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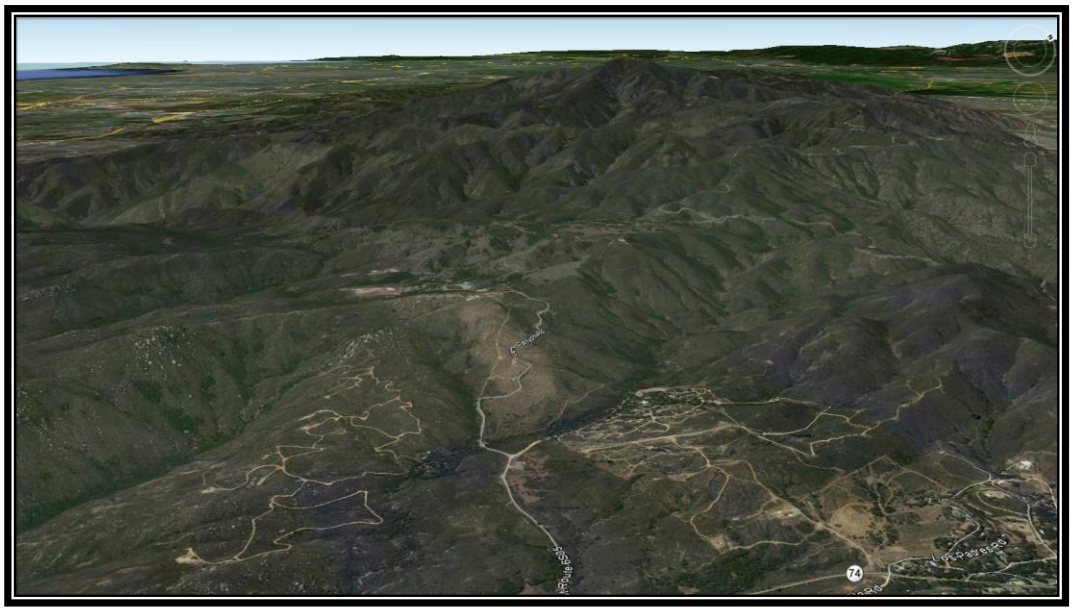
The Preserve at San Juan
Tree Management and Preservation Plan



Prepared for:

The Preserve at San Juan LLC
100 Pacifica, Suite 345
Irvine, California 92618
Contact: Jeff Weber

Prepared by:

DUDEK

605 Third Street
Encinitas, California 92024
Contact: Michael Huff
760.942.5147

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EXECUTIVE SUMMARY

Dudek evaluated and recorded information about native trees and prepared this Tree Management and Preservation Plan (TMPP) for the proposed Preserve at San Juan (The Preserve) project. Primary topics of this TMPP include recommendations regarding tree protection, relocation, removal, and mitigation. The project site is generally located adjacent to the Cleveland National Forest in eastern Orange County and Western Riverside County (Figure 1).

This TMPP provides a summary of Dudek's inventory and evaluation of the native trees located within the area proposed for the Preserve project. Native tree species within the Study Area (project footprint and adjacent areas) are coast live oak (*Quercus agrifolia*), western cottonwood (*Platanus racemosa*), arroyo willow (*Salix lasiolepsis*) and Coulter pine (*Pinus coulteri*). Dudek's International Society of Arboriculture (ISA) certified arborists performed various functions associated with surveying, inventorying and evaluating the condition of trees within the project area, as described in the following sections. The purpose of this report is to present the physical characteristics, mapped locations, impact levels, proposed disposition, and appropriate mitigation for the project area's native trees. The tree quantities and related project impacts have been analyzed and are reported in the following sections. Based on the anticipated impacts, an ecological approach to impact mitigation has been developed and is presented herein. The mitigation approach is consistent with the State of California's oak mitigation requirements (Public Resources Code 21083.4), but includes a multi-pronged approach to include oak tree plantings in the landscape, the buffer areas (including outer fuel modification zones) and within the site's preserved oak woodlands.

The project site is primarily located in Orange County and this TMPP focuses on the Orange County tree impacts. However, two small portions of the project that will result in oak tree impacts, including the access road and an internal project road, are located within Riverside County. Therefore, a separate Riverside County tree report has been prepared (Appendix A), and will be submitted to Riverside County for approval. For purposes of determining impacts and mitigation, this TMPP considers tree impacts on a project basis and requires mitigation for Orange County impacts to occur in Orange County and mitigation for Riverside County tree impacts to occur in Riverside County. Summaries of the county-specific impacts and mitigation are provided herein.

In summary, the site's native trees and woodlands are characterized as reasonablyhealthy with a sustainable mix of senescent, mature, semi-mature, juvenile, sapling, and seedling tree sizes/ages, with some variation as to the overall distribution of these age classes. Some of the woodlands exhibit an uneven-age stand composition, indicating past and present successful seedling recruitment and regeneration. Current observations of seedling recruitment are

indicative of a healthy and self-regenerative woodland in most of the site's oak-dominated landscapes. The Study Area inventory resulted in four native species, dominated by coast live oak. There are a total of 747 coast live oaks, 92 western sycamores, 7 arroyo willows and 1 Coulter pine in the Study Area. Additionally, there are a calculated 2,339 trees within the preserved portions of the project site outside of the Study Area. The combined total for both trees within the project Study Area (847) and trees outside of the project footprint within preserved areas (2,339) is 3,186 trees It is anticipated that 201 trees (6.3%) will be impacted by the proposed project. All of these trees will require removal and replacement by mitigation planting based on the proposed footprint. Approximately 3.9% of the trees in the study area (123 trees), are dead or in poor condition.

The project would potentially impact up to 201 trees in Orange County and 91 trees in Riverside County[1]. The majority of these trees are native coast live oaks. As indicated by the low percentage of impacted trees, project planners worked with Dudek arborists and foresters to minimize oak impacts. However, given the project footprint, engineering and grading requirements, and fuel modification areas, complete avoidance of tree impacts is not possible. Despite expected project-related impacts, over 2,985 trees, roughly 93.7% of the site's trees, primarily native coast live oaks, are preserved.

The summary of mitigation measures that follows is an overview of the comprehensive mitigation plan proposed for this project and detailed in Section 5.0, the Mitigation Program section of this TMPP.

The mitigation program outlined for this project will result in favorable tree replacement preservation ratios while meeting the intent of local and state native tree mitigation requirements. The mitigation program focuses on proportional oak preservation and tree planting to compensate for the the loss of woodlands. As such, this TMPP details appropriate tree mitigation including avoidance and preservation, tree planting within the landscape, buffer and preserved areas, and a comprehensive monitoring program to enhance the capability of preserved oak woodlands to achieve natural regeneration and quality improvements over the long term.

Proposed Mitigation includes:

1. Avoidance and preservation of approximately 93.7% of the trees on site.
2. Landscape oak tree plantings to incorporate native trees in the developed portions of the site for an ecologically sensitive approach to the developed area landscapes

[1] Because the project includes components in both Riverside and Orange Counties, a discussion of Riverside County tree characteristics, observations, impacts and mitigation can be found in Appendix I – The Preserve at San Juan: Riverside County.

3. Buffer area plantings, including in outer zones of fuel modification zones, to provide a natural transition from wildlands to developed landscapes
4. Potential relocation of select trees, into development landscape, if any meet qualifications to be considered relocation candidates.
5. Collection of acorns from site for direct planting to augment and enhance recruitment in preserved oak woodlands.
6. In-lieu provisions for tree protection (shelters) for existing seedlings as a substitute for up to 500 of the proposed seedling plantings.
7. Adaptive Management program to provide for a robust monitoring program that can adapt to changing climatic and environmental conditions, aiding achievement of mitigation goals.
8. Provision for low-impact maintenance and exotic plant removal in preserved woodlands.
9. Provisions for 7 years of oak mitigation monitoring, consistent with state requirements.

The following sections provide detailed descriptions of the methods employed during this study, notable observations from the site, results of the tree inventory and impact analysis, and customized impact mitigation and monitoring recommendations.

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1.0 ASSIGNMENT AND METHODOLOGY

Dudek was retained by J.P. Weber Group to prepare a Tree Management Plan (TMP) for a portion of a project site that was included in a previous TMP in 2008 for this property and conduct an inventory, assessment and survey of trees on the Preserve project site in the Santa Ana Mountains, located in eastern Orange County (Figure 1). The current proposed project area, which is comprised of two (2) phases, encompasses approximately 583 acres. Phases 1 and 2 are physically separated by Long Canyon Road in Orange County.

Because the County of Orange does not currently enforce an oak protection/management ordinance, oaks in unincorporated portions of the county are subject to management guidelines outlined in Public Resources Code (PRC) 21083.4 (Senate Bill 1334, as adopted). PRC 21083.4 sets forth requirements for oak tree protection and mitigation and defines oak trees as those trees with a minimum trunk diameter of 5 inches. Furthermore, California State Public Resources CODE (PRC) 21083.4 contains provisions for counties to mitigate impacts to oak-dominated habitats that are considered significant under CEQA and for which there is no oak preservation ordinance or regulation in place. Specifically, an Oak Tree Management Plan must be submitted as a component of the oak tree permit application and shall address site oak tree characteristics, locations, protection measures to be implemented during construction, and mitigation for those trees impacted by development activity.

In addition to addressing potential oak tree impacts on the site, Dudek's International Society of Arboriculture (ISA) certified arborists and foresters evaluated non-oak tree species, including sycamores, pines, and willows, and recorded size and health information. This TMPP provides a site-specific analysis identifying the impact level of the proposed project on the site's trees, including both native oaks and other non-listed, native trees. It also provides methods for reducing or avoiding adverse impacts to the property's tree resources and details a customized mitigation program.

Based on tree and woodland location in relation to proposed project land use types, Dudek conducted two different inventory and assessment efforts for trees on the project site. Trees within the proposed project "Study Area" were individually inventoried and evaluated, and locations were mapped using Global Positioning System (GPS) technology (Appendix B and Appendix C). The Study area includes the project footprint as well as a 200-foot buffer around the footprint. For the areas outside of this, which will not include disturbances or impacts, tree quantity estimates and overall stand attributes for woodlands were evaluated by woodland sampling efforts. Individual tree inventory and woodland sampling techniques are discussed in greater detail in the following sections.

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June 2013

FIGURE 1

Regional Map

The Preserve at San Juan

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1.1 Category 1 - Trees within the Project Study Area

The Study Area for the project site is defined as the maximum composite extent of proposed grading and other impact areas (including road buffers, and fuel modification zones) for both phases 1 and 2 (Appendices B and C) plus a 200-foot buffer zone. Nearly all of the trees meeting minimum size requirements in the Study Area were individually mapped using a Trimble Pathfinder Pro XH GPS receiver. Since tree canopies can sometimes cause loss of satellite lock by blocking the line-of-sight to satellites, an electronic compass and reflectorless electronic distance measuring (EDM) device was also used in mapping tree locations. The EDM/compass combination operates in concert with the Pathfinder system to position offsets, and offset information is automatically attached to the GPS position data string. Raw GPS data was post-processed and the digital tree inventory data was exported for analysis in a geographic information system (GIS). A master tree location database file for the project site was generated and utilized in determining tree position relative to the proposed development boundaries for each project alternative.

GPS inventory efforts were conducted during concentrated field efforts over the course of an approximately three year period, between May 2005 and March 2008 and then updated on May 28th, 29th and June 28th of 2013. Concurrent with GPS mapping efforts, each tree in this Category was tagged with an aluminum tree tag bearing a unique tree identification number, and assessed for species, trunk diameter, tree height, canopy spread, and overall tree health and structural condition. Dudek arborists recorded individual trunk diameters in inches (including all diameters for multiple-stemmed trees), tree height in feet, canopy spread in feet, and overall tree health and structural condition for each assessed tree. Tree health assessment was performed at a resource level and notes general health and structural condition. Trees rated as having poor health include declining vigor, insect infestations, or symptoms indicating disease infection. Trees rated as having fair or good health were generally free of insects and disease and exhibited good vigor.

Individual tree conditions were rated by Dudek's arborists and follow ISA guidelines. Tree parts that were assessed in order to develop an overall condition rating included determining the observable condition of roots, trunks, scaffold branches, smaller branches and twigs, and foliage or buds. Within each of these tree parts, several key indicators were inspected, including those in Table 1.

Table 1
Key Indicators Inspected during Overall Tree Condition Rating

Roots	Trunk	Foliage
anchorage	sound bark and wood	appearance, size, color
injury	upright trunk (taper)	observable nutrient deficiencies
girdling or kinked roots	insects and disease	wilted or dead leaves
insects or disease	swollen or sunken areas	insects or disease

All oaks mapped within this Category meet the definition of "Oak Tree," as defined by the California PRC 21083.4 Oak Tree Guidelines:

> "oak" means a native tree species in the genus Quercus, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height.

Further, all non-oak trees in the Study Area defined by this Category meeting the same minimum trunk diameter requirements were mapped and assessed. This method was utilized to maintain consistency with oak mapping efforts. The result is a comprehensive individual tree inventory for the Study Area totaling 847 individually mapped trees.

Representative photographs of the site's trees are located in Appendix D; and tree attribute details are presented in the Master Tree Information Matrices in Appendix E.

1.2 Category 2 – Trees outside Project Study Area

The tree resources outside the project footprint and buffer area for both phases include scattered individual trees along with numerous large stands of trees. Tree quantities and stand condition information was evaluated between May/June 2005 and updated in May/June 2013. Isolated, individual trees were counted and locations hand-mapped in the field on 200-scale aerial photographs, while larger stands and woodlands were evaluated by the use of standard forestry plot sampling techniques.

Prior to plot sampling efforts in the field, stands and woodlands within this Category were delineated using digital aerial photographs in a GIS and acreages were calculated for each stand. Tree stands, as defined for this project, are wooded areas that include approximately 20% or greater canopy cover as part of a continuous or nearly continuous group of trees and are not necessarily consistent with oak woodland boundaries mapped by project biologists who often

evaluate understory and associated plant species and soils in defining woodland boundaries. To conduct a 15% sample of stands and woodlands, one-tenth acre sample plot center locations were placed in a grid pattern over stands and woodlands and numbered with a unique identification number. Plot sample locations were then randomly selected such that 15% of the stand and woodland would be sampled. Prior to field sampling, selected plot centers were loaded into a GPS unit in order to expedite field plot center location.

The number of plots within a stand or woodland varied with the size of the stand. Data for all trees within each of the one-tenth acre circular plots was collected, consistent with the criteria discussed for Category 1 trees. Following field data collection, tree data was extrapolated, thus allowing Dudek to determine stand or woodland densities (trees per acre) and calculate the total number of trees per stand or woodland (Appendix F – Woodland Preservation Areas). This method of woodland sampling used in deriving tree total estimates is based on statistically sound practices most typically used in traditional forest management inventories. Based on Dudek's calculations, it is estimated that approximately 2,339 trees (2,148 oaks and 191 sycamores) exist in the stands and woodlands located outside the project Study Area (Category 1). This total includes scattered individual trees not associated with stands or woodlands that lie outside the proposed project footprint.

Locations of sampled stands and woodlands, as well as isolated individual trees included in the Category 2 area are presented in Appendix F – Woodland Preservation Areas.

1.3 Riverside County Trees

In addition to updating and collecting tree attribute information in Orange County, Dudek evaluated and recorded information about native oak trees over 2 inches in diameter at breast height (DBH) for the proposed access roadway improvements and an internal project access road, both located in Riverside County. Data collection efforts for the trees in Riverside County followed the same protocol as described in Section 1.1 Category 1 – Trees Within the Project Study Area. Specific details regarding trees located within Riverside County are located in Appendix A – Riverside County Preserve at San Juan Tree Management and Preservation Plan.

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2.0 OBSERVATIONS

2.1 Site Characteristics

The individual parcels that make up Phases 1 and 2 of the project site evaluated within this TMPP are physically separated by Long Canyon Road (Figure 2). The property is a combination of four individual parcels, each of which has been subject to different historical land uses. The property located south of Long Canyon Road (Phase 1) has been relatively undisturbed, while the land north of Long Canyon Road (Phase 2) has been subject to minor development (ad-hoc grading and storage of vehicles and debris) and extensive dirt road construction. The overall site is characterized by steep terrain with flatter ridgetops, valleys, canyons, and plateaus. The steep slopes are vegetated primarily with chaparral vegetation and numerous rock outcroppings occur throughout the site. The majority of oaks and other trees are concentrated heavily in drainages and canyons within tree stands and associated with north facing slopes. Scattered individual oak trees are also found throughout the site. Examples of both the scattered individual oak trees and site characteristics can be found in the site photograph log (Appendix D).

Elevations on the site range from approximately 2,400 feet to just over 3,000 feet above mean sea level (amsl). Slopes exceeding 30% are common, especially in the western portion of the property. Rainfall in the area averages more than 15 inches per year, supporting the heavy chaparral and oak woodlands found in the area (Stephenson and Calcarone 1999). The site's fire history has also played an important role in shaping its vegetation composition and the current distribution of oak and riparian woodlands and chaparral-dominated hillsides. There have been at least two fires burning on the project site since records have been maintained and it is presumed that fire was a relatively frequent occurrence prior to recorded history, much as it has been throughout Southern California. A recent prescribed fire burned onto portions of Phase 1 and Phase 2, resulting in temporary loss of vegetation and damage to oak trees.

2.2 Phase 1 – Woodlands Outside of the Proposed Development Footprint

The oak tree resources outside of the Project Study Area of Phase 1 include scattered individual trees, small tree clusters, groupings of 15 to 40 trees, and larger canyon bottom woodlands. The tallied number of trees for this area, including both sycamore (191 trees) and oak trees (2,148 trees) totals 2,339. The highest value oak resources on this parcel are associated with the large drainage that trends north south through the parcel. This drainage is a steep sided drainage with very limited access. The canyon bottom varies from approximately 125–415 feet wide and includes a perennial or nearly perennial rock and boulder strewn stream. The oak resources in

this area were tallied with a combination tree count for scattered trees and small tree groupings and tree sampling for larger woodland stands.

Along the drainage bottom, oak and sycamore trees occur with densities of up to 115 trees per acre, forming a dense, often closed canopy above the stream. In total, the canyon bottom includes a calculated 1,812 trees. The woodland is a high quality, dynamic woodland with tree classes ranging from seedlings and saplings to mature and senescent trees, although seedlings and sapling populations are not considered robust. This particular woodland is considered the highest quality woodland on the project site, but provides potential opportunities for mitigation planting.

The woodlands outside the drainage bottom, but still within the preserved portion of the parcel, occur primarily in secondary drainages on a steep, east-facing slope that lies to the west of the canyon bottom. These oak tree groupings vary in size and continuity, but generally form dense canopies from mid-slope stretching nearly to the drainage bottom woodland. These woodlands also include scattered sycamore trees, some fairly high up on the slope. The number of trees tallied for the western slope woodlands and scattered, isolated trees is 505. The remaining trees in the preserved portion of the parcel are located as scattered individuals at the top of slope on the eastern side of the large drainage. These trees were individually counted and total 22. These trees are all oaks and do not form dense canopy groupings.

