROUPINGS OF TREES, SHRUBS AND/OR GROUNDCOVERS.
7. SLOPE PLANTINGS, HYDROSEEDING AND MULCHING PROCESSES ARE INTENDED TO TAKE PLACE DURING THE APPROPRIATE SEASONS OF LATE FALL OR WINTER (NOVEMBER THROUGH FEBRUARY) FOR OPTIMUM RESULTS.
8. LANDSCAPE FINISH GRADING OBJECTIVES WILL INCLUDE POSITIVE SURFACE DRAINAGE OF PLANTED AREAS THROUGHOUT THE SITE.
9. IRRIGATION SYSTEMS WILL BE PERMANENT BELOW GROUND AUTOMATED SYSTEMS, WHERE ALLOWED, FOR THE ESTABLISHMENT AND MAINTENANCE OF ALL PLANT MATERIAL. THESE SYSTEMS WILL BE INSTALLED AS SOON AS PRACTICAL AFTER GRADING AND PRIOR TO PLANT MATERIAL INSTALLATION AND HYDROSEEDING. THE IRRIGATION SYSTEM SHALL CONSIST OF LOW PRECIPITATION RATE SPRAY HEADS FOR LAWN, GROUND COVER, AND SHRUB PLANTER AREAS. ALL SLOPES SHALL BE IRRIGATED WITH SPRAY AND ROTOR HEADS. MICRO SPRAY HEADS MAY BE USED WHERE REASONABLE.
10. ALL SOILS WILL BE FERTILIZED, AMENDED, AND TILLED TO CONFORM TO RECOMMENDATIONS MADE BY A SOIL TESTING LABORATORY AND/OR LANDSCAPE ARCHITECT IN ORDER TO PROMOTE HEALTHY AND VIGOROUS PLANT GROWTH.
11. ALL PLANTING AREAS WILL BE MAINTAINED IN A WEED AND DEBRIS FREE CONDITION.
12. ALL LANDSCAPING SHALL BE MAINTAINED BY HOMEOWNER'S ASSOCIATION. MINOR FRONT, SIDE AND REAR YARD SLOPES SHALL BE MAINTAINED BY THE PROPERTY OWNER.

PROPOSED BMPS NOTE:

ALL MANUFACTURED SLOPES SHALL BE SPRAYED WITH A BONDED FIBER MTRIX (BFM) AFTER GRADING TO PREVENT EROSION.

NOTE A:

PROPOSED LANDSCAPING WITHIN SIGHT VISIBILITY AREAS SHALL BE PLACED SO AS NOT TO OBSCURE VIEWS WHEN INSTALLED OR AT MATURITY. SHRUBS WITHIN THIS AREA SHALL BE NO TALLER THAN 30" AND TREES SHALL BE TRIMMED UP 6' FROM THE GROUND.

NOTE B:

ALL PLANTING BEDS SHALL RECEIVE A MINIMUM OF 2 INCHES OF ORGANIC MULCH TO FURTHER HELP CONSERVE WATER.

PLANTING LEGEND

COASTAL SAGE SCRUB RE-VEGETATION AREAS

SYMBOL	BOTANICAL	COMMON NAME	SIZE	WUCOLS	QTY.
	TREES				
	QUERCUS AGRIFOLIA	CALIFORNIA LIVE OAK	15 GAL.	L	138
	SAMBUCUS MEXICANA	BLUE ELDERBERRY	24" BOX	L	144
	SHRUBS				
	ARTEMISIA CALIFORNICA	COASTAL SAGEBRUSH	1 GAL.	L	OUTSIDE OF BRUSH MANAGEMENT ZONES
	BACCHARIS SAROTHROIDES	DESERT BROOM	1 GAL.	L	
	ERIOGONUM FASCICULATUM	FLAT TOP BUCKWHEAT	1 GAL.	L	OUTSIDE OF BRUSH MANAGEMENT ZONES
	HETEROMELES ARBUTIFOLIA	TOYON	5 GAL.	L	
	MALOSMA LAURINA	LAUREL SUMAC	5 GAL.	L	
	RHUS INTEGRIFOLIA	LEMONADE BERRY	5 GAL.	L	
	YUCCA WHIPPLEI	LORD'S CANDLE	1 GAL.	L	