2.3 Tree Characteristics

Overall, the site's native trees represent reasonably healthy woodlands with a variety of age classes, tree sizes, and conditions. When the site was assessed in 2008, there was a notable lack of seedling and sapling sized trees. The 2013 assessments indicate that acorn production and establishment has been strong since that time. Almost every woodland includes a strong population of seedlings and sapling sized trees. At current levels, woodland sustainability has improved substantially from Dudek's first assessment of the site.

There are four native tree species (coast live oak, California sycamore, Coulter pine, and arroyo willow) located on the project site. The following section provides brief summaries of each of the four native tree species, a detailed summary of all tree attribute data be found in Appendix E.

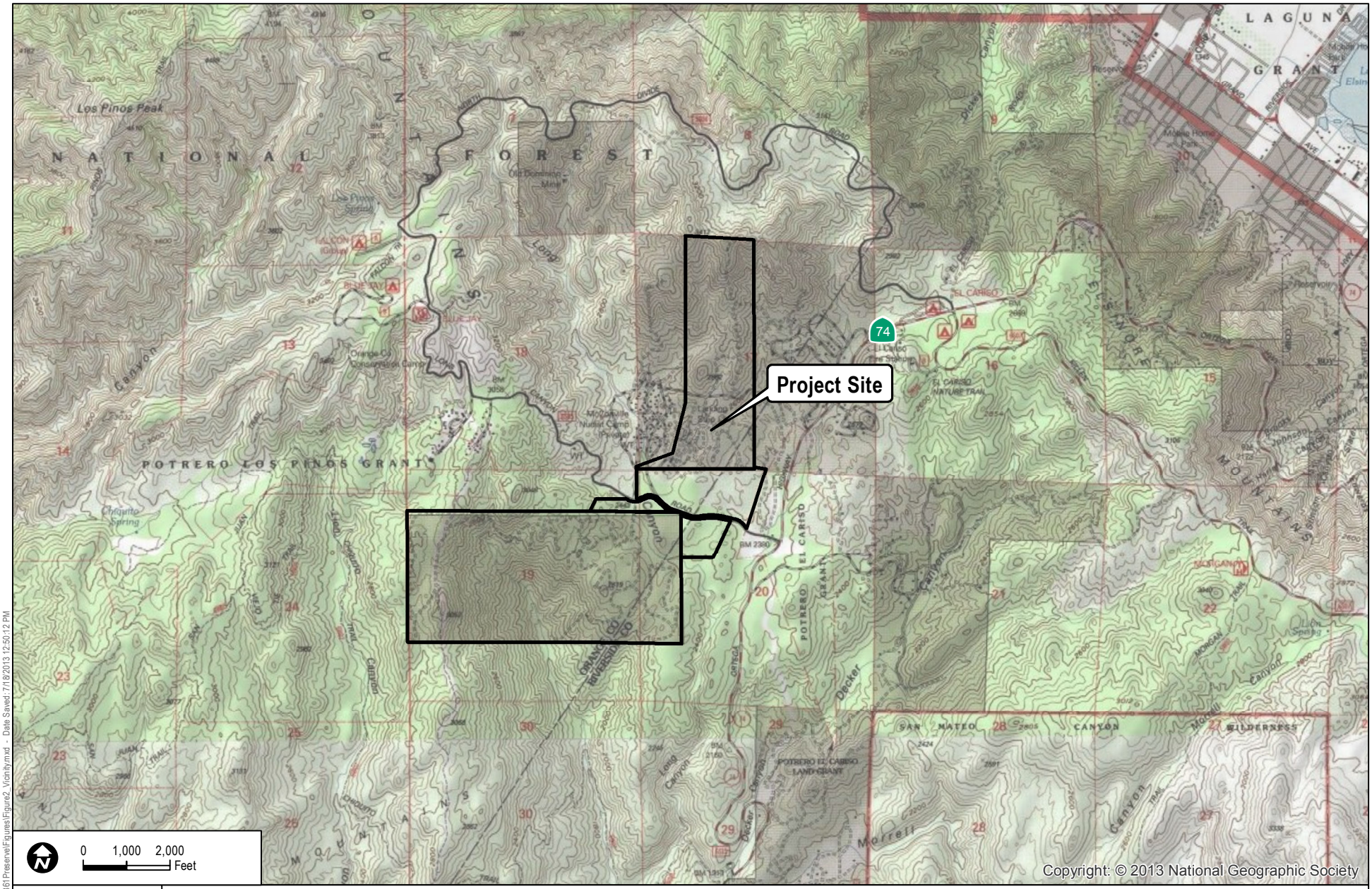

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FIGURE 2

Project Location

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2.3.1 Coast Live Oaks

Coast live oaks (*Quercus agrifolia*) are relatively fast-growing, drought-tolerant native oaks typically found along creeks and streambeds, on north-facing slopes, and high up on hillsides in drainages/draws where there is more soil moisture available. The species is known to occur from Mendocino County in the north to San Diego County in the south in California at elevations ranging from sea level to 4,921 feet amsl. There are 747 coast live oak trees located within the Study Area that meet the California State PRC 21083.4 Oak Tree Management Guidelines. There are an additional 2,148 trees in the preserved woodlands and as scattered trees outside the development areas of Phases 1. In total there are 2,895 oak trees within the project boundary. Coast live oak trees can reach heights in excess of 65 feet with canopy widths as wide. Trunk diameters can reach very large sizes, up to eight feet or more. Average trees, as are many of the trees on the project site, are 30 feet tall with 27-foot wide crown spreads and a 15 to 40-inch trunk diameter. Table 2 presents a summary of project site oak tree heights and trunk diameters.

Table 2
Tree Height and Trunk Diameters
for Coast Live Oak Trees within the GPS Inventory Area

Tree Height			Trunk Diameter		
(ft)	*Qty*	*%*	*(in)*	*Qty*	*%*
1 to 10	11	1.5	—	—	—
11 to 20	165	22.1	5–10.9	169	22.6
21 to 30	261	34.9	11–17.9	255	34.1
31 to 40	208	27.8	18–27.9	212	28.4
41 to 50	71	9.5	28–35.9	57	7.6
over 50	31	4.1	over 36	54	7.2
Total	**747**	**100.0**	**Total**	**747**	**100.0**

Many of these trees have more than one trunk and in these cases, diameters recorded are the averaged sum of trunk diameters, as measured according to International Society of Arboriculture standards. Typical trunk form varies from standard (single trunk) to forked (branching between 2 and 4.5 feet) to multi-stemmed (branching below 2 feet). The majority of the trees, approximately 69%, have a single-stemmed form.

Tree Conditions

The site's oak trees are predominantly in fair condition as detailed in Table 3. The trees include typical attributes of naturalized oaks. Many of the oaks include cavities with internal wood rot, poor branch structure, and dead wood. These attributes are not considered detrimental in a

natural area; in fact, they provide many benefits to the wildlife that inhabit the area. These same attributes may be problematic in an urbanized area and result in lower overall health and structural condition ratings, but for purposes of this report, the trees were rated according to their "natural setting attributes."

Table 3
Oak Tree Health and Structural Condition Ratings

Health Rating		
Condition	**Qty**	**%**
Good	146	19.5
Fair	500	66.9
Poor	84	11.2
Dead	16	2.1
Total	**747**	**100.0**
Structural Rating		
Condition	**Qty**	**%**
Good	38	5.1
Fair	509	68.1
Poor	183	24.5
Dead	16	2.1
Total	**747**	**100.0**

Many of the oak trees sustained damage from wildfires that occurred in the area during their life spans. Most of the fire damaged oak trees exhibit signs of recovery, as is typical of the species following fire, although many of them have basal trunk wounds, scorched bark, and reduced canopies. These fire-caused wounds have contributed to internal decay and susceptibility to insect and disease attack resulting in premature tree decline for some of the trees.

One notable observation on the site was the occurrence of large scaffold branch failures and whole tree failures in Phase 2 woodlands. Large, mature coast live oaks were noted to have failed within a fairly short time span. Cause of failure could not be determined, but appeared to be related to advanced stages of internal wood rot. It is suspected that a *Phytophthora* fungal infection may be occurring in this particular area and it is common for it to affect trees in concentric rings from the central tree. This is a natural occurrence in woodlands and does not require intervention. This type of disturbance creates openings in woodlands that provide opportunities for mitigation tree planting.

2.3.2 California Sycamores

The California sycamore (*Platanus racemosa*) is a moderately shade tolerant, fast growing native tree. This species can most often be found in its natural setting along streams and moist canyons in California and South into Baja California. The California sycamore trees on site vary in their composition from small, homogenous clusters to sycamore riparian habitat where they intermingle with native oaks. The sycamore trees on site are most commonly associated with intermittent streams or drainage bottoms, both primary drainages and in some cases, such as on the slopes of the eastern portion of the property, they occur high up in secondary drainages. The sycamore trees on site vary from juvenile trees to senescent trees that are nearing the end of their lifespan. Many exhibit fire damage, but they are categorized primarily as fair condition trees. There are 92 California sycamores within the revised project boundary and 191 within the preserved portions of the property. The total number of sycamore for the project site totals 283 trees. These California sycamores were found to be consistent with healthy trees, ranging in diameter and height from 5–98 inches in combined trunk diameter and 7–60 feet tall.

2.3.3 Coulter Pine

The Coulter pine (*Pinus coulteri*) is a shade intolerant native conifer that grows relatively slowly reaching maturity at approximately 150 years. Coulter pines grow along dry, rocky slopes in pure stands or mixed with California coast live oaks. The species is scattered throughout western California into the southern reaches of Baja California. The species can reach heights in excess of 50 feet with canopy widths as wide. Trunk diameters can reach very large sizes, up to 2 feet or more. Average trees are 40–50 feet tall and 40 feet wide with 20–30 inch trunk diameters. A single Coulter pine was inventoried within the revised project boundary. The tree had a 19.5 inch diameter at 4.5 feet above ground and an approximate height of 55 feet. The mature tree is in good health.

2.3.4 Arroyo Willow

The arroyo willow (*Salix lasiolepis*) is a shade intolerant native with a moderate growth rate that tends to grow in moist soils along streams and arroyos, or gullies, in valleys, foothills, and mountains. The tree can reach heights in excess of 25 feet with canopy widths as wide. The arroyo willow is typically a multi-stemmed tree that resembles a shrub until it reaches maturity. There are a total of 7 willows mapped on site. On average, the diameter of the trees on site ranges from 31–39 inches at 4.5 feet above ground and have an average height of 21.5 feet. Tree health appears to be good with no observable pest outbreaks or other maladies that would be considered abnormal in naturally growing trees.

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3.0 TREE IMPACT ANALYSIS

Impacts to trees can be direct, occurring immediately or within a short timeframe or they can be indirect, not occurring immediately or even near a tree. Direct impacts to trees on construction sites are typically the result of physical injuries or changes caused by machinery involved with the development process. Direct impacts may include root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds, amongst others.

Indirect impacts to trees are the result of changes to the site that may cause tree decline over a longer period, even when the tree is not directly injured. Large-scale, site topography alterations as well as specific changes that occur around trees are important considerations. Site-wide changes affecting trees can include changes in stormwater surface flow hydrology, lowering, raising, or altering ground water tables, altering the capacity for soil moisture recharge and removing vegetation (Matheny and Clark 1998).

Impacts to trees can be cumulative. Without proper site design and long-term woodlands management, a series of changes and site manipulations can occur which require trees to respond and adapt, sometimes unsuccessfully. The initial impacts often occur during vegetation clearing when tree roots are likely to be injured and the site microclimate altered. Additional changes and tree damage may occur during grading and infrastructure installation. The next phase, construction of adjacent structures, may cause yet another series of tree impacts. Finally, finish grading and landscaping may further impact the trees and alter their growing environment.

There is a great deal of variation in tolerance to construction impacts among tree species, ages, and conditions. These characteristics must be evaluated in order to predict how a tree or woodland may respond to changes in the growing environment. In general, healthy trees will respond more readily 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. Likewise, young trees typically respond more favorably to construction impacts than do mature trees.

For the purposes of this TMPP, direct impacts are those associated with tree removal, trimming, relocation, growing-site alteration, and root, trunk or canopy disturbance. Indirect impacts include changes to the overall project site, which affect hydrological conditions, groundwater recharge and sub-surface water flow, amongst others. Additionally proposed development plans indicate areas classified as “Temporary Impact” area. However for the purposes of this TMPP, all trees located within “Temporary Impact” area are considered impacted.

3.1 Tree Impact Analysis Methods

Tree impacts were determined with the assistance of GIS technology. Tree locations were compared with the proposed disturbance limits and trees located inside or within 25 feet of the grading limits were considered impacted because they would be encroached upon and would require removal or experience root disturbance. The resulting GIS data files were used in generating a comprehensive tree location exhibit illustrating the mapped locations of each tree within the project area and impact were determined for each project phase (Appendices G and G-1). Impacts were further determined based on Dudek's experience with native trees and their typical reactions to disturbances such as soil and root damage, compaction, or branch removal. 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 would respond to different types of disturbance. The native trees in the proposed Project area are of varying ages and conditions. Mature specimens are typical 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.

3.2 Potential Indirect Impacts

Possible indirect impacts to trees near the proposed development include hydrological and human-caused alterations. A hydrological study is expected to be included in the draft environmental impact report (EIR). The woodland management goal would be to adequately design drainage systems, desilting basins, culverts, and piping to minimize indirect impacts to trees outside the grading limits by maintaining soil moisture and runoff at current levels. Trees within and adjacent to the remaining natural drainages in the vicinity of the project would need to receive comparable flows from precipitation events after the proposed development as they do currently. Trees within drainages that are cut off from natural upstream flow by development are not expected to receive comparable stream flow to what they currently receive. Trees in these areas will only receive water from rainfall or runoff from the developed area upstream, (the proposed development drainage system is expected to deliver storm water in excess of natural conditions flows to storm drain systems off site). These trees will require engineering solutions such that stormwater flows remain consistent with existing conditions.

Other types of potential indirect impacts to trees from the Proposed Project are human-caused impacts. These impacts are the result of an increased number of people living near oak woodlands. Activities in wooded areas like those outside the development footprint may include firewood harvesting and hiking/recreational use, both of which cause denuded growing environments from soil compaction, along with seedling trampling and exotic species

introduction. Other potential human caused indirect impacts include littering, vandalism, and deliberate or accidental wildfire ignition. These are all potential indirect impacts associated with development that may negatively impact the preserved oak resources. The indirect impacts can be minimized through tree and woodland management and protection.

Impacts discussed below are based on development plans as of the date of this TMPP. As such, the actual number of trees that are subject to direct and indirect impacts may be further reduced as the detailed site permitting process proceeds and is defined. Typically, specific circumstances allow some trees to be preserved in place within or adjacent to the development envelope. These trees are often identified at later stages of projects, when detailed planning usually occurs. At the site planning stage, it may be possible, and is encouraged, to preserve as many native trees as reasonably feasible.

3.3 Project Impacts

Based on available project information and site plans, it is estimated that 201 (6.3%) of the trees within the Study Area will experience direct impacts in the form of removal or will be significantly encroached upon, while the remaining 2,985 (93.7%) trees will be preserved in place. The removal of 201 trees in Orange County is considered a significant impact, but is mitigated to a less than significant level through measures outlined in this TMPP in (Section 4.0 – Mitigation Framework and Overall Goals). This TMPP assumes the worst-case and utilizes a conservative, overly aggressive approach in terms of defining grading related tree impacts. The actual number of tree impacts will be tallied at time of grading. It may be possible to reduce the total number of trees impacted through minor grading adjustments in the field.

3.4 Direct Impacts

3.4.1 Native Trees – Phase 1

Table 4 summarizes indirect and direct tree impacts. Trees subject to direct impacts will be removed. Indirect impacts are related to encroachments within the 25-foot tree protection zones. A total of 167 trees would be impacted by the proposed grading activities within Phase 1 of the proposed project.

Table 4
Phase 1 – Tree Impacts

Type	Indirect Impact	Direct Impact	Total
Oak	53	95	148
Sycamore	11	8	19

Table 4
Phase 1 – Tree Impacts

Type	Indirect Impact	Direct Impact	Total
Pine	—	—	—
Arroyo Willow	—	—	—
Subtotal	*64*	*103*	*167*

3.4.2 Native Trees - Phase 2

Table 5 summarizes indirect and direct tree impacts within Phase 2 of the proposed development footprint. Trees subject to direct impacts will be removed. Indirect impacts are related to encroachments within the 25 foot tree protection zones. A total of 34 trees would be impacted by the proposed grading activities within Phase 2 of the proposed project.

Table 5
Phase 2 – Tree Impacts

Type	Indirect Impact	Direct Impact	Total
Oak	5	20	25
Sycamore	3	6	9
Pine	—	—	—
Arroyo Willow	—	—	—
Subtotal	*8*	*26*	*34*

3.4.3 Native Trees – Total Impacts

Table 6 summarizes indirect and direct tree impacts within Phase 2 of the proposed development footprint. Trees subject to direct impacts will be removed. Indirect impacts are related to encroachments within the 25-foot tree protection zones. A total of 201 trees would be impacted by the proposed grading activities of the proposed development footprint.

Table 6
Total Site Impacts

Type	Indirect Impact	Direct Impact	Total
Oak	58	115	173
Sycamore	14	14	28
Pine	—	—	—
Arroyo Willow	—	—	—
Subtotal	*72*	*119*	*201*

3.4.4 Native Trees – Riverside County

Table 7 summarizes indirect and direct tree impacts within the Riverside County Portion of the proposed development footprint. Trees subject to direct impacts will be removed. Indirect impacts are related to encroachments within the 25-foot tree protection zones. A total of 91 trees would be impacted by the proposed grading activities.

Table 7
Phase 2 – Riverside County Tree Impacts

Type	Indirect Impact	Direct Impact	Total
Oak	3	85	88
Sycamore	4	6	10
Arroyo Willow	0	3	3
Subtotal	*7*	*94*	*91*

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4.0 MITIGATION PROGRAM FRAMEWORK AND OVERALL GOALS

The mitigation program intended for oak impacts on the Preserve project include a variety of measures to preserve and enhance woodlands, provide woodland buffer plantings on created slopes, and incorporate native trees in the site's landscaping.

Avoidance of oak trees and woodlands and preservation of 93.7% of the site's woodlands is the backbone of the mitigation program. Preservation will be augmented by planting in available receiver areas. Trees planted in these areas would be provided adaptive management techniques to help meet success goals. North and east facing slopes within the project footprint that will be considered "C" and "D" fuel modification zones will be populated with appropriately spaced oaks, providing FMZ-consistent canopy cover and also providing a transition between developed areas softening the urban edge and leading to the preserved oak woodlands that will be enhanced and expanded, where conditions will support oak tree planting.

The mitigation program detailed herein considers the magnitude of the tree impacts and is designed to compensate and reduce impacts to below significant levels, according to California Environmental Quality Act (CEQA) by providing the following mitigation measures elaborated upon in this TMPP:

- Preserving large acreages of the site's oak woodland and individual oak trees
- Planting oak trees within the developed area and outer fuel modification zones for an ecologically sensitive landscape and softened transition from developed areas to preserved areas
- Enhancing woodland biodiversity by replacing invasive trees with native vegetation and by creating "live-in habitat" for raptors and other species
- Enhancing existing and created wildlife movement corridors through tree planting, where possible and consistent with related mitigation plantings
- Implementing an adaptive management program, including long-term monitoring.

4.1 Jurisdictional Requirements

Orange County does not include a specific oak tree or woodland protection ordinance for trees outside the established natural community conservation plan (NCCP) preserve areas. As such, this TMPP uses the Public Resources Code 21083.4 as a guideline for developing an oak tree impact mitigation program. The state oak woodlands mitigation law contains provisions for counties to mitigate impacts to oak-dominated habitats that are considered significant under CEQA and for which there is no oak preservation ordinance or regulation in place. Because the County of Orange does not currently provide for an oak protection/management ordinance in

place, PRC 20183.4 applies. Under the state requirements one or more of the following oak woodlands mitigation alternatives are utilized to mitigate the significant effect of the conversion of oak woodlands:

1. Conserve oak woodlands, through the use of conservation easements.

   The Project preserves by conservation easements and/or deed restrictions up to 94% of the total oaks on site for a combined total of 2,721 oak trees.

Plant an appropriate number of trees. Trees need to be maintained for seven years and the planting effort cannot account for more than half of the mitigation. The trees may be used to restore former oak dominated habitats. The goal is to restore declining woodlands or re-establish them where they once grew, avoiding vegetation type conversion issues.

- The Preserve TMPP mitigation program will plant an appropriate number of trees with a minimum of 603 trees guaranteed through the seven year monitoring period. This results in a 3:1 ratio of impacted to planted trees. Up to 2,000 acorns and/or seedlings will be planted within preserved woodlands. Additionally, an estimated 400 oaks and sycamores and additional trees will be planted in the landscape and outer fuel modification zones.
- The monitoring program specified in this TMPP will include intensive monitoring during the initial years after planting and then ongoing monitoring by a qualified oak restoration specialist for seven years.

2. Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project.

   - Due to the substantial on-site tree planting and woodland conservation, funding associated with The Preserve project will be focused on monitoring and managing the preserved woodlands and the on-site oak management effort rather than provided for conservation of off-site woodlands.

3. Other mitigation measures developed by the county.

   - The County of Orange does not currently include a specific oak mitigation ordinance or regulation. This TMPP proposes an option to provide seedling protection for up to

500 existing seedlings (at the time of mitigation program implementation) in lieu of planting up to 500 acorns/seedlings in the preserved oak woodland areas.

5.0 MITIGATION PROGRAM

The following section outlines key features of the oak mitigation program. These mitigation program components are consistent with PRC 21083.4 Oak Management Guidelines.

5.1 Preserved Tree Protection Measures and Design Provision

The following provisions are provided to guide protection of preserved trees on the site. Additional tree protection measures for pre-construction, construction and post-construction phases can be found in Appendix H. Trees that are subject to any of these disturbances are considered impacted and require mitigation:

- No construction activities or placement of structures shall occur within the protected zone of any oak tree or oak woodland except as provided for in these policies.
- Landscaping, trenching or irrigation systems shall not be installed within the existing protected zone of any oak tree or oak woodland, unless recommended by an arborist, forester, or qualified biologist.
- Land uses that would cause excessive soil compaction within the protected zone of any individual oak tree shall be avoided. No recreational trails are permitted within the drip line of any individual oak tree.
- Manufactured cut slopes shall not begin their downward cut within the protected zone of any individual oak tree, except as provided in these guidelines.
- Manufactured fill slopes shall not extend within the protected zone, except as provided in these guidelines.
- On-slope retaining structures, if required, shall be designed to protect the root system of any individual oak tree by preserving the natural grade within the protected zone.
- Redirection of surface runoff which results in increased soil moisture for an extended period of time within the drip line area of any individual oak tree shall be avoided. If unavoidable, a drainage system shall be designed to maintain the previous amount of soil moisture.
- Sedimentation and siltation shall be controlled to avoid filling around bases of oak trees.
- Redirection of surface runoff which results in decreased soil moisture for an extended period of time within the drip line area shall be avoided. If unavoidable, an irrigation system shall be designed to maintain the previous amount of soil moisture.

- A construction zone at the interface with a tree protection zone shall be clearly delineated on the site in order to avoid impacts from construction operations and also to prevent the storage or parking of equipment outside the construction zone.
- Dead or dying oak trees are necessary for the excavation of nest cavities by woodpeckers. Twelve species of birds use nest cavities. It is important to the health of the habitat to retain dead and dying trees that are not a hazard to humans. Such oak trees shall be retained in place unless determined to pose a health or safety hazard, in which case they shall be discarded at an approved on-site location identified by the consulting arborist, forester, or qualified biologist for habitat enhancement.
- On-site to on-site or off-site to off-site relocation of oak trees will not constitute mitigation and is considered the same as removal for the purposes of these guidelines.
- Replacement of oak trees with plantings of saplings or acorns is not required by these guidelines; however, replacement plantings may be used in addition to these guidelines when they are required by another agency or when it is determined to be biologically sound and appropriate to do so.
- Oak protection should be orientated toward protection of the life cycle of oak trees and oak woodland; i.e., young trees should be protected along with older trees.

5.2 Mitigation Areas

Dudek evaluated the potential for oak mitigation within the project boundaries (Appendix I) by utilizing specific site knowledge, aerial photography and site development plans. In general, potential oak mitigation sites considered in this analysis were delineated based upon slope, aspect and the proposed development footprint, looking specifically at north and east facing manufactured slopes that could potentially support oak vegetation communities or individual oak trees as well as roadside planting areas and preserved oak woodlands that are accessible for maintenance during the establishment period.

In determining suitable oak tree mitigation sites, Dudek evaluated existing and adjacent vegetation, soils, slope, aspect, vehicular access (for installation and maintenance) and water availability (for irrigation). Potential oak mitigation sites include areas with appropriate soils, moderate slopes, northern and eastern aspect, vehicular access, water availability for irrigation, and adjacent native vegetation communities.

This analysis should be followed up by a more detailed analysis of the potential oak tree mitigation areas during the development of a precise oak woodland restoration plan for the Preserve. Agricultural suitability soil tests should be performed and analyzed before mitigation is

undertaken in any area. The test results may help verify that the soil is suitable for oaks and will help determine what soil amendments and/or fertilizers may be required, if any, for mitigation to be successful in the allotted time frame. This more detailed analysis would also determine the exact methods of restoration, maintenance, and monitoring that would be employed.

There are a total of approximately 45 acres of potential receiver sites available for mitigation planting as presented in Appendix I. The receiver areas are represented by the following categories and acreages in Table 8, which total approximately 45 acres:

Table 8
Potential Mitigation Planting Receiver Sites

Planting Location	Total Acres
North, Northeast and East Facing Manufactures Slopes	1.22 ac.
Roadside	16.81 ac.
Preserved Woodland Enhancement Areas	26.14 ac.
Fuel Modification Zones C and D	.46 ac.
Total Acreage	**44.63 ac.**

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The total number of plantings under the proposed mitigation program is considered appropriate and sustainable at the site and guarantees a minimum of 3:1 replacement, with the possibility of up to 12:1 should all acorns/seedlings survive. However, the acorn planting success ratios cannot be precisely determined at this time. Conservative estimates of acorn establishment success result in a 30–75% success ratio for a project of this scale. At a 30% success ratio, the acorn/seedling planting totals 600 trees or roughly 3 replacement trees for every impacted oak tree. At 60% success of acorns/seedlings, the replacement to impacted ratio is 6 to 12 for oak trees, significantly higher than the PRC 21083.4 ratio of 2:1.

Planting acorns has long been considered the most simple, economical, and successful way of establishing healthy oak trees. They do not require long-term supplemental water (following watering for up to five years and during drought years and generally naturalize, outperform larger trees, and produce superior trees. Direct seeding of acorns is often discouraged because growers expect poor germination rates and a high loss of planted acorns to rodents. These problems are minimized with careful selection and storage of acorns and the use of newly available, low-cost tree shelters to protect the seed and growing seedling in the ground. Proper seed handling methods have been shown in numerous settings to produce germination rates greater than 60th percentile. New technology, such as planting hole preparation, amendments,

[2] Note: Although it cannot be guaranteed that the replacement ratios will be 6.9 to 1, our conservative analysis results in a ratio that exceeds the PRC 21083.4.

watering techniques, and protective cages, allows experienced restoration specialists to prepare a planting site to enhance the likelihood of successful germination and survival. The proposed mitigation program overplants acorns such that only a 30% success rate is necessary to achieve tree establishment goals.

Acorns require harvesting from local trees generally during early fall. The restoration specialist should develop an acorn collection and storage plan that allows the acorns to be planted at the most advantageous time, generally between early November and early March. The acorns could be contract grown for this project and planted along with nursery stock.

5.3 Mitigation Planting Plan Discussion

The following sections describe mitigation plantings proposed to mitigate the oak impacts associated with The Preserve. Prior to commencing development, an oak tree and woodland restoration-planting plan will be designed, approved and implemented by a qualified revegetation/restoration specialist. This plan will be completed to direct the tree and seed planting in the receiver areas in a manner that dovetails with the other on-site mitigation requirements. Tree planting within the landscaped and maintained areas will occur following precise grading.

5.3.1 Landscape Area Tree Planting

The project will include landscape planting throughout the community open space and will include up to 400 total oak tree plantings. Plantings will incorporate oak trees as a major component of the landscape theme. Oak trees will be incorporated into medians (where appropriate), roadsides, entrances, and front yards.

5.3.2 Manufactured Slope and Fuel Modification Zone C and D Tree Planting

A total of up to 50 containerized (5-, 15- gallon, 24-inch box) oak trees are proposed for mitigation planting within Fuel Modification Zones C and D. Trees will be planted within the open space adjacent the proposed community's developed areas, such as manufactured slopes and fuel modification areas, along with creation/enhancement areas on the periphery of the project footprint and within landscape areas of the project. As presented in Appendix I – Potential Tree Receiver Sites, the slopes that are targeted for woodland creation are primarily north and east facing slopes, with priority given to slopes that have been identified by project biologists as important existing or future wildlife corridor areas.

5.3.3 Preserved Woodland Restoration

Three priority mitigation planting receiver areas with potential for establishment and restoration of oak dominated habitats have been identified on the Preserve property. These priority areas are located outside the proposed development footprint and include existing oak habitat (Appendix I) These natural receiver areas include:

- Natural Receiver Area 1 – 15.78 acres, protected canyon, flat to steep terrain, coast live oak woodland
- Natural Receiver Area 2 – 7.43 acres, gently rolling terrain, coast live oak woodland Natural Receiver Area 3 – 1.96 acres, north/east facing slopes and gently rolling terrain, coast live oak woodland.

Under this proposed mitigation program acorns/seedlings will be used where it is appropriate to restore, enhance and rehabilitate the receiver areas. Accessible locations will be provided temporary, supplemental irrigation via above ground water line or hand watering. Plant success and performance standards, along with monitoring requirements will be identified in the Restoration and Monitoring Plan prepared for this project. Performance standards will ensure that predetermined levels of restoration success are accomplished in each target area throughout the monitoring period. As mentioned, in lieu of planting up to 500 acorns/seedlings, 500 protective shelters may be provided to existing seedlings throughout the site's preserved woodlands to improve survival and establishment of these naturally occurring trees, as described in more detail in the following section.

5.3.3.1 Preserved Tree Protection Measures – Seedlings and Saplings

Woodland sustainability is a key component of the overall mitigation program for the Preserve. Observations of both regeneration and advanced regeneration of seedlings and saplings during the 2013 tree analysis indicated that the on-site woodlands are capable of producing sustainable levels of both seedlings and saplings. However, predation of seedlings by both large and small mammals and competition from invasive plants is of concern. As such, Dudek proposes that in lieu of planting up to 500 acorns/seedlings, protection of already established seedlings can be provided within existing preserve areas. Seedlings (oak trees up to 12 inches in height) will be protected through the use of plastic seedling protectors (e.g., Tubex shelters). It is recommended that the protective shelters be maintained and monitored for 7 years following the commencement of construction activities or until the tree outgrows the need for protection. Furthermore, Dudek recommends that invasive plants be controlled through various natural means for an equal time frame to reduce the likelihood of tree failure from competition. These seedling and sapling protection strategies will be described in more detail in the project's Oak

Woodland Restoration and Monitoring Plan that will be prepared prior to grading and that will be used for procuring bids for the oak restoration/mitigation work on the project.

5.3.3.2 Replacement Tree Planting within Natural reciever areas

In natural oak woodlands, it is common to find tree spacing that varies considerably. Generally, however, competition among trees naturally produces spacing averages of more than 20 feet. The trees often occur in scattered groups with dominant trees flanked by co-dominants, secondary and understory trees. These trees are often within a few feet of each other but are spaced further from neighboring tree groups. Three priority receiver areas on the Preserve project site provide up to 10.92 acres for oak tree planting (Appendix I). These areas currently support native oak woodlands. They would facilitate enhancement and restoration activities based on their favorable aspect, soils, and historical oak tree habitat. An oak restoration plan customized to the site will be prepared and will indicate the number of acorns/seedlings that can be planted within each receiver area. The plantings will take advantage of open areas, woodland edge areas, and gaps that would support oak trees.

5.4 Adaptive Management Program

Oak mitigation success will require an active monitoring program that includes flexibility and responsiveness. Additionally, the preserved woodlands will require monitoring to ensure that they are not indirectly impacted by the project. To that end, adaptive management procedures will be utilized within the monitoring program that includes:

- Conduct monitoring to track the long-term oak tree establishment success and preserved woodland management.
- Maintain appropriate subsurface hydrology to avoid under- and over-watering.
- Control exotics invasions by prohibiting invasive species from proposed plant palettes to reduce competition and increase establishment and survival success.
- Maintain suitable nesting habitat in preserved oak habitats, and specifically potential nest cavities in snags, dead or decaying limbs, and hollow trunks for acorn woodpecker. (As a primary cavity nester (i.e., species that excavate their own holes for nests), acorn woodpeckers may be a keystone species for secondary cavity nesters that utilize abandoned holes).
- In the preserved woodlands, retain large oaks (greater than approximately 36 inches DBH to the maximum extent possible to provide granaries for acorn woodpeckers.

- Maintain acorn production in preserved woodlands and protect seedlings and saplings to support establishment of new trees. Management would entail addressing the following issues:
    - Maintain acorn production to provide forage for native wildlife such as acorn woodpeckers, scrub jays, squirrels, mice and mule deer. (It is important to maintain native predators of acorns, seedlings and saplings because they may be important components of the oak-dominated habitat ecosystem, especially in regard to dispersal of acorns or mycorrhizal fungi. Acorn predators such as mice also provide food for other oak-dominated habitat species such as Cooper's hawk and white-tailed kite. The challenge is to balance these natural predators with viable oak-dominated habitat systems that can naturally regenerate).
    - Protect seedlings and saplings in preserved stands of oak-dominated habitats.
- Maintain the complex understory of shrubs, grasses annual forbs, leaf litter and downed woody debris in preserved woodlands that provide habitat for a variety of wildlife species.

As a means to ensure a successful oak planting program, the adaptive management program for this site would include intensive monitoring during a period of seven years. Tracking and documenting the success rates of varying planting and management techniques would be a primary focus of the adaptive management/monitoring program. Through the adaptive management process, less-successful methods can be identified and discarded as methods to be implemented in the management program's restoration planning. The adaptive management process will enable corrective management actions to be enacted when problems or issues arise. The most critical stage for the adaptive management process will be during the monitoring program after initial planting and then the first few years of project implementation. During these periods, it is anticipated that there will be establishment failures, but they will be contained and corrected based on site-specific knowledge.

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6.0 MONITORING SPECIFICS

A monitoring program will be established for The Preserve oak mitigation effort. The monitoring program will include monitoring in areas of grading and ground disturbance occurring within a buffer area of the drip line of preserved (encroached upon) oaks (Greeley 2001) both during and following construction. Although it is intended that protection measures designated in the tree protection guidelines will provide the preserved oaks protection during construction, monitoring ensures that the protection measures are implemented correctly.

The monitoring program includes the following basic components:

- Tree establishment standards
- Data collection standards
- Digital and on-site locations of data points/monitoring stations
- Monitoring schedule
- Observations
- Recommendations.

Monitoring will be conducted by qualified arborists, foresters, or oak restoration specialists with specific oak experience. The monitor will coordinate with grading and other contractors to minimize impacts as well as during the restoration planting establishment period in preserve areas. Monitoring of new plantings will continue on a long-term basis on a regular schedule that includes more visits initially and, as successful establishment occurs, fewer visits over time.

Monitoring of preserved oak-dominated habitats would include methods such as the following or similar:

- Tag trees and record species, tag number, DBH (inches), height (feet), and dominance (i.e., is the tree in the canopy of another tree or does it form the canopy?). Note slope and aspect of each tree, understory species (including proportion of natives to exotics), presence of debris and litter, soil type, depth, and parent material and elevation.
- Assess the status of trees' health based on International Society of Arboriculture standards and examination of canopy, branches, trunk and if necessary, cambial tissue.
- Assess acorn production and natural establishment.
- Create a simple oak tree database through the use of software specially developed to track discrete resources (e.g., software that links the database to GIS mapping capabilities).

6.1 Restoration Oaks – Proposed Project Area Plantings

Based on applicable regulations, monitoring is proposed to occur for a seven year period following planting. Monitoring will focus on plant health, mortality rates, presence of pests or diseases, competition levels from exotic species, and other factors that may affect establishment or growth of the planted oaks.

6.1.1 Monitoring Schedule

Monitoring will occur from planting through a 7-year monitoring period for each restoration area, and should be of higher intensity during planting and for the 90 days following planting. The monitor should be on site during all oak planting and irrigation installation periods, and periodically each year throughout the monitoring period to track the progress of the oak establishment. Additional monitoring may be needed to better implement the adaptive management process should tree decline or mortality at unusual levels occur. The monitor is responsible for coordinating with the planting contractor and the nursery, conducting inspections of planting stock prior to its placement in the ground to ensure high-quality plant material.

Container Size Plant Requirements

Larger plant materials that receive supplemental irrigation at planting will be required to survive a minimum two years following removal of the irrigation, which is typically after year three in the ground. Once trees reach this stage, they are less susceptible to drought effects. These trees will be planted in the irrigated areas of the development, including in the landscape areas and wildland urban interface areas. As such, supplemental irrigation can be provided if necessary, beyond the establishment period. For project aesthetics, survival of these trees is important, as they will be located in highly visible areas. They will receive care and maintenance to assist their long-term survival and will be replaced with new trees where mortality occurs.