HYDROSEED MIX

BOTANICAL	COMMON NAME	PURITY	GERMINATION	LIVE SEED	LBS/ACRE
DICHELOSTEMMA CAPITATUM	BLUE DICKS	90	80	80	4
ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	98	80	85	2
LASTHENIA CALIFORNICA	GOLDFIELDS	90	85	85	3
ELYMUS TRITICOIDES	CREEPING WILD RYE	90	80	80	2
LUPINUS BICOLOR	LUPINE	98	85	90	3
MELICA IMPERFECTA	MELIC	80	60	70	2
MUHLENBERGIA MICROSPERMA	LITTLESEED MUHLY	80	60	50	4 OUTSIDE OF BRUSH MANAGEMENT ZONES
STIPA PULCHRA	PURPLE NEEDLEGRASS	90	80	75	6
PLANTAGO ERECTA	DOT-SEED PLANTAIN	80	80	70	3
SISYRINCHIUM BELLUM	BLUE-EYED GRASS	95	75	80	4

PRIVATE/H.O.A. DROUGHT TOLERANT SLOPE LANDSCAPE AREAS

SYMBOL	BOTANICAL	COMMON NAME	SIZE	SPACING	WUCOLS	QTY.
	TREES					
	QUERCUS AGRIFOLIA	CALIFORNIA LIVE OAK	15 GAL.	PER PLAN	L	86
	CERCIS OCCIDENTALIS	WESTERN REDBUD	15 GAL.	PER PLAN	L	147
	CERCIDIUM 'DESERT MUSEUM'	DESERT MUSEUM PALO VERDE	15 GAL.	PER PLAN	L	4
	SHRUBS					
	ALOE STRIATA	CORAL ALOE	5 GAL.	PER PLAN	L	
	AGAVE ATTENUATA	FOXTAIL AGAVE	5 GAL.	PER PLAN	L	
	ARBUTUS UNEDO	STRAWBERRY TREE	5 GAL.	PER PLAN	L	
	CISTUS X PURPUREUS	ORCHID ROCKROSE	5 GAL.	PER PLAN	L	
	MUHLENBERGIA C. 'REGAL MIST'	REGAL MIST GRASS	1 GAL.	PER PLAN	M	OUTSIDE OF BRUSH MANAGEMENT ZONES
	SALVIA GREGGII	AUTUMN SAGE	5 GAL.	PER PLAN	L	OUTSIDE OF BRUSH MANAGEMENT ZONES
	SALVIA LEUCANTHA	MEXICAN BUSH SAGE	5 GAL.	PER PLAN	L	OUTSIDE OF BRUSH MANAGEMENT ZONES
	GROUNDCOVER					
	BACCHARIS P. 'TWIN PEAKS'	DWARF COYOTE BRUSH	FLATS	18" O.C.	L	
	SENECIO MANDRALISCAE	BLUE CHALK STICKS	FLATS	18" O.C.	L	

STREET / BIO-RETENTION / PARK LANDSCAPE AREAS

SYMBOL	BOTANICAL	COMMON NAME	SIZE	SPACING	WUCOLS	QTY.
	STREET TREES					
	METROSIDEROS EXCELSA	NEW ZEALAND CHRISTMAS TREE	24" BOX	PER PLAN	L	197
	PYRUS CALLERYANA 'CHANTICLEER'	FLOWERING PEAR	24" BOX	PER PLAN	L	57
	PODOCARPUS GRACILIOR	FERN PINE	24" BOX	PER PLAN	L	-
	QUERCUS AGRIFOLIA	COAST LIVE OAK	24" BOX	PER PLAN	M	-
	QUERCUS ILEX	HOLLY OAK	24" BOX	PER PLAN	L	-
	BIO-RETENTION AREAS					
	MUHLENBERGIA C. 'REGAL MIST'	REGAL MIST GRASS	1 GAL.	PER PLAN	L	OUTSIDE OF BRUSH MANAGEMENT ZONES
	CAREX PRAEGRACILIS	FIELD SEDGE	FLATS	18" O.C.	M	
	CAREX TUMULICOLA	BERKELEY SEDGE	FLATS	18" O.C.	M	
	TURF					
	MARATHON II - SOD					

FENCING LEGEND

- MOW CURB
- 5' CMU WALL
- 5' WOOD/VINYL FENCE
- 5' TUBULAR STEEL FENCE
- 42" TUBULAR STEEL FENCE
- TRAIL FENCE

50 25 0 50 100 150
SCALE: 1"=50'-0"