Mid-Monitoring Term Success Indicators

The oak specialist/forester will monitor the overall restoration success by evaluating:

- Successful establishment of planted oaks in the mitigation planting areas is the primary indicator that will be tracked.
- Tree recruitment—estimates of the quantity of seedlings emerging in preserved woodlands each year and alive at the end of the year will be tracked as part of the overall success evaluation.

- Plant health—seedlings and saplings will be evaluated for overall health, presence of disease, pests, or other factors that are affecting tree health and survival. Presence of controllable issues will be addressed through a post-monitoring memorandum describing the issue and recommended treatment. Treatment will be carried out as soon as practical and under the supervision of the site forester/arborist.
- Disturbance—damaged fences, damaged protective cages, or other factors that may result in increased herbivory will be monitored and corrective actions employed as soon as possible to correct the situation.
- Invasive species—occurrences of exotic, non-native species will be monitored and treatments recommended on an annual basis. Maintenance will include the removal or treatment of exotics that are competing with mitigation plantings.
- Natural processes—the monitor will document natural processes that are beneficial or detrimental to oak establishment in the preserved woodlands. Where detrimental effects from wildlife are noted, actions will be recommended to correct the situation. Where beneficial effects are noted, recommendations to promote the wildlife activities or a "no action" alternative will be specified.

6.1.2 Annual Status Reports

In addition to regular monitoring reports, an annual status report will be prepared by the monitor for submittal to the County of Orange. The report will summarize the successes, failures, and observations of the previous year. In addition, the annual status report will outline a course of action for the coming monitoring year.

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7 .0 CONCLUSIONS

This TMPP provides an accounting of the trees on-site and within the project's footprint and a buffer area adjacent the footprint. Further, it provides an evaluation of the project related impacts and the comprehensive mitigation program that is customized for this site, the proposed project and the opportunities for enhancing existing woodlands, providing transition areas, and incorporating native oaks within the landscaped areas. The result is a mitigation plan that is consistent with the state oak woodland mitigation requirements.

The proposed Preserve at San Juan Project includes approximately 201 tree impacts. The native oak and other trees impacted by the project are mainly located in scattered clusters and woodlands. The proposed mitigation program includes significant avoidance of oak trees as well as long-term preservation of these preserved woodlands. The program replaces oak trees in accordance with applicable oak regulations and provides conditions for mitigation through planting and preservation.

The mitigation program will result in the replacement of the impacted oaks with up to 3,000 oak trees as well as preservation and enhancement of preserved woodlands on site. Overall, the project will preserve approximately 93.7% of the trees on site and provides for replanting of suitable disturbed areas at a replacement ratio exceeding 10:1. The project also includes a robust seven-year monitoring program with use of adaptive management principles to provide a sound restoration and planting plan, ability to detect issues and make mid-course changes, and ongoing follow up through the monitoring period to ensure successful mitigation is achieved.

7.1 Arborist's Statement

This report provides conclusions and recommendations based on an examination of the trees and surrounding site by ISA Certified Arborists and oak woodland management specialists. 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 of time. There are no guarantees that a tree's condition will not change over a short or long period due to weather, cultural or environmental conditions. Trees can be managed but not controlled.

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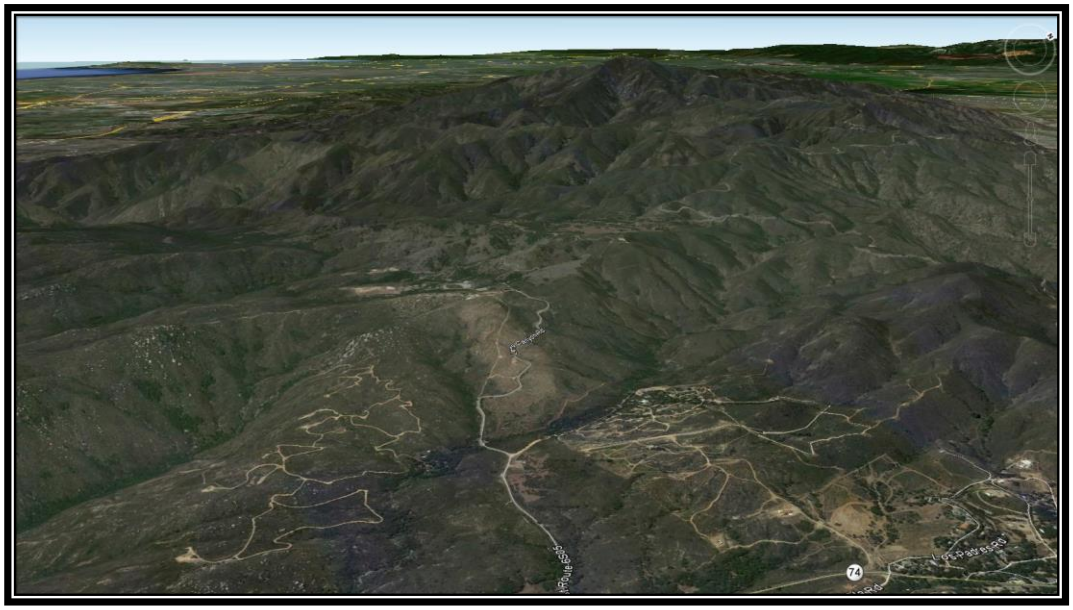
APPENDIX A

Riverside County Preserve Tree Management and Preservation Plan

DRAFT
The Preserve at San Juan
Tree Management and Preservation Plan
For Access Roadway Improvements



Prepared for:

The Preserve at San Juan LLC
2697 N. Vista Glen Road
Orange, California 92867
Contact: Jeff Weber

Prepared by:

DUDEK

605 Third Street
Encinitas, California 92024
Contact: Michael Huff
760.942.5147

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The Preserve at San Juan
Tree Management and Preservation Plan for
Access Roadway Improvements

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Tree Management and Preservation Plan for
Access Roadway Improvements

1.0 INTRODUCTION

Dudek evaluated and recorded information about native oak trees over 2 inches in diameter at breast height (DBH) and prepared this Tree Management and Preservation Plan (TMPP) for the proposed access roadway improvements that are located within Riverside County for The Orange County Preserve at San Juan (The Preserve-TTM No. 17270) project. This TMPP includes Oak tree evaluations of project-related oak tree impacts and recommendations for tree protection, relocation, removal, and mitigation for oaks that are located within the County of Riverside, California, near El Cariso, California. The Preserve at San Juan is primarily an Orange County project, with all of the planned residential units and most of the infrastructure located within Orange County. The access road and one section of an internal road cross the Riverside County line, and have triggered the preparation of this report.

This TMPP provides a summary of Dudek's inventory and native tree evaluation within the area proposed for the Project's monument and primary road access to The Preserve's project site as well as along an internal project roadway. Coast live oak (*Quercus Agrifolia*) and Arroyo Willow (*Salix lasiolepsis*) were the only native tree species found along the proposed roadways. Non-native trees found within the project study area include one pine tree and one olive tree, which were not included in this TMPP. Dudek's International Society of Arboriculture (ISA) certified arborists performed various functions associated with surveying, inventorying and evaluating the condition of trees within the project area.

The purpose of this TMPP is to present the physical characteristics, mapped locations, impact levels, and appropriate mitigation for the project area's oak trees. The tree quantities and related project impacts have been analyzed and are reported in the following sections. The mitigation approach is consistent with Riverside County Oak Tree Management Guidelines in addition to a multi-pronged approach to include oak tree plantings in the landscape, the buffer areas (including fuel modification zones) and within the site's preserved oak woodlands.

In summary, the site's oak trees and woodlands along the three access roads are characterized as reasonably healthy with a sustainable mix of mature, semi-mature, and juvenile trees with some variation as to overall distribution of these age classes. Oak trees (overhanging canopies or trunks) within 25 feet of the edge of the current or proposed roadways were considered to be inside the proposed disturbance limits. The Study Area inventory resulted in evaluating 439 Coast live oaks and includes the disturbance area as well as a 200-foot buffer area adjacent the disturbance area. Of these, 91 trees, including 85 oak trees (2.6 % of the total number of native trees within The Preserve project site) are anticipated to be impacted by the proposed road improvements to Highway 74 and Long Canyon Road and construction of the project-internal connector roadway.

Some of these trees will require removal (88 trees) while 3 trees will be encroached upon and the remainder (248 trees) will be preserved. Tree impacts will be mitigated as part of the overall project mitigation program and Riverside County tree impacts will be mitigated within Riverside County project areas (roadside landscapes and preserved woodland areas).

Proposed Mitigation includes:

1. Avoidance and preservation of approximately 97% of the trees on the project site (including both Orange and Riverside County areas).
2. A comprehensive oak tree mitigation program for the project's tree impacts throughout Orange County where most of the impacts occur and a similar program for mitigation of Riverside county oak impacts
3. Landscape oak tree plantings to incorporate native trees along roadside portions of the project site in Riverside County.
4. Buffer area plantings, including in roadside fuel modification zones to provide a natural transition from wildlands to developed landscapes
5. Collection of acorns from site for direct planting to augment and enhance recruitment in preserved roadside oak woodlands.
6. In-lieu provisions for tree protection (shelters) for existing seedlings as a substitute for up to 250 of the proposed seedling plantings.
7. Adaptive Management program to provide for a robust monitoring that can adapt to changing climatic and environmental conditions, aiding achievement of mitigation goals..
8. Provisions for low-impact, roadside fuel modification maintenance and exotic plant removal.
9. Provisions for 7 years of oak mitigation monitoring, consistent with County and State requirements.

The following sections provide detailed descriptions of the methods employed during this study, notable observations from the site, results of the tree inventory and impact analysis, and customized impact mitigation and monitoring recommendations.

1.1 Site Description

The Preserve project roadways (Study Area) are located within the southwestern portion of Riverside County in the Santa Ana Mountains (Figure 1). The project study area is generally located adjacent to the Cleveland National Forest (CNF) just three-tenths of a mile, west of the

village of El Cariso, California. More specifically, the project study area consists of a buffer zone along both sides of State Route 74 (Ortega Highway) for four-tenths of a mile and Long Canyon Road (U.S. Forest Service Route 6S05) for six-tenths of a mile. The project study area is located in northern half of Section 20, Township 6 South, Range 5 West on the U.S. Geographical Survey (USGS), 7.5 minute, Alberhill quadrangle map.

The project study area includes three, asphalt paved roads (Long Canyon Road, Ortega Highway, and residential connector road) with a 25 feet wide canopy overhang buffer along the existing roads. The existing road widths for Long Canyon Road and Ortega Highway are 20 feet and 24 feet, respectively. The buffer areas on both sides of the roads are undeveloped, disturbed, and dominated by oak woodlands with an occasional poison oak and leaf litter understory. Chaparral habitat occurs along the edge of the woodlands or open areas within the tree canopy. Surrounding land uses include rural residential properties to the east and south, private resort to the northwest, and CNF fire fighter's training facility to the west, and CNF Fire Station to the northeast in the rural, community of El Cariso. The project study area consists of flat to gently sloping terrain, which trends from the north to the south and from east to west. A small tributary/drainage flows north to south into Long Canyon along the west side of Ortega Highway. The steepest sloping terrain on site is minimal and is associated with this drainage system. Banks on both sides of these drainages range from several feet to 1-foot-tall, and exhibit incising from past water flows. Gradients on the remainder of the study area are less than 10%. Elevations on site range from roughly 2,450 feet above mean seal level (AMSL) in the western portion of the project study area to just over 2,250 feet AMSL in the southern portion of the project study area along Ortega Highway.

Rainfall in the area averages more than 15 inches per year, supporting the heavy chaparral and oak woodlands found in the area (Stephenson and Calcarone 1999). The site's fire history has also played an important role in shaping its vegetation composition and the current distribution of oak and riparian woodlands and chaparral-dominated hillsides. There have been at least two fires burning on the project site since records have been maintained and it is presumed that fire was a relatively frequent occurrence prior to recorded history, much as it has been throughout Southern California. A recent prescribed fire burned onto portions of study area, resulting in temporary loss of vegetation and damage to oak trees. Appendix A provides photographs of the project study area, including its landscape features.

1.2 Project Description

The project study area is currently in the unincorporated area of the County of Riverside in Vesting Tentative Tract Maps (TTM) Nos. 35910 and 35911. The proposed construction

includes widening both Ortega Highway and Long Canyon Road, providing turning lanes from Ortega Highway onto Long Canyon Road, and erecting a community entrance monument (Figure 2). In addition, the project includes the construction of a residential connector street for the southern portion of The Preserve development (Phase 2), which will intersect with Long Canyon Road. The proposed road improvements will enhance the ingress and egress roads into the proposed 30-lot, single family residential development (The Preserve- TTM No. 17270) located in Assessor Parcel Nos. 125-120-26 and 125-120-31, Orange County, California.

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June 2013

FIGURE 1

Regional Map

The Preserve at San Juan

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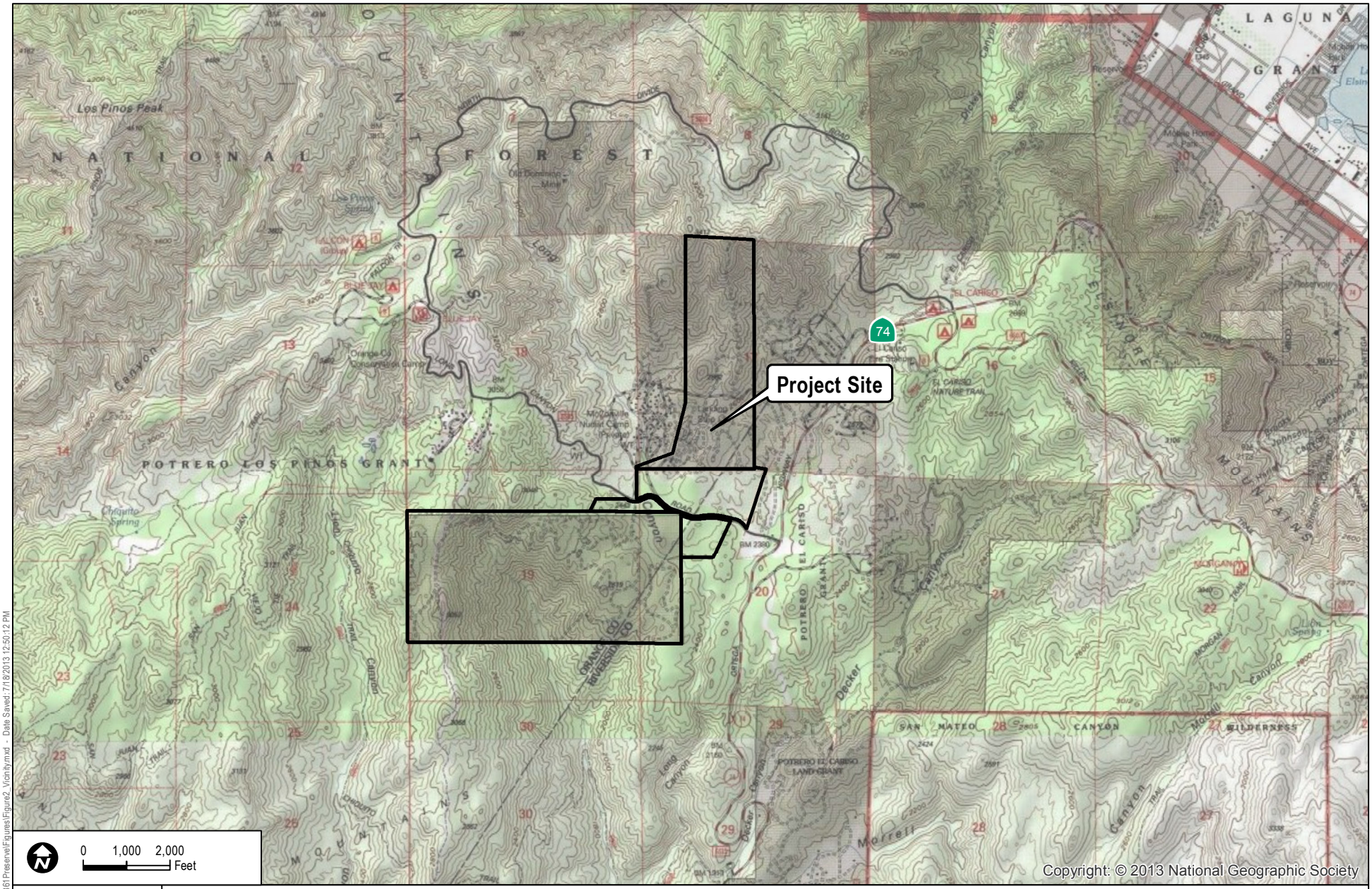

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FIGURE 2

Project Location

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2.0 ASSIGNMENT AND METHODS

Dudek was retained by J.B. Weber Group to update an existing tree inventory of the oak trees along two roadways leading to the proposed residential development and one internal connector between development clusters for The Preserve project (Figure 2). Dudek's ISA Certified Arborists examined the roadside trees by performing a visual assessment of the trees and their growing environment. The study area for the project is defined as the maximum composite extent of proposed road grading and widening or other impacts, such as limb breakage to low, overhanging branches, where trees may be subject to road construction-related impacts. The tree inventory efforts have been conducted over a course of approximately three year period, between May 2005 and March 2008 and then updated for this portion of the The Preserve project on June 27, 2013.

Trees included in the inventory and assessment meet the Riverside County's definition of a "Oak tree," which includes Coast live oak trees with a minimum trunk diameter of 2 inches for a single trunk or the sum of the diameters of multiple trunks at 4.5 feet above the ground as discussed in Section 2.1 below. In addition to addressing potential oak tree impacts on the site, Dudek's ISA arborists evaluated one Arroyo Willow, a native tree species, and recorded its size and health information, consistent with ISA data collection protocols. Data collection efforts for the study area's tree resources included documenting individual tree locations and conducting individual tree evaluations as discussed in greater detail in the following section.

This TMPP provides a site-specific analysis identifying the impact level of the proposed project on the site's native oak trees. It also provides methods for reducing or avoiding adverse impacts to the property's tree resources and details a customized mitigation program.

2.1 Individual Tree Data Collection

Dudek mapped and collected tree attribute information for all trees in the tree survey area meeting the County of Riverside's Oak Tree Management Guidelines. The location of each individual tree meeting minimum size requirements was mapped using a Trimble Pathfinder Pro XH Global Positioning System (GPS) receiver. Study Area tree locations are presented in Appendix B. The Pathfinder has a horizontal accuracy of 1-meter (1-sigma) using differential code positioning techniques. Since tree canopies can sometimes cause loss of satellite lock by blocking the line-of-sight to satellites, an electronic compass and reflectorless electronic distance measuring (EDM) device was also used in mapping tree locations. The EDM/compass combination operates in concert with the Pathfinder system to position offsets, and offset information is automatically attached to the GPS position data string. All trees greater than 2 inches in diameter were tagged, if they didn't already have a tag number, in the field with an

aluminum tree tag bearing a unique identification number. The tags were placed on the trunk of each inventoried tree and tag numbers correspond with the individual tree data presented 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, published by the ISA1. Trunk diameter at breast height (DBH) measurements were taken at 4.5 feet (54 inches) above the ground along the trunk axis, with a few common exceptions. In cases where a tree's trunk is 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 this 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 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 with respect to five distinct tree components: roots, trunk(s), scaffold branches, small branches, and foliage. Each component of the tree was assessed with regard to 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, and 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. However, this assessment focuses on tree condition with regards to health and structure for purposes of analyzing potential project impacts and where necessary, providing 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 GPS data was post-processed using GPS Pathfinder Office (v 3.10) and individual tree location data was compiled and updated in a

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

geographic information system (GIS). 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 related to the proposed project development areas. Data resulting from this analysis was utilized to evaluate the individual tree impact totals presented in this report.

2.2 The Preserve at San Juan Trees (Orange County)

The majority of the project Study Area fall within Orange County, with only three roadways that are located in Riverside County. As such, in addition to updating and collecting tree attribute information in Riverside County, Dudek evaluated and recorded information about native oak trees for the bulk of the proposed Preserve at San Juan Project in Orange County. Data collection efforts for the trees in Orange County followed a similar protocol as described in Section 2.1 – Individual Tree Data Collection. Specific details regarding trees located within Orange County are located in Appendix D – The Preserve at San Juan TMPP – Orange County.

2.3 Scope of Work Limitations

No root crown excavations or investigations, aerial evaluations, 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 ISA Certified Arborist before finalizing preservation plans.

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3.0 OBSERVATIONS

There are 426 Coast live oak trees located within the project's Riverside County Study Area that meet the County's criteria for oak inventory, as described in Section 4.1.1. In addition, Dudek surveyed ten California Sycamores (*Platanus racemosa*) and threeArroyo Willow (*Salix lasiolepis*) trees within the buffer area adjacent to the proposed residential connector road and Long Canyon Road, respectively. Overall, the site's native trees represent reasonably healthy woodlands with a variety of age classes, tree sizes, and structural conditions. When the site was assessed in 2008, there was a notable lack of oak seedling and sapling sized trees. The 2013 assessments indicate that acorn production and establishment has been minimal since that time. The woodlands within the project study area had a small population of seedlings and sapling sized oak trees. At current levels, woodland sustainability has not improved substantially from our first assessment of the site. The following sections provide brief summaries of the native tree's attributes and a more thorough analysis of the oak woodlands. Refer to Appendix C for detailed tree attribute data.

3.1 Oak Tree Characteristics

Coast live oak trees within the survey area vary in size and stature according to available growing space and sunlight. Many of Coast live oaks trees have more than one trunk and in these cases, diameters recorded are the averaged sum of trunk diameters, as measured according to ISA standards. Typical trunk form varies from standard (single trunk) to forked (branching between 2 and 4.5 feet) to multi-stemmed (branching below 2 feet). Tree inventory data indicate that 68% of the oaks have a single-stemmed form.

Coast live oak tree trunk diameters, heights, and canopy widths can reach very large sizes. Oak trees on the site can reach heights in excess of 65 feet with canopy widths as wide. Trunk diameters were observed in the project study area up to seven feet or larger, but they typically ranged from 5–22 inches trunk diameters. Oak trees on the project site averaged 33 feet tall with 20- to 40-foot wide crown spread. Table 1 presents a summary of project site oak tree heights and trunk diameters.

Table 1
Tree Height and Trunk Diameters for Coast Live Oak Trees within the Project Study Area

Tree Height		
(ft)	*Qty*	*%*
1–10	6	1.4
11–20	110	25.8
21–30	100	23.5
31–40	100	23.5
41–50	83	19.5
over 50	27	6.3
Total	**426**	**100.0**
Trunk Diameter*		
(in)	*Qty*	*%*
2 –10	105	24.6
11–20	169	39.7
21–30	89	20.9
31–40	51	12.0
41–50	9	2.1
over 50	3	0.7
Total	**426**	**100.0**

*Measurements were taken for oak trees 2.0 inches or larger at DBH.

3.2 Oak Tree Conditions

Overall, the Coast Live oaks exhibit growth and structural conditions that are typical of their locations as naturalized trees. Many of the oaks include cavities with internal wood rot, poor branch structure, and dead wood. These attributes are not considered detrimental in a natural area and provide many benefits to the wildlife that inhabit the area. These same attributes may be problematic in an urbanized area and result in lower overall health and structural condition ratings, but for purposes of this report, the trees were rated according to their "natural setting attributes."

The site's oak trees include various trunk and branch maladies as well as varying health and structural conditions. Some of the oak trees have sustained minor damage from wildfires that occurred in the area during their life spans. Although some of them have old basal trunk wounds and scorched bark from past wildfires, most of the fire damaged oak trees exhibit signs of recovery, as is typical of the species following fire, These fire-caused wounds can contribute to internal decay and susceptibility to insect and disease attack resulting in premature tree decline for some of the trees. As presented in Table 2, most of the individually-mapped oak trees, roughly 54 % (228 trees) exhibit good health condition, 43% are in fair health condition, 3% in

poor health. One dead tree was observed during the tree inventory. Structurally, 5% of the oak trees are considered to exhibit good structure, 90% (383 trees) exhibit fair structure, 5% exhibit poor structure. Good condition trees exhibit acceptable vigor, healthy foliage, 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 or excessive lean.

Table 2
Tree Health and Structural Condition Ratings
for Coast Live Oaks within the Project Study Area

Health Rating		
Condition	*Qty*	*%*
Good	228	53.5
Fair	184	43.2
Poor	13	3.1
Dead	1	0.2
Total	**426**	**100.0**
Structural Rating		
Condition	*Qty*	*%*
Good	21	4.9
Fair	383	90.0
Poor	21	4.9
Dead	1	0.2
Total	**426**	**100.0**

3.3 California Sycamores

The California sycamore (*Platanus racemosa*) is a moderately shade tolerant, fast growing native tree. This species can most often be found in its natural setting along streams and moist canyons in California and South into Baja California. The California sycamore trees on site vary in their composition from small, homogenous clusters to sycamore riparian habitat where they intermingle with native oaks. The sycamore trees on site are most commonly associated with intermittent streams or drainage bottoms, both primary drainages and in some cases, such as on the slopes of the eastern portion of the property, they occur high up in secondary drainages. The sycamore trees on site vary from juvenile trees to senescent trees that are nearing the end of their lifespan. There are 10 California sycamores within the project study area. These California sycamores were found to be fairly healthy trees, ranging in trunk diameter from 4–23 inches in combined trunk diameter and tree canopies 12–40 feet tall and as wide.

3.4 Arroyo Willow

The arroyo willow (*Salix lasiolepis*) is a shade intolerant native with a moderate growth rate that tends to grow in moist soils along streams and arroyos, or gullies, in valleys, foothills, and mountains. The tree can reach heights in excess of 25 feet with canopy widths as wide. The arroyo willow is typically a multi-stemmed tree that resembles a shrub until it reaches maturity. There are a total of three willows mapped within the site. The diameters of the trees on site range from 15–19 inches at DBH and have an average height of 23 feet. Tree health and structure appear to be fair with no observable pest outbreaks or other maladies that would be considered abnormal in naturally growing trees.

4.0 TREE IMPACT ANALYSIS

Impacts to trees can be classified as either direct or indirect. Impacts to trees can be direct, occurring immediately or within a short timeframe or they can be indirect, not occurring immediately or even near a tree. Direct impacts to trees related to site improvements are typically the result of physical injuries or changes caused by machinery involved with the development process. Direct impacts may include tree removal, root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds, amongst 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 ground water flow, introduction of exotic plant species, and alterations to disturbance regimes. Wider-scale alterations to the area near trees as well as 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 would respond to different types of disturbance. The trees in the proposed project study 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 proposed disturbance limits for road improvements and roadside fuel modification zones as of the date of this TMPP. As such, the actual number of trees that are subject to direct and indirect impacts may change as the detailed roadway improvement planning process proceeds.

4.1 Tree Impact Analysis Methods

Tree impacts were determined with the assistance of geographic information system (GIS) technology. Tree locations were compared with the proposed disturbance limits and trees located inside or within 25 feet of the grading limits were considered impacted because they would be encroached upon and would require removal or experience root disturbance. The resulting GIS data files were used in generating a comprehensive tree location exhibit illustrating the mapped locations of each tree within the project area (Appendix B). Impacts were further determined based on Dudek's experience with native trees and their typical reactions to disturbances such as soil and root damage, compaction, or branch removal. 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 would respond to different types of disturbance. The native 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. The impact analysis results presented herein were utilized for developing appropriate mitigation measures for the project Study Area.

4.2 Potential Direct Tree Impacts

For the purposes of this report, direct impacts are those associated with tree removal or encroachment within the tree protected zone (tree's height or 10 feet from trunk, whichever is greater). Tree removal is expected to be required when the trunk is located inside or within 5 feet of the proposed limits of grading. Encroachment is expected when soil and roots are cut or disturbed within the tree protected zone. Table 3 summarizes the total number of native trees, which are expected to be subject to direct road construction-related impacts. The locations of impacted trees, by impact type, are presented in Appendix E. Measures to minimize the extent of impact to preserved trees are provided in Appendix F.

4.2.1 Potential 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 storm water, 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, or 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 or road improvements and not subject to removal or encroachment (i.e., direct impacts).

Other potential indirect impacts may include firewood harvesting, vandalism, and deliberate or accidental wildfire ignition in oak woodland areas. These potential indirect impacts can be minimized by implementing woodland management and protection measures, including educational material provided to homeowners and long-term management of Coast live oak dominated habitat on the site.

Trees located in roadside fuel modification zones are also typically considered indirectly impacted. However, trees located in the proposed fuel modification zones on each side of the

access roads may not require any direct impacts or may require minimal canopy raising and thinning of understory brush and an occasional removal of deadwood that may create ladder fuels2. All trimming and thinning activities will be performed by a tree service crew that has been properly trained to prune oak trees. Table 3 presents the number of trees, by species, that are within a fuel modification area. These native trees will not require replacement, because the roadside FMZ implementation is not anticipated to injure the trees or damage/encroach into their tree protection zone and thereby cause tree decline or death.

Table 3
Native Tree Impacts Analysis for Road Improvement

Type	Direct Impact	Encroachment	FMZ*	Trees Retained	Total
Coast Live Oak	82	3	138	203	426
Arroyo Willow	0	0	3	N/A	3
California Sycamore	6	0	4	N/A	10
Subtotal	*88*	*3*	*145*	*203*	*439*

*Trees within roadside fuel modification zone will not require mitigation or tree replanting.

4.2.2 Project Tree Impacts Summary

Based on available project information, it is estimated that 85 native oak trees and 6 sycamore trees out of 436 oak trees (21%) within the Riverside County project Study Area will experience direct impacts in the form of removal or the tree protected zone will be significantly encroached upon. The remaining 348 (79%) trees will be preserved or not affected by grading or road construction work. The removal of 91 native oak and sycamore trees is considered a significant impact, but is mitigated to a less than significant level through the measures outlined in Section 5.0: Mitigation Program Framework and Overall Goals. This TMPP assumes the worst-case and utilizes a conservative, overly aggressive approach to defining tree impacts from grading/road improvements. The actual number of tree impacts will be tallied at time of road construction. It may be possible to reduce the total number of trees impacted and the related mitigation tree planting requirements through minor grading or road improvement adjustments in the field.

4.2.3 Native Trees' Total Impacts for The Preserve Development

For comparison, Table 4 summarizes indirect and direct tree impacts within the proposed Orange County portion of The Preserve project. Trees subject to direct impacts will be removed. Indirect impacts are related to encroachments within the tree protection zones. A

[2] fuels that provide ground fire a "ladder" into tree crowns

total of 201 (173 oak and 28sycamore) trees would be impacted by the proposed grading activities within the development footprint.

Table 4
Total Impacts for the Preserve Development

Type	Indirect Impact	Direct Impact	Total
Oak	58	115	173
Sycamore	14	14	28
Pine	-	-	-
Arroyo Willow	-	-	-
Subtotal	*72*	*119*	*201*

Although 173oak trees will be impacted by the development, the Preserve project in Orange County will preserve 2,721 oak trees, which equates to preserving 94% of the oak tree population within the project site in Orange County.

5.0 MITIGATION PROGRAM FRAMEWORK AND OVERALL GOALS

The mitigation program intended for oak impacts on the project site include a variety of measures to preserve and enhance woodlands adjacent to access roads as well as incorporate native trees in the site's landscaping.

Avoidance of oak trees and woodlands and preservation of the site's woodlands is the backbone of the mitigation program. Preservation will be augmented by planting in available receiver areas. Trees planted in these areas would be provided adaptive management techniques to help meet success goals. Roadside areas currently populated with oaks will be planted with additional oak tree for mitigating the removal of 85 oaks (and 6 sycamore) from these areas. These areas are within roadside fuel modification buffers and will provide FMZ-consistent canopy cover and also providing a transition between the access roadways and the surrounding, preserved oak woodlands that will be enhanced and expanded, where conditions will support oak tree planting.

- The mitigation program detailed herein considers the magnitude of the tree impacts and is designed to compensate and reduce impacts to below significant levels, according to California Environmental Quality Act (CEQA) by providing the following mitigation measures elaborated upon in this TMPP:
    - Preserving large acreages of the site's individual oak trees and oak woodlands
    - Planting oak trees within the roadside fuel modification zones for an ecologically sensitive landscape and softened transition from access roadway improvements to preserved areas.
    - Planting acorns within preserved Riverside County oak woodlands that include low recruitment rates or have openings that would support tree establishment.
    - Enhancing woodlands biodiversity by providing younger, age class oak trees, by replacing non-native trees with native vegetation, and by creating "live-in habitat" for raptors and other species
    - Enhancing existing and created wildlife movement corridors through tree planting, where possible and consistent with related mitigation plantings
    - Implementing an adaptive management program, including long-term monitoring.

5.1 Relevant Tree and Environmental Requirements

The following section summarizes the relevant policies regulating oak tree impact and removal associated with the project study area for this report.

5.1.1 Riverside County Tree Policies, Plans, Ordinances, and Guidance

Tree protection, removal, and replacement standards in Riverside County are included in the County's Vegetation section of the Multipurpose Open Space Element of the General Plan and the Riverside County Oak Tree Management Guidelines. The County's General Plan, Elsinore Area Plan recognizes oak trees, as defined below, and other native trees as significant aesthetic and ecological resources deserving protection within the boundaries of the County. The County's Oak Tree Management Guidelines set forth standards related to oak tree removal, protection, and replacement.

Definitions

1. An **Oak *tree*** is an individual plant of the genus *Quercus*, including in Riverside County the species *Q. agrifolia*, *Q. chrysolepis*, *Q. engelmannii*, *Q. Kelloggii*, *Q. morehus*, and *Q. wislezenii*. The single stem, or one of multiple stems of any oak tree (*Quercus* species), shall have a diameter two (2) inches or greater when measured at four and one-half feet (DBH) above the tree's natural grade.
2. A ***protected tree zone*** is a "circle whose center is within the base of an oak tree, the radius of which is equal to an oak's height or 10 feet, whichever is greater or to the outermost portion of an oak tree's dripline[3], if that portion extends beyond the radius."

County Properties with Oak Tree Resources

Minimum mitigation criteria for encroachment into an oak tree protected zone or oak tree removal must include a conservation easement negotiated between the applicant and a conservation agency, such as a land conservancy or County Service District, that will cover the undisturbed, remaining oak trees on the property.

Replacement of impacted oak trees with plantings of saplings and acorns is not required under the County's Oak Tree Management Guidelines However, replacement plantings are encouraged when they are required by another agency or when it is determined to be biologically sound and appropriate to do so. Oak tree protection should be oriented toward protection of the life cycle of oak trees and oak woodlands. That is, young trees should be conserved or protected along with older trees.

[3] The dripline is the area directly located 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.

5.1.2 California Public Resources Code 21083.4

The above County guidelines are intended to address the treatment of oak woodlands in areas where zoning and or General Plan density restrictions will allow the effective use of clustering. The County's Oak Tree Management guidelines in no way exempt a project from being reviewed and evaluated for significant impacts to oak trees pursuant to the CEQA. As such, this TMPP uses the Public Resources Code 21083.4 as a guideline for developing an oak tree impact mitigation program. The state oak woodlands mitigation law contains provisions for counties to mitigate impacts to oak-dominated habitats that are considered significant under CEQA and for which there is no oak preservation ordinance or regulation in place. Even though the County of Riverside does currently provide for oak protection/management guidelines in place, PRC 20183.4 more specifically addresses oak tree mitigation and replacement criteria. This is also consistent with the oak mitigation program being proposed for the main residential development for The Preserve in Orange County's jurisdiction. Under the state requirements one or more of the following oak woodlands mitigation alternatives are utilized to mitigate the significant effect of the conversion of oak woodlands:

1. Conserve oak woodlands, through the use of conservation easements.

   The Project preserves by conservation easements and/or deed restrictions up to 79% of the total oaks along the access roadways for a total of 348 oak trees.

2. Plant an appropriate number of trees. Trees need to be maintained for seven years and the planting effort cannot account for more than half of the mitigation. The trees may be used to restore former oak dominated habitats. The goal is to restore declining woodlands or re-establish them where they once grew, avoiding vegetation type conversion issues.

   a. This TMPP mitigation program will plant an appropriate number of trees with a minimum of 250 trees surviving through the seven year monitoring period. This results in a 2.75:1 ratio of planted to impacted trees in Riverside County Up to 500 acorns and/or seedlings will be planted within roadside fuel modification zones or preserved oak woodlands along Long Canyon Road and an internal project access road in Riverside County. Additionally, an estimated 100 containerized trees (including 90 oaks and 10 sycamores) will be planted in the landscaping along both roads.

   b. The monitoring program specified in this TMPP will include intensive monitoring during the initial years after planting and then ongoing monitoring by a qualified oak restoration specialist for seven years.

3. Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project.

    a. Due to the substantial on-site tree planting and woodland preservation, funding associated with The Preserve project will be focused on monitoring and managing the preserved woodlands adjacent to the roadsides and the on-site oak management efforts rather than provided for conservation of off-site woodlands.

4. Other mitigation measures developed by the county.

    a. Riverside County's Oak Tree Management Guidelines address some mitigation measures as described in Section 4.1.1. This TMPP proposes an option to provide seedling protection for up to 250 existing seedlings (at the time of mitigation program implementation) in lieu of planting up to 250 acorns/seedlings in the preserved oak woodland areas.

5.2 Mitigation Program

The following section outlines key features of the oak mitigation program. These mitigation program components are consistent with PRC 21083.4 and the Riverside County Oak Management Guidelines.

5.2.1 Preserved Tree Protection Measures and Design Provisions

The following provisions are provided to guide protection of preserved trees on the site. Additional tree protection measures for pre-construction, construction and post-construction phases can be found in Appendix F. Trees that are subject to any of these disturbances are considered impacted and require mitigation:

1. No road improvement construction activities or placement of structures shall occur within the protected zone of any oak tree or oak woodland except as provided for in these policies.
2. Landscaping, trenching or irrigation systems shall not be installed within the existing protected zone of any oak tree or oak woodland, unless recommended by an arborist, forester, or qualified biologist.