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LANDSCAPE CONCEPT PLAN

661 BEAR VALLEY

City of Escondido, California

SHEET 2 OF 4

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FENCING LEGEND

- MOW CURB
- 5' CMU WALL
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	ERIOGONUM FASCICULATUM	FLAT TOP BUCKWHEAT	1 GAL.	L	OUTSIDE OF BRUSH MANAGEMENT ZONES
	HETEROMELES ARBUTIFOLIA	TOYON	5 GAL.	L	
	MALOSMA LAURINA	LAUREL SUMAC	5 GAL.	L	
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	GROUNDCOVER					
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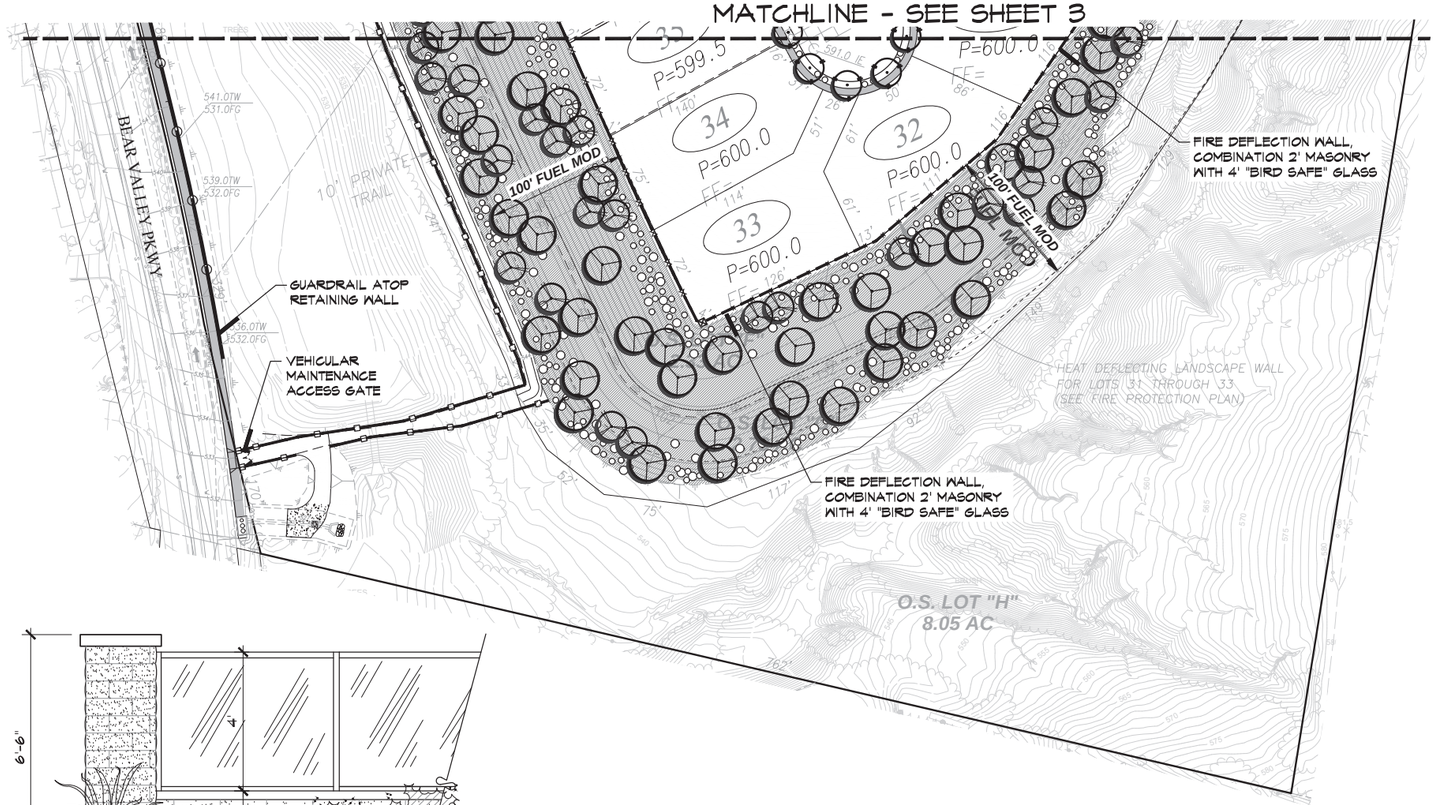