3. Land uses that would cause excessive soil compaction within the protected zone of any individual oak tree shall be avoided. No recreational trails are permitted within the drip line of any individual oak tree.
4. Manufactured cut slopes shall not begin their downward cut within the protected zone of any individual oak tree, except as provided in these guidelines.
5. Manufactured fill slopes shall not extend within the protected zone, except as provided in these guidelines.
6. On-slope retaining structures, if required, shall be designed to protect the root system of any individual oak tree by preserving the natural grade within the protected zone.
7. Redirection of surface runoff which results in increased soil moisture for an extended period of time within the drip line area of any individual oak tree shall be avoided. If unavoidable, a drainage system shall be designed to maintain the previous amount of soil moisture.
8. Sedimentation and siltation shall be controlled to avoid filling around bases of oak trees.
9. Redirection of surface runoff which results in decreased soil moisture for an extended period of time within the drip line area shall be avoided. If unavoidable, an irrigation system shall be designed to maintain the previous amount of soil moisture.
10. A construction zone at the interface with a tree protection zone shall be clearly delineated on the site in order to avoid impacts from construction operations and also to prevent the storage or parking of equipment outside the construction zone.
11. Dead or dying oak trees are necessary for the excavation of nest cavities by woodpeckers. Twelve species of birds use nest cavities. It is important to the health of the habitat to retain dead and dying trees that are not a hazard to humans. Such oak trees shall be retained in place unless determined to pose a health or safety hazard, in which case they shall be discarded at an approved on-site location identified by the consulting arborist, forester, or qualified biologist for habitat enhancement.
12. On-site to on-site or off-site to off-site relocation of oak trees will not constitute mitigation and is considered the same as removal for the purposes of these guidelines.
13. Replacement of oak trees with plantings of saplings or acorns is not required by these guidelines; however, replacement plantings may be used in addition to these guidelines when they are required by another agency or when it is determined to be biologically sound and appropriate to do so.
14. Oak protection should be orientated toward protection of the life cycle of oak trees and oak woodland; i.e., young trees should be protected along with older trees.

5.3 Mitigation Areas

Dudek evaluated the potential for oak mitigation within the project road improvements' boundaries (Appendix G) by utilizing specific site knowledge, and road improvement plans. In general, potential oak mitigation sites considered in this analysis were delineated based upon slope, aspect and the proposed road construction footprint, looking specifically for roadside planting areas and preserved oak woodlands that are accessible for maintenance during the establishment period.

Potential oak mitigation sites will include areas with appropriate soils, moderate slopes, northern and eastern aspect, existing tree canopy, vehicular access, water availability for irrigation, and adjacent native vegetation communities.

This analysis should be followed up by a more detailed analysis of the potential oak tree mitigation areas during the preparation of a precise oak woodland restoration plan for the project site. Agricultural suitability soil tests should be performed and analyzed before mitigation is undertaken in any area. The test results may help verify that the soil is suitable for oaks and will help determine what soil amendments and/or fertilizers may be required, if any, for mitigation to be successful in the allotted time frame. This more detailed analysis would also determine the exact methods of restoration, maintenance, and monitoring that would be employed.

There are a total of approximately seven acres of potential receiver sites available for mitigation planting as presented in Appendix G. The receiver areas are represented by the following categories and acreages in Table 5:

Table 5
Potential Mitigation Planting Receiver Sites

Planting Location	Acres Per Receiver Site
Roadside	2.83
Oak Woodland Enhancement Areas	2.60
Fuel Modification Zone D	1.53
Total Acreage	**6.96**

The total number of plantings under the proposed mitigation program is considered appropriate and sustainable at the site and guarantees a minimum of 2.75:1 replacement, with the possibility of up to 6:1 should all acorns/seedlings survive. However, the acorn planting success ratios cannot be precisely determined at this time. Conservative estimates of acorn establishment

success result in a 30% to 75% success ratio for a project of this scale. At a 30% success ratio, the tree acorn/seedling planting totals 250 trees or roughly 2.75 replacement trees for every impacted oak tree. At 60% success of acorns/seedlings, the replacement to impacted ratio is 4.4. to 1[4] for oak trees, significantly higher than the PRC 21083.4 ratio of 2:1.

Planting acorns has long been considered the most simple, economical, and successful way of establishing healthy oak trees. They do not require long-term supplemental water (following watering for up to five years and during drought years and generally naturalize, outperform larger trees, and produce superior trees. Direct seeding of acorns is often discouraged because growers expect poor germination rates and a high loss of planted acorns to rodents. These problems are minimized with careful selection and storage of acorns and the use of newly available, low-cost tree shelters to protect the seed and growing seedling in the ground. Proper seed handling methods have been shown in numerous settings to produce germination rates greater than 60th percentile. New technology, such as planting hole preparation, amendments, watering techniques, and protective cages, allows experienced restoration specialists to prepare a planting site to enhance the likelihood of successful germination and survival. The proposed mitigation program overplants acorns such that only a 30% success rate is necessary to achieve tree establishment goals.

Acorns require harvesting from local trees generally during early fall. The restoration specialist should develop an acorn collection and storage plan that allows the acorns to be planted at the most advantageous time, generally between early November and early March. The acorns could be contract grown for this project and planted along with nursery stock.

5.4 Mitigation Planting Plan Discussion

The following sections describe mitigation plantings proposed to mitigate the oak impacts associated with the project's road improvements within Riverside County. Prior to commencing road construction-related work, an oak tree and woodland restoration/planting plan will be designed, approved by the County, and implemented by a qualified revegetation/restoration specialist. This plan will be completed to direct the tree and seed planting in the receiver areas in a manner that dovetails with the other on-site mitigation requirements. Tree planting within the landscaped and maintained areas will occur following precise grading or road construction-related work.

[4] Note: Although it cannot be guaranteed that the replacement ratios will be 4.4 to 1, our conservative analysis results in a ratio that exceeds the PRC 21083.4.

5.4.1 Landscape Area Tree Planting

The project will include landscape planting along the proposed interior road and the main entrance monument at the intersection of Ortega Hwy and Long Canyon Road. Plantings incorporate oak trees as a major component of the landscape theme. Oak trees will be incorporated into medians (where appropriate), and right of ways in front yards along the proposed interior connector road.

5.4.2 Fuel Modification Zone D Tree Planting

A total of 100 containerized (5-, and 15- gallon) oak trees are proposed for mitigation planting within the fuel modification zones along both sides of Long Canyon Road and the portion of the interior connector road that adjoins existing oak woodlands.

5.4.3 Preserved Tree Protection Measures – Seedlings and Saplings

Woodland sustainability is a key component of the overall mitigation program for the Project. Observations of both regeneration and advanced regeneration of seedlings and saplings during the 2013 tree analysis indicated that the on-site woodlands are capable of producing sustainable levels of both seedlings and saplings. However, predation of seedlings by both large and small mammals and competition from invasive plants is of concern. As such, Dudek proposes that in lieu of planting up to 250 acorns/seedlings, protection of 250 already established seedlings can be provided within existing preserve areas. Seedlings (oak trees up to 12 inches in height) will be protected through the use of plastic seedling protectors (e.g., Tubex shelters). It is recommended that the protective shelters be maintained and monitored for 7 years following the commencement of construction activities or until the tree outgrows the need for protection. Furthermore, Dudek recommends that invasive plants be controlled through various natural means for an equal time frame to reduce the likelihood of tree failure from competition. These seedling and sapling protection strategies will be described in more detail in the project's Oak Woodland Restoration and Monitoring Plan that will be prepared prior to grading and that will be used for procuring bids for the oak restoration/mitigation work on the project.

5.4.4 Replacement Tree Planting within Natural reciever areas

In natural oak woodlands, it is common to find tree spacing that varies considerably. Generally, however, competition among trees naturally produces spacing averages of more than 20 feet. The trees often occur in scattered groups with dominant trees flanked by co-dominants, secondary and understory trees. These trees are often within a few feet of each other but are spaced further from neighboring tree groups. One preliminary tree receiver area in the project site provides up

to 1.53 acres for oak tree planting (Appendix G). This site currently supports native oak woodlands. An oak restoration plan customized to the site will be prepared and will indicate the number of acorns/seedlings that can be planted within each receiver area. The plantings will take advantage of open areas, woodland edge areas, and gaps that would support oak trees.

5.5 Adaptive Management Program

Oak mitigation success will require an active monitoring program that includes flexibility and responsiveness. Additionally, the preserved woodlands will require monitoring to ensure that they are not indirectly impacted by the project. To that end, adaptive management procedures will be utilized within the monitoring program that includes:

1. Conduct monitoring to track the long-term oak tree establishment success and preserved woodland management.
2. Maintain appropriate subsurface hydrology to avoid under- and over-watering.
3. Control exotics invasions by prohibiting invasive species from proposed plant palettes to reduce competition and increase establishment and survival success.
4. Maintain suitable nesting habitat in preserved oak habitats, and specifically potential nest cavities in snags, dead or decaying limbs, and hollow trunks for acorn woodpecker. (As a primary cavity nester (i.e., species that excavate their own holes for nests), acorn woodpeckers may be a keystone species for secondary cavity nesters that utilize abandoned holes).
5. In the preserved woodlands, retain large oaks (greater than approximately 36 inches DBH) to the maximum extent possible to provide granaries for acorn woodpeckers.
6. Maintain acorn production in preserved woodlands and protect seedlings and saplings to support establishment of new trees. Management would entail addressing the following issues:
    a. Maintain acorn production to provide forage for native wildlife such as acorn woodpeckers, scrub jays, squirrels, mice and mule deer. (It is important to maintain native predators of acorns, seedlings and saplings because they may be important components of the oak-dominated habitat ecosystem, especially in regard to dispersal of acorns or mycorrhizal fungi. Acorn predators such as mice also provide food for other oak-dominated habitat species such as Cooper's hawk and white-tailed kite. The challenge is to balance these natural predators with viable oak-dominated habitat systems that can naturally regenerate).

b. Protect seedlings and saplings in preserved stands of oak-dominated habitats.

7. Maintain the complex understory of shrubs, grasses annual forbs, leaf litter and downed woody debris in preserved woodlands that provide habitat for a variety of wildlife species.

As a means to ensure a successful oak planting program, the adaptive management program for this site would include intensive monitoring during a period of seven years. Tracking and documenting the success rates of varying planting and management techniques would be a primary focus of the adaptive management/monitoring program. Through the adaptive management process, less-successful methods can be identified and discarded as methods to be implemented in the management program's restoration planning. The adaptive management process will enable corrective management actions to be enacted when problems or issues arise. The most critical stage for the adaptive management process will be during the monitoring program after initial planting and then the first few years of project implementation. During these periods, it is anticipated that there will be establishment failures, but they will be contained and corrected based on site-specific knowledge.

6.0 MONITORING SPECIFICS

A monitoring program will be established for the project oak mitigation effort. The monitoring program will include monitoring in areas of grading and ground disturbance occurring within a buffer area of the drip line of preserved (encroached upon) oaks (Greeley 2001) both during and following construction. Although it is intended that protection measures designated in the tree protection guidelines will provide the preserved oaks protection during construction, monitoring ensures that the protection measures are implemented correctly.

The monitoring program includes the following basic components:

- Tree establishment standards
- Data collection standards
- Digital and on-site locations of data points/monitoring stations
- Monitoring schedule
- Observations
- Recommendations.

Monitoring will be conducted by qualified arborists, foresters, or oak restoration specialists with specific oak experience. The monitor will coordinate with grading and other contractors to minimize impacts as well as during the restoration planting establishment period in preserve areas. Monitoring of new plantings will continue on a long-term basis on a regular schedule that includes more visits initially and, as successful establishment occurs, fewer visits over time.

Monitoring of preserved oak-dominated habitats would include methods such as the following or similar:

1. Monitoring will be through tree by tree evaluations.
2. Tag trees and record species, tag number, DBH (inches), height (feet), and dominance (i.e., is the tree in the canopy of another tree or does it form the canopy?). Note slope and aspect of each tree, understory species (including proportion of natives to exotics), presence of debris and litter, soil type, depth, and parent material and elevation.
3. Assess the status of trees' health based on ISA standards and examination of canopy, branches, trunk and if necessary, cambial tissue.

4. Assess acorn production and natural establishment.
5. Create a simple oak tree database through the use of software specially developed to track discrete resources (e.g., software that links the database to GIS mapping capabilities).

6.1 Restoration Oaks - Proposed Project Area Plantings

Based on applicable regulations, monitoring is proposed to occur for a seven year period following planting. Monitoring will focus on plant health, mortality rates, presence of pests or diseases, competition levels from exotic species, and other factors that may affect establishment or growth of the planted oaks.

6.1.1 Monitoring Schedule

Monitoring will occur from planting through a 7-year monitoring period for each restoration area, and should be of higher intensity during planting and for the 90 days following planting. The monitor should be on site during all oak planting and irrigation installation periods, and periodically each year throughout the monitoring period to track the progress of the oak establishment. Additional monitoring may be needed to better implement the adaptive management process should tree decline or mortality at unusual levels occur. The monitor is responsible for coordinating with the planting contractor and the nursery, conducting inspections of planting stock prior to its placement in the ground to ensure high-quality plant material.

Container Size Plant Requirements

Larger plant materials that receive supplemental irrigation at planting will be required to survive a minimum two years following removal of the irrigation, which is typically after year three in the ground. Once trees reach this stage, they are less susceptible to drought effects. These trees will be planted in the irrigated areas of the development, including in the landscape areas and wildland urban interface areas. As such, supplemental irrigation can be provided if necessary, beyond the establishment period. For project aesthetics, survival of these trees is important, as they will be located in highly visible areas. They will receive care and maintenance to assist their long-term survival and will be replaced with new trees where mortality occurs.

Mid-Monitoring Term Success Indicators

The oak specialist/forester will monitor the overall restoration success by evaluating:

1. Successful establishment of planted oaks in the mitigation planting areas is the primary indicator that will be tracked.
2. Tree recruitment—estimates of the quantity of seedlings emerging in preserved woodlands each year and alive at the end of the year will be tracked as part of the overall success evaluation.
3. Plant health—seedlings and saplings will be evaluated for overall health, presence of disease, pests, or other factors that are affecting tree health and survival. Presence of controllable issues will be addressed through a post-monitoring memorandum describing the issue and recommended treatment. Treatment will be carried out as soon as practical and under the supervision of the site forester/arborist.
4. Disturbance—damaged fences, damaged protective cages, or other factors that may result in increased herbivory will be monitored and corrective actions employed as soon as possible to correct the situation.
5. Invasive species—occurrences of exotic, non-native species will be monitored and treatments recommended on an annual basis. Maintenance will include the removal or treatment of exotics that are competing with mitigation plantings.
6. Natural processes—the monitor will document natural processes that are beneficial or detrimental to oak establishment in the preserved woodlands. Where detrimental effects from wildlife are noted, actions will be recommended to correct the situation. Where beneficial effects are noted, recommendations to promote the wildlife activities or a "no action" alternative will be specified.

6.1.2 Annual Status Reports

In addition to regular monitoring reports, an annual status report will be prepared by the monitor for submittal to the County of Riverside. The report will summarize the successes, failures, and observations of the previous year. In addition, the annual status report will outline a course of action for the coming monitoring year.

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7.0 CONCLUSIONS

This TMPP provides an assessment of the trees along the project's access roadways within Riverside County where road widening is proposed. Furthermore, the TMPP evaluates the project related new roadway construction impacts and provides a comprehensive mitigation plan that is customized for the project site. The proposed road construction and improvements could potentially impact 91 trees. The oaks and other native trees impacted by the project are primarily located in scattered clusters and woodlands within the project footprint. A total of 88 trees will require removal while 3 will be encroached upon but retained in place and 251 trees will be preservable in place with tree protection measures applied.

Mitigation planting will include replacement of the impacted oakswith a total of 100 5- to 15-gallon trees along project roadways within the Riverside County portion of the project and 500 acorns/seedlings in the preserved woodlands within Riverside County. This proposed mitigation program is a sustainable and site-specific oak restoration program. The proposed mitigation program provides many benefits including focusing restoration on degraded woodlands, utilizing site collected acorns, providing protection measures for developing seedlings and saplings, and integrating the oak mitigation with mitigation for other plant communities, as possible.

The final number of mitigation trees that establish is expected to be between 250 and 350, depending on acorn germination rates and seedling establishment. The project will guarantee 250 trees through the monitoring period. The anticipated result is a significant increase in the number of trees over existing conditions and provision for the next generation of oaks.

Overall, including both Orange County and Riverside county portions, the project will preserve approximately 92% of the trees on site and provides for replanting of suitable disturbed areas at a replacement ratio exceeding 3:1 and up to roughly 10:1. The project also includes a robust seven-year monitoring program with use of adaptive management principles to provide a sound restoration and planting plan, ability to detect issues and make mid-course changes, and ongoing follow up through the monitoring period to ensure successful mitigation is achieved.

7.1 Arborist's Statement

This report provides conclusions and recommendations based on an examination of the trees and surrounding site by ISA Certified Arborists and oak woodland management specialists. 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 and appropriate mitigations should be enacted to reduce potential risk.

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 of time. There are also no guarantees that a tree's condition will not change over a short or long period due to weather, cultural or environmental conditions. Trees can be managed, but not controlled.

8.0 REFERENCES

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ISA (International Society of Arboriculture). 2000. Guide for Plant Appraisal, 9th Edition. Council of Tree and Landscape Appraisers. 143 pp.

Matheny, N. and Clark, J. 1998. Trees and Development, A Technical Guide to Preservation of Trees During Land Development.

Stephenson, J. and G.M. Calcarone. 1999. *Southern California mountains and foothills assessment: habitat and species conservation issues*. General Technical Report PSW-GTR-172, USDA Forest Service, Pacific Southwest Research Station, Albany, California.

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APPENDIX A

Photograph Log

The Preserve

Access Roadways

Photograph Log

1. View looking south along Ortega Highway (Hwy #74) at the intersection of Long Canyon Road and Hwy 74. Notice that trees are set back from edge of existing road and will not be impacted during road improvements for the project.

2. View looking north (opposite direction from photograph #1) along Ortega Highway (Hwy #74) at the intersection of Long Canyon Road and Hwy 74. The village of El Cariso is approximately ½ mile down the road from this location. Trees will not be impacted during road improvements for the project.

The Preserve
Access Roadways

Photograph Log

3. Photograph displays Long Canyon Road or Forest Service Route 6S05, which is currently the primary access road to the Preserve project site. Oak trees occur along both sides of the roadway. Photograph was taken looking west along the road.

4. Photograph is a closer view of the tree canopies overhanging Long Canyon Road. Road improvements will encroach into some of the Oak tree root zones and their impacts are addressed in the report.

The Preserve
Access Roadways

Photograph Log

5. Photograph shows the typical grass understory found on the project study area. Fuel modification will be minimal with an occasional pruning of lower limbs to reduce ladder fuels along Long Canyon Road.

6. As displayed in the photograph, the majority of the larger diameter trees will not require pruning of branches overhanging roadway, since they already have adequate vertical clearance.