6' FIRE DEFLECTION WALL - 2' SLUMP BLOCK W/ WITH 4' "BIRD SAFE" GLASS

PLANTING LEGEND

COASTAL SAGE SCRUB RE-VEGETATION AREAS

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	TURF						
	MARATHON II - SOD						

SUMMARY OF LANDSCAPE CALCULATIONS:

AREA

Total Area of Site (sq. ft.)	1,537,746
Total Landscape Area (sq. ft.)	460,368
Total Area Landscapes + Turf (sq. ft.)	2,605
Turf to Landscape Area Ratio	1%

WATER USAGE

Estimated Annual Water Usage (cu. Ft./yr)	757,962.23
Estimated Annual Water Usage (hcf/yr)	7579.6223*2

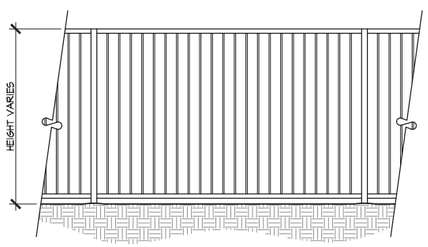
Monogram — METER "A" / CONTROLLER "A"

ESTIMATED WATER USE

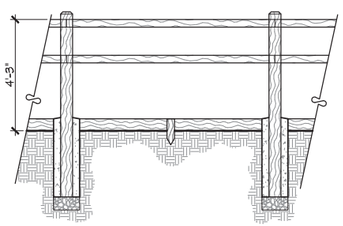
EWU (GPD) = $\frac{ETo \times PF \times HA \times .62}{IE}$

ETo	=	0.134	AVG. DAILY Eto — 50 per year
PF	=	0.5	SHRUBS & GROUND COVER (SPRAY&ROTOR)
		0.8	TURF (SPRAY & ROTOR)
		0.5	SHRUBS (POINT SOURCE & DRIPLINE)
HA	=		SEE BELOW FOR SQUARE FOOTAGE
0.62	=		CONVERSION FACTOR OF INCHES TO GPD
IE	=	0.85	ROTORS
		0.6	SPRAYS
		0.9	DRIP
		0.85	BUBBLERS

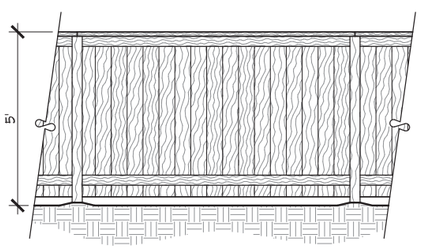
ZONE TYPE	AREA (SQ FT)			
TURF ROTORS	2,605	EWU = (Eto x 0.8 x HA x .62)/.85	208.31	GPD
SHRUB DRIP	457,762	EWU = (Eto x 0.5 x HA x .62)/.90	21,599.12	GPD
TOTAL SQ. FEET:	460,368	EWU =	21807.43 GPD	
ACRE	10.57		5,669,932 GPY*	17.40 AC FT/yr
	*"EWU based on watering 5days per week, 52 weeks per year, with no effective rainfall"			757962.23 CU.FT/yr
MAWA=Eto x 0.7 x AREA x 0.62		DAILY MAWA	27.370	
		YEARLY MAWA	9,989.986 GPY	30.66 AC FT



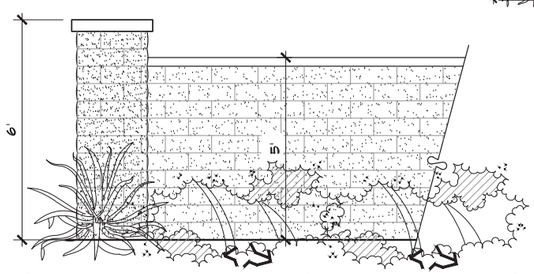
TUBULAR STEEL FENCE



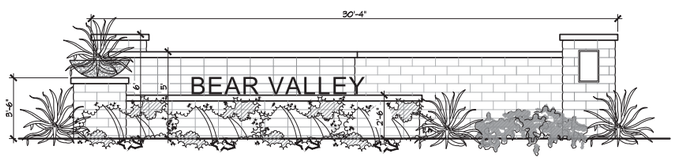
TRAIL FENCE



5'-0" WOOD/VINYL FENCE



6' SLUMP BLOCK PILASTER AND 5' SLUMP BLOCK WALL W/ STUCCO



BEAR VALLEY ENTRY MONUMENT

FENCING LEGEND

- MOW CURB
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