The Preserve

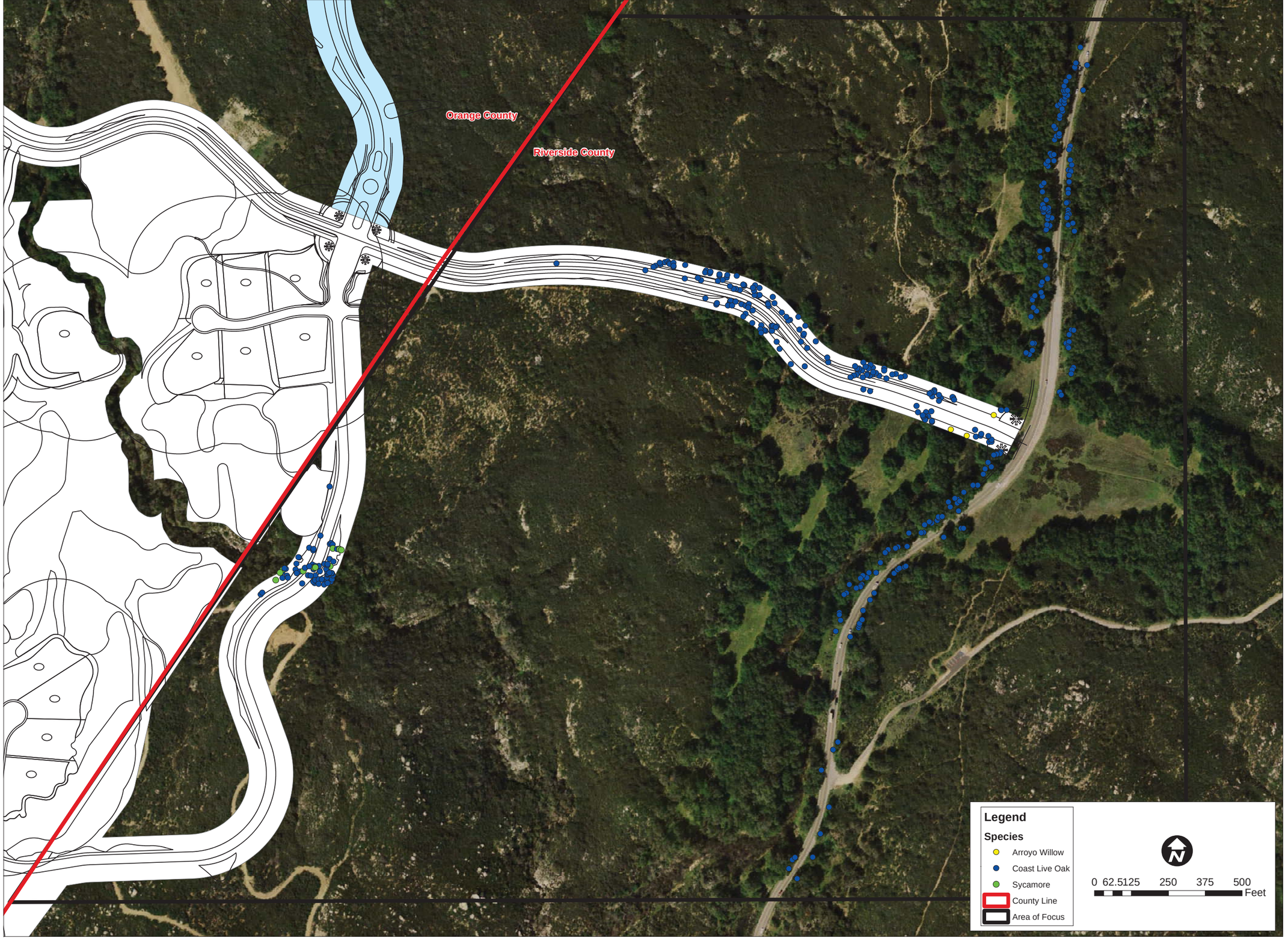
Access Roadways

Photograph Log

7. Photograph taken of majestic, 86-inch DBH Oak tree. Tree canopy is 40 feet tall and 55 feet wide. Oak woodlands near Long Canyon Road has an abundance of young and older trees.

APPENDIX B

GPS Inventory Area Tree Locations – Riverside County



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GPS INVENTORY AREA TREE LOCATIONS - RIVERSIDE COUNTY

THE PRESERVE AT SAN JUAN TMPP

Appendix B

APPENDIX C

Master Tree Information Matrices – Riverside County

Appendix C - Master Tree Information Matrices - Riverside County

Tree #	Botanical Name	Common Name	Stems	Basal Diameter	D.B.H	Individual Trunk Diameters (in)					Height	Canopy	Health	Structure	Impact Status	Notes	X	Y
						D1	D2	D3	D4	D5								
1542	*Quercus agrifolia*	Coast Live Oak	1	6	4.0	4	0	0	0	0	12	0	Poor	Fair	FMZ D		6204432	2177834
1543	*Quercus agrifolia*	Coast Live Oak	3	30	23.3	16	12	12	0	0	38	30	Good	Fair	FMZ D		6204415	2177809
1717	*Quercus agrifolia*	Coast Live Oak	1	28	17.0	17	0	0	0	0	42	25	Good	Fair	FMZ D		6204394	2177814
1718	*Quercus agrifolia*	Coast Live Oak	1	12	10.0	10	0	0	0	0	20	25	Good	Fair	Remove	canopy over road	6204382	2177809
1719	*Quercus agrifolia*	Coast Live Oak	1	28	14.0	14	0	0	0	0	50	30	Good	Fair	Remove		6204384	2177810
1721	*Quercus agrifolia*	Coast Live Oak	1	22	18.0	18	0	0	0	0	50	30	Good	Fair	Remove		6204375	2177815
1720	*Quercus agrifolia*	Coast Live Oak	2	24	14.4	12	8	0	0	0	25	15	Fair	Fair	Remove		6204373	2177812
1723	*Quercus agrifolia*	Coast Live Oak	1	40	37.0	37	0	0	0	0	55	45	Good	Fair	Remove		6204359	2177804
1724	*Quercus agrifolia*	Coast Live Oak	3	36	18.0	12	10	9	0	0	40	30	Good	Fair	FMZ D		6204357	2177827
1729	*Quercus agrifolia*	Coast Live Oak	1	20	15.0	15	0	0	0	0	45	25	Good	Fair	Remove		6204344	2177820
1730	*Quercus agrifolia*	Coast Live Oak	1	13	10.0	10	0	0	0	0	35	20	Good	Fair	Remove		6204338	2177813
1730a	*Quercus agrifolia*	Coast Live Oak	2	5	2.8	2	2	0	0	0	10	8	Good	Fair	Remove		6204329	2177810
1731	*Quercus agrifolia*	Coast Live Oak	2	24	16.5	16	4	0	0	0	45	40	Good	Fair	Remove		6204318	2177804
1733	*Quercus agrifolia*	Coast Live Oak	2	25	22.8	22	6	0	0	0	35	30	Fair	Fair	Remove		6204242	2177855
1752	*Quercus agrifolia*	Coast Live Oak	3	28	20.4	16	12	4	0	0	38	40	Good	Fair	Remove		6204171	2177903
1751	*Quercus agrifolia*	Coast Live Oak	1	18	18.0	18	0	0	0	0	45	25	Good	Fair	Remove		6204150	2177924
1750	*Quercus agrifolia*	Coast Live Oak	4	35	19.0	12	10	9	6	0	30	35	Good	Fair	FMZ D		6204145	2177965
1755	*Quercus agrifolia*	Coast Live Oak	2	25	12.2	10	7	0	0	0	25	20	Fair	Fair	FMZ D		6204113	2177998
1753	*Quercus agrifolia*	Coast Live Oak	2	30	30.5	23	20	0	0	0	40	40	Fair	Poor	Encroach		6204107	2177996
1754	*Quercus agrifolia*	Coast Live Oak	1	55	49.0	49	0	0	0	0	45	55	Fair	Fair	FMZ D		6204101	2178008
1765	*Quercus agrifolia*	Coast Live Oak	1	9	5.0	5	0	0	0	0	18	12	Fair	Fair	FMZ D		6204085	2178023
1767	*Quercus agrifolia*	Coast Live Oak	1	20	20.6	18	10	0	0	0	35	35	Fair	Fair	Remove		6204041	2178045
1769	*Quercus agrifolia*	Coast Live Oak	1	4	3.0	3	0	0	0	0	15	8	Good	Good	Remove		6204038	2178055
1768	*Quercus agrifolia*	Coast Live Oak	1	14	11.0	11	0	0	0	0	25	20	Fair	Poor	Remove		6204039	2178051
1806	*Quercus agrifolia*	Coast Live Oak	1	35	33.0	33	0	0	0	0	40	45	Fair	Fair	FMZ D		6204005	2178080
1775	*Quercus agrifolia*	Coast Live Oak	1	18	16.0	16	0	0	0	0	30	30	Fair	Fair	FMZ D		6204010	2178082
1808	*Quercus agrifolia*	Coast Live Oak	1	5	3.0	3	0	0	0	0	10	10	Fair	Fair	Encroach		6203993	2178082
1807	*Quercus agrifolia*	Coast Live Oak	2	36	32.6	24	22	0	0	0	40	50	Fair	Fair	FMZ D		6203991	2178097
1778	*Quercus agrifolia*	Coast Live Oak	1	24	24.0	24	0	0	0	0	50	45	Fair	Fair	FMZ D		6203995	2178115
1811	*Quercus agrifolia*	Coast Live Oak	1	19	17.0	17	0	0	0	0	30	25	Fair	Fair	Remove		6203944	2178099
1810	*Quercus agrifolia*	Coast Live Oak	3	22	12.0	10	6	3	0	0	25	20	Fair	Fair	FMZ D		6203958	2178116
1812	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	27	10	Fair	Fair	Remove		6203930	2178103
1813	*Quercus agrifolia*	Coast Live Oak	2	18	12.1	11	5	0	0	0	35	25	Good	Fair	Remove		6203922	2178103
1814	*Quercus agrifolia*	Coast Live Oak	2	18	14.4	12	8	0	0	0	28	20	Good	Fair	Remove		6203910	2178112
1804	*Quercus agrifolia*	Coast Live Oak	5	40	35.5	4	20	18	14	18	35	55	Fair	Poor	FMZ D	side toward road dead	6203899	2178141
1817	*Quercus agrifolia*	Coast Live Oak	2	36	35.6	28	22	0	0	0	60	50	Fair	Fair	FMZ D		6203885	2178133
1818	*Quercus agrifolia*	Coast Live Oak	2	26	32.0	25	20	0	0	0	43	50	Fair	Fair	Remove		6203869	2178130
1825	*Quercus agrifolia*	Coast Live Oak	1	38	31.0	31	0	0	0	0	20	25	Fair	Fair	Remove		6203812	2178132
1824	*Quercus agrifolia*	Coast Live Oak	2	22	13.9	13	5	0	0	0	17	20	Fair	Fair	Remove		6203801	2178140
1826	*Quercus agrifolia*	Coast Live Oak	1	32	30.0	30	0	0	0	0	30	30	Fair	Fair	Remove		6203757	2178138
1842	*Quercus agrifolia*	Coast Live Oak	3	18	12.7	7	8	7	0	0	25	20	Good	Fair	Remove		6203624	2178166
1840	*Quercus agrifolia*	Coast Live Oak	1	9	7.0	7	0	0	0	0	20	12	Good	Fair	Encroach		6203658	2178181
1841	*Quercus agrifolia*	Coast Live Oak	2	12	8.6	7	5	0	0	0	20	12	Good	Fair	Remove		6203651	2178177
1838	*Quercus agrifolia*	Coast Live Oak	2	16	19.8	14	14	0	0	0	25	25	Good	Fair	FMZ D		6203675	2178186
1837	*Quercus agrifolia*	Coast Live Oak	1	18	16.0	16	0	0	0	0	30	30	Good	Fair	FMZ D		6203690	2178193
1833	*Quercus agrifolia*	Coast Live Oak	1	19	17.0	17	0	0	0	0	30	30	Good	Fair	FMZ D		6203699	2178196
1832	*Quercus agrifolia*	Coast Live Oak	1	12	9.0	9	0	0	0	0	22	18	Good	Fair	FMZ D		6203704	2178190
1831	*Quercus agrifolia*	Coast Live Oak	1	19	17.0	17	0	0	0	0	30	25	Good	Fair	FMZ D		6203706	2178187
1830	*Quercus agrifolia*	Coast Live Oak	3	38	23.7	20	12	4	0	0	30	38	Good	Fair	FMZ D		6203719	2178191

1829	*Quercus agrifolia*	Coast Live Oak	1	18	15.0	15	0	0	0	0	30	38	Good	Fair	FMZ D		6203719	2178177
1843	*Quercus agrifolia*	Coast Live Oak	3	28	18.2	11	14	4	0	0	35	30	Good	Fair	Remove		6203827	2178071
1846	*Quercus agrifolia*	Coast Live Oak	1	16	13.0	13	0	0	0	0	25	20	Good	Fair	FMZ D		6203864	2178050
1847	*Quercus agrifolia*	Coast Live Oak	1	16	13.0	13	0	0	0	0	25	20	Good	Fair	FMZ D		6203866	2178055
1863	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	25	20	Fair	Fair	FMZ D		6203910	2178060
1862	*Quercus agrifolia*	Coast Live Oak	1	16	14.0	14	0	0	0	0	25	20	Fair	Fair	Remove		6203912	2178063
1861	*Quercus agrifolia*	Coast Live Oak	2	28	21.3	16	14	0	0	0	30	40	Good	Fair	FMZ D		6203905	2178049
1860	*Quercus agrifolia*	Coast Live Oak	1	9	7.0	7	0	0	0	0	18	10	Fair	Fair	FMZ D		6203903	2178047
1864	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	18	10	Fair	Fair	FMZ D		6203917	2178047
1865	*Quercus agrifolia*	Coast Live Oak	1	15	13.0	13	0	0	0	0	30	20	Fair	Fair	Remove		6203929	2178060
1866	*Quercus agrifolia*	Coast Live Oak	1	34	30.0	30	0	0	0	0	50	50	Good	Fair	Remove		6203949	2178051
1867	*Quercus agrifolia*	Coast Live Oak	1	26	22.0	22	0	0	0	0	45	45	Good	Fair	Remove		6203963	2178046
1868	*Quercus agrifolia*	Coast Live Oak	1	20	18.0	18	0	0	0	0	35	30	Good	Fair	Remove		6203974	2178052
1869	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	35	30	Good	Fair	Remove		6203972	2178040
1871	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	35	30	Good	Fair	FMZ D		6203963	2178019
1870	*Quercus agrifolia*	Coast Live Oak	1	22	18.0	18	0	0	0	0	45	30	Good	Fair	Remove		6203987	2178030
1934	*Quercus agrifolia*	Coast Live Oak	1	22	20.0	20	0	0	0	0	50	50	Good	Good	FMZ D		6204016	2177980
1936	*Quercus agrifolia*	Coast Live Oak	1	12	10.0	10	0	0	0	0	30	20	Good	Fair	Remove		6204052	2177967
1937	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	18	12	Good	Fair	Remove		6204052	2177961
1931	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	35	30	Good	Fair	FMZ D		6204030	2177961
1941	*Quercus agrifolia*	Coast Live Oak	1	31	29.0	29	0	0	0	0	48	40	Fair	Fair	Remove		6204051	2177978
1940	*Quercus agrifolia*	Coast Live Oak	1	36	34.0	34	0	0	0	0	55	40	Good	Fair	Remove		6204056	2177978
1938	*Quercus agrifolia*	Coast Live Oak	1	8	7.0	7	0	0	0	0	24	12	Good	Fair	Remove		6204069	2177976
1939	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	20	14	Good	Fair	Remove		6204065	2177973
1942	*Quercus agrifolia*	Coast Live Oak	1	80	78.0	78	0	0	0	0	65	60	Good	Fair	FMZ D		6204068	2177924
1943	*Quercus agrifolia*	Coast Live Oak	1	5	4.0	4	0	0	0	0	18	12	Good	Good	FMZ D		6204078	2177900
1946	*Quercus agrifolia*	Coast Live Oak	1	33	31.0	31	0	0	0	0	50	35	Good	Fair	FMZ D		6204163	2177841
1947	*Quercus agrifolia*	Coast Live Oak	1	39	37.0	37	0	0	0	0	45	50	Good	Fair	FMZ D		6204361	2177763
1948	*Quercus agrifolia*	Coast Live Oak	1	35	33.0	33	0	0	0	0	45	50	Good	Fair	FMZ D		6204384	2177757
1949	*Quercus agrifolia*	Coast Live Oak	1	25	23.0	23	0	0	0	0	50	35	Good	Fair	FMZ D		6204541	2177707
1950	*Quercus agrifolia*	Coast Live Oak	1	60	56.0	56	0	0	0	0	40	50	Good	Fair	FMZ D		6204546	2177686
1951	*Quercus agrifolia*	Coast Live Oak	1	15	13.0	13	0	0	0	0	25	20	Good	Fair	FMZ D		6204573	2177686
1952	*Quercus agrifolia*	Coast Live Oak	2	22	14.1	10	10	0	0	0	25	20	Good	Fair	FMZ D		6204591	2177689
1958	*Quercus agrifolia*	Coast Live Oak	2	16	11.4	9	7	0	0	0	14	20	Good	Fair	FMZ D	lean toward road	6204580	2177672
1957	*Quercus agrifolia*	Coast Live Oak	1	16	14.0	14	0	0	0	0	35	28	Good	Fair	FMZ D		6204571	2177665
1955	*Quercus agrifolia*	Coast Live Oak	1	9	7.0	7	0	0	0	0	25	15	Good	Fair	FMZ D		6204568	2177672
1956	*Quercus agrifolia*	Coast Live Oak	1	16	14.0	14	0	0	0	0	35	25	Good	Fair	FMZ D		6204566	2177667
1956a	*Quercus agrifolia*	Coast Live Oak	1	5	6.0	6	0	0	0	0	28	18	Good	Fair	FMZ D		6204570	2177661
1959	*Quercus agrifolia*	Coast Live Oak	1	20	18.0	18	0	0	0	0	45	32	Good	Fair	FMZ D		6204569	2177661
1960	*Quercus agrifolia*	Coast Live Oak	1	20	18.0	18	0	0	0	0	45	32	Good	Fair	FMZ D		6204570	2177660
1961	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	18	10	Good	Fair	FMZ D		6204593	2177653
1962	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	18	10	Good	Fair	FMZ D		6204593	2177656
639	*Quercus agrifolia*	Coast Live Oak	4	47	31.1	15	17	14	16	0	30	40	Good	Fair	FMZ D		6204739	2177626
640	*Quercus agrifolia*	Coast Live Oak	1	16	12.0	12	0	0	0	0	30	20	Good	Fair	FMZ D		6204742	2177603
641	*Quercus agrifolia*	Coast Live Oak	1	21	19.0	19	0	0	0	0	32	30	Good	Fair	FMZ D		6204758	2177606
642	*Quercus agrifolia*	Coast Live Oak	1	22	20.0	20	0	0	0	0	32	30	Good	Fair	FMZ D		6204760	2177612
644	*Quercus agrifolia*	Coast Live Oak	1	22	18.0	18	0	0	0	0	37	35	Good	Fair	FMZ D		6204787	2177585
645	*Quercus agrifolia*	Coast Live Oak	1	24	22.0	22	0	0	0	0	37	35	Good	Fair	FMZ D		6204795	2177586
644a	*Quercus agrifolia*	Coast Live Oak	4	6	3.2	2	2	1	1	0	12	14	Good	Fair	FMZ D		6204795	2177593
649	*Quercus agrifolia*	Coast Live Oak	1	48	46.0	46	0	0	0	0	50	45	Good	Fair	FMZ D		6204826	2177551
648	*Quercus agrifolia*	Coast Live Oak	1	30	28.0	28	0	0	0	0	50	38	Good	Fair	Retain		6204823	2177546
647	*Quercus agrifolia*	Coast Live Oak	2	28	22.7	17	15	0	0	0	50	47	Good	Fair	Retain		6204812	2177544

653	*Quercus agrifolia*	Coast Live Oak	1	20	17.0	17	0	0	0	0	55	30	Good	Fair	Retain		6204802	2177541
654	*Quercus agrifolia*	Coast Live Oak	2	20	12.8	8	10	0	0	0	55	30	Good	Fair	Retain		6204783	2177516
656	*Quercus agrifolia*	Coast Live Oak	1	32	30.0	30	0	0	0	0	45	50	Good	Fair	Retain		6204794	2177501
658	*Quercus agrifolia*	Coast Live Oak	1	22	20.0	20	0	0	0	0	45	30	Good	Fair	Retain		6204767	2177476
657	*Quercus agrifolia*	Coast Live Oak	6	84	39.6	20	20	15	16	17	40	55	Good	Fair	Retain		6204773	2177494
1966	*Quercus agrifolia*	Coast Live Oak	2	20	14.8	13	7	0	0	0	30	25	Good	Fair	Retain		6204748	2177439
1965	*Quercus agrifolia*	Coast Live Oak	1	38	36.0	36	0	0	0	0	50	40	Good	Fair	Retain		6204732	2177439
1968	*Quercus agrifolia*	Coast Live Oak	2	38	35.0	30	18	0	0	0	50	40	Good	Fair	Retain		6204701	2177415
1971	*Quercus agrifolia*	Coast Live Oak	1	30	32.0	32	0	0	0	0	50	55	Good	Fair	Retain		6204680	2177391
1970	*Quercus agrifolia*	Coast Live Oak	1	16	14.0	14	0	0	0	0	40	28	Good	Fair	Retain		6204679	2177378
1967	*Quercus agrifolia*	Coast Live Oak	2	8	3.3	3	1	1	0	0	12	10	Good	Fair	Retain		6204687	2177385
1969	*Quercus agrifolia*	Coast Live Oak	2	20	9.4	8	5	0	0	0	25	10	Good	Fair	Retain		6204671	2177394
1972	*Quercus agrifolia*	Coast Live Oak	2	28	29.7	22	20	0	0	0	45	40	Poor	Poor	Retain		6204649	2177382
1974	*Quercus agrifolia*	Coast Live Oak	1	25	25.0	25	0	0	0	0	50	40	Good	Fair	Retain		6204655	2177365
1975	*Quercus agrifolia*	Coast Live Oak	1	52	48.0	48	0	0	0	0	55	65	Good	Fair	Retain		6204683	2177352
1997	*Quercus agrifolia*	Coast Live Oak	1	25	20.0	20	0	0	0	0	40	30	Good	Fair	Retain		6204611	2177320
1996	*Quercus agrifolia*	Coast Live Oak	2	36	34.2	32	12	0	0	0	55	50	Good	Fair	Retain		6204617	2177328
1983	*Quercus agrifolia*	Coast Live Oak	1	18	17.0	17	0	0	0	0	45	25	Good	Fair	Retain		6204615	2177332
1982	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	45	30	Good	Fair	Retain		6204628	2177333
1994	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	22	8	Good	Fair	Retain		6204592	2177311
1993	*Quercus agrifolia*	Coast Live Oak	1	4	3.0	3	0	0	0	0	20	8	Poor	Fair	Retain		6204586	2177315
1992	*Quercus agrifolia*	Coast Live Oak	1	12	10.0	10	0	0	0	0	45	30	Poor	Fair	Retain		6204584	2177315
1991	*Quercus agrifolia*	Coast Live Oak	1	14	12.0	12	0	0	0	0	35	20	Good	Fair	Retain		6204568	2177305
1998	*Quercus agrifolia*	Coast Live Oak	1	22	18.0	18	0	0	0	0	50	45	Good	Fair	Retain	Phytophthra	6204565	2177279
1999	*Quercus agrifolia*	Coast Live Oak	1	7	4.0	4	0	0	0	0	15	8	Fair	Fair	Retain		6204557	2177278
2750	*Quercus agrifolia*	Coast Live Oak	2	20	12.6	12	4	0	0	0	30	18	Fair	Fair	Retain		6204515	2177277
2749	*Quercus agrifolia*	Coast Live Oak	2	30	29.8	23	19	0	0	0	45	40	Fair	Fair	Retain		6204509	2177232
2741	*Quercus agrifolia*	Coast Live Oak	2	27	21.2	20	7	0	0	0	45	40	Fair	Fair	Retain		6204478	2177230
2739	*Quercus agrifolia*	Coast Live Oak	2	27	22.6	16	16	0	0	0	45	40	Fair	Fair	Retain		6204471	2177226
2738	*Quercus agrifolia*	Coast Live Oak	1	22	19.0	19	0	0	0	0	50	35	Good	Fair	Retain		6204470	2177226
2742	*Quercus agrifolia*	Coast Live Oak	2	30	22.5	19	12	0	0	0	50	35	Good	Fair	Retain		6204445	2177221
2743	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	18	10	Fair	Fair	Retain		6204437	2177210
2744	*Quercus agrifolia*	Coast Live Oak	2	28	24.1	18	16	0	0	0	50	45	Good	Fair	Retain		6204436	2177209
2745	*Quercus agrifolia*	Coast Live Oak	2	20	11.3	8	8	0	0	0	30	20	Good	Fair	Retain		6204435	2177211
2737	*Quercus agrifolia*	Coast Live Oak	3	42	26.3	20	16	6	0	0	60	45	Good	Fair	Retain		6204419	2177177
2736	*Quercus agrifolia*	Coast Live Oak	1	12	10.0	10	0	0	0	0	30	20	Good	Good	Retain		6204404	2177143
2734	*Quercus agrifolia*	Coast Live Oak	2	12	6.4	5	4	0	0	0	20	12	Good	Good	Retain		6204380	2177143
2733	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	20	10	Good	Good	Retain		6204373	2177126
2732	*Quercus agrifolia*	Coast Live Oak	2	7	4.5	4	2	0	0	0	20	10	Good	Good	Retain		6204359	2177133
2731	*Quercus agrifolia*	Coast Live Oak	1	10	8.0	8	0	0	0	0	20	10	Good	Good	Retain		6204351	2177124
2730	*Quercus agrifolia*	Coast Live Oak	1	10	8.0	8	0	0	0	0	20	10	Good	Good	Retain		6204356	2177103
2729	*Quercus agrifolia*	Coast Live Oak	2	6	4.5	4	2	0	0	0	20	10	Good	Good	Retain		6204352	2177099
2729a	*Quercus agrifolia*	Coast Live Oak	3	8	3.3	3	1	1	0	0	20	8	Good	Good	Retain		6204351	2177095
2728	*Quercus agrifolia*	Coast Live Oak	1	14	11.0	11	0	0	0	0	30	20	Good	Fair	Retain		6204337	2177091
2727	*Quercus agrifolia*	Coast Live Oak	1	22	20.0	20	0	0	0	0	50	40	Good	Fair	Retain		6204314	2177103
2726	*Quercus agrifolia*	Coast Live Oak	2	22	15.6	11	11	0	0	0	50	40	Good	Fair	Retain		6204304	2177074
2724	*Quercus agrifolia*	Coast Live Oak	1	30	28.0	28	0	0	0	0	50	60	Good	Fair	Retain		6204296	2177069
2723	*Quercus agrifolia*	Coast Live Oak	1	22	21.0	21	0	0	0	0	45	40	Good	Fair	Retain		6204280	2177008
2722	*Quercus agrifolia*	Coast Live Oak	1	19	18.0	18	0	0	0	0	45	40	Good	Fair	Retain		6204280	2177001
2721	*Quercus agrifolia*	Coast Live Oak	2	30	22.8	18	14	0	0	0	35	40	Good	Fair	Retain		6204284	2176982
2720	*Quercus agrifolia*	Coast Live Oak	2	8	5.8	5	3	0	0	0	18	10	Good	Fair	Retain		6204268	2176945
2717	*Quercus agrifolia*	Coast Live Oak	1	2	18.0	18	0	0	0	0	50	35	Good	Fair	Retain		6204317	2176926

2716	*Quercus agrifolia*	Coast Live Oak	1	5	4.0	4	0	0	0	0	15	12	Good	Fair	Retain		6204345	2176957
2715	*Quercus agrifolia*	Coast Live Oak	1	25	23.0	23	0	0	0	0	40	35	Good	Fair	Retain		6204347	2176964
2714	*Quercus agrifolia*	Coast Live Oak	1	8	6.0	6	0	0	0	0	22	20	Good	Fair	Retain		6204348	2176971
2713	*Quercus agrifolia*	Coast Live Oak	2	20	16.5	16	4	0	0	0	40	30	Good	Fair	Retain		6204357	2176984
2712	*Quercus agrifolia*	Coast Live Oak	2	8	6.4	5	4	0	0	0	14	10	Good	Fair	Retain		6204360	2177015
2711	*Quercus agrifolia*	Coast Live Oak	3	35	21.6	14	13	10	0	0	35	25	Good	Fair	Retain		6204384	2177051
2710	*Quercus agrifolia*	Coast Live Oak	1	8	10.0	10	0	0	0	0	20	10	Good	Fair	Retain		6204398	2177074
2707	*Quercus agrifolia*	Coast Live Oak	3	60	50.8	28	30	30	0	0	50	40	Poor	Fair	Retain		6204448	2177117
2706	*Quercus agrifolia*	Coast Live Oak	1	12	10.0	10	0	0	0	0	25	15	Fair	Fair	Retain		6204465	2177141
2705	*Quercus agrifolia*	Coast Live Oak	1	12	10.0	10	0	0	0	0	30	20	Fair	Fair	Retain		6204477	2177153
2704	*Quercus agrifolia*	Coast Live Oak	1	5	4.0	4	0	0	0	0	18	12	Fair	Fair	Retain		6204483	2177158
2703	*Quercus agrifolia*	Coast Live Oak	2	5	11.3	8	8	0	0	0	18	12	Fair	Fair	Retain		6204500	2177162
2701	*Quercus agrifolia*	Coast Live Oak	1	5	3.0	3	0	0	0	0	18	8	Fair	Fair	Retain		6204505	2177165
2000	*Quercus agrifolia*	Coast Live Oak	1	24	22.0	22	0	0	0	0	50	40	Good	Fair	Retain		6204633	2177263
2006	*Quercus agrifolia*	Coast Live Oak	1	19	17.0	17	0	0	0	0	45	20	Good	Fair	Retain		6204692	2177293
2007	*Quercus agrifolia*	Coast Live Oak	5	55	34.8	20	18	16	13	8	55	60	Good	Fair	Retain		6204700	2177293
2038	*Quercus agrifolia*	Coast Live Oak	1	20	17.0	17	0	0	0	0	35	20	Good	Fair	FMZ D		6204665	2177735
2039	*Quercus agrifolia*	Coast Live Oak	1	20	18.0	18	0	0	0	0	45	30	Good	Fair	FMZ D		6204663	2177737
2037	*Quercus agrifolia*	Coast Live Oak	1	20	18.0	18	0	0	0	0	50	40	Good	Fair	FMZ D		6204668	2177728
2041	*Quercus agrifolia*	Coast Live Oak	1	20	18.0	18	0	0	0	0	40	30	Fair	Fair	Remove		6204623	2177734
2042	*Quercus agrifolia*	Coast Live Oak	1	20	16.0	16	0	0	0	0	8	8	Poor	Poor	Remove	Diameter taken at 2.5 ft. above grade.	6204617	2177724
2040	*Quercus agrifolia*	Coast Live Oak	1	38	36.0	36	0	0	0	0	65	55	Good	Good	Remove		6204617	2177744
2047	*Quercus agrifolia*	Coast Live Oak	4	30	25.6	16	14	13	6	0	50	50	Good	Fair	FMZ D		6204601	2177760
2046	*Quercus agrifolia*	Coast Live Oak	1	8	6.0	6	0	0	0	0	25	10	Fair	Fair	FMZ D		6204601	2177755
2043	*Quercus agrifolia*	Coast Live Oak	2	39	30.6	24	19	0	0	0	45	45	Good	Fair	Remove		6204594	2177739
2044	*Quercus agrifolia*	Coast Live Oak	2	32	29.7	22	20	0	0	0	55	40	Good	Fair	Remove		6204590	2177752
2045	*Quercus agrifolia*	Coast Live Oak	1	28	22.0	22	0	0	0	0	35	30	Fair	Fair	Remove		6204585	2177749
2036b	*Quercus agrifolia*	Coast Live Oak	1	48	42.0	42	0	0	0	0	45	50	Good	Fair	Retain		6204846	2177694
2035	*Salix lasiolepis*	Arroyo willow	3	14	16.5	12	8	8	0	0	15	10	Poor	Poor	FMZ D		6204802	2177676
2036	*Quercus agrifolia*	Coast Live Oak	3	35	29.6	22	15	13	0	0	35	35	Fair	Fair	FMZ D		6204826	2177695
2036a	*Quercus agrifolia*	Coast Live Oak	1	26	24.0	24	0	0	0	0	40	40	Good	Fair	FMZ D		6204828	2177693
2032	*Quercus agrifolia*	Coast Live Oak	1	30	28.0	28	0	0	0	0	35	35	Good	Fair	Retain		6204923	2177881
2034	*Quercus agrifolia*	Coast Live Oak	1	30	28.0	28	0	0	0	0	35	35	Good	Fair	Retain		6204911	2177885
2033	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	18	12	Fair	Fair	Retain		6204912	2177887
2034a	*Quercus agrifolia*	Coast Live Oak	2	24	26.9	20	18	0	0	0	40	45	Good	Fair	Retain		6204933	2177895
2030	*Quercus agrifolia*	Coast Live Oak	1	12	9.0	9	0	0	0	0	25	20	Fair	Fair	Retain		6204939	2177919
2029	*Quercus agrifolia*	Coast Live Oak	1	26	24.0	24	0	0	0	0	50	40	Good	Good	Retain		6204933	2177919
2028	*Quercus agrifolia*	Coast Live Oak	1	32	30.0	30	0	0	0	0	50	40	Good	Good	Retain		6204928	2178009
2027	*Quercus agrifolia*	Coast Live Oak	2	30	31.8	28	15	0	0	0	40	45	Good	Good	Retain		6204947	2178028
2026	*Quercus agrifolia*	Coast Live Oak	1	16	16.0	16	0	0	0	0	35	20	Fair	Fair	Retain		6204936	2178040
2023	*Quercus agrifolia*	Coast Live Oak	1	26	22.0	22	0	0	0	0	30	30	Fair	Fair	Retain		6204933	2178068
2024	*Quercus agrifolia*	Coast Live Oak	1	26	22.0	22	0	0	0	0	30	30	Fair	Fair	Retain		6204932	2178069
2023a	*Quercus agrifolia*	Coast Live Oak	1	28	25.0	25	0	0	0	0	45	40	Fair	Fair	Retain		6204933	2178065
2674	*Quercus agrifolia*	Coast Live Oak	1	15	14.0	14	0	0	0	0	25	20	Fair	Fair	Retain		6204941	2178080
2022	*Quercus agrifolia*	Coast Live Oak	1	55	53.0	53	0	0	0	0	50	50	Good	Fair	Retain		6204967	2178077
2675	*Quercus agrifolia*	Coast Live Oak	1	13	11.0	11	0	0	0	0	50	35	Good	Fair	Retain		6204962	2178116
2676	*Quercus agrifolia*	Coast Live Oak	1	38	35.0	35	0	0	0	0	45	45	Fair	Fair	Retain		6204966	2178126
2677	*Quercus agrifolia*	Coast Live Oak	2	26	18.4	13	13	0	0	0	45	35	Fair	Fair	Retain		6204962	2178091
2679	*Quercus agrifolia*	Coast Live Oak	1	22	18.0	18	0	0	0	0	50	30	Good	Fair	Retain		6204984	2178140
2678	*Quercus agrifolia*	Coast Live Oak	1	12	10.0	10	0	0	0	0	20	10	Fair	Fair	Retain		6204984	2178137
2680	*Quercus agrifolia*	Coast Live Oak	1	38	36.0	36	0	0	0	0	45	50	Good	Fair	Retain		6204977	2178182
2682	*Quercus agrifolia*	Coast Live Oak	1	16	15.0	15	0	0	0	0	40	25	Fair	Fair	Retain		6204959	2178209

2683	*Quercus agrifolia*	Coast Live Oak	2	36	27.6	20	19	0	0	0	50	60	Good	Fair	Retain		6204958	2178231
2681	*Quercus agrifolia*	Coast Live Oak	2	8	20.6	20	4	3	0	0	18	10	Fair	Fair	Retain		6204985	2178236
2687	*Quercus agrifolia*	Coast Live Oak	1	36	32.0	32	0	0	0	0	65	50	Fair	Fair	Retain		6204991	2178314
2684	*Quercus agrifolia*	Coast Live Oak	1	12	10.0	10	0	0	0	0	35	25	Fair	Fair	Retain		6204978	2178301
2685	*Quercus agrifolia*	Coast Live Oak	1	8	7.0	7	0	0	0	0	35	25	Fair	Fair	Retain		6204980	2178303
2686	*Quercus agrifolia*	Coast Live Oak	1	16	14.0	14	0	0	0	0	60	25	Fair	Fair	Retain		6204980	2178303
2688	*Quercus agrifolia*	Coast Live Oak	1	18	16.0	16	0	0	0	0	50	25	Fair	Fair	Retain		6204992	2178317
2687a	*Quercus agrifolia*	Coast Live Oak	1	5	3.0	3	0	0	0	0	12	8	Fair	Fair	Retain		6204982	2178320
2690	*Quercus agrifolia*	Coast Live Oak	1	25	22.0	22	0	0	0	0	55	50	Fair	Fair	Retain		6204985	2178339
2689	*Quercus agrifolia*	Coast Live Oak	1	22	18.0	18	0	0	0	0	50	25	Fair	Fair	Retain		6204999	2178343
2691	*Quercus agrifolia*	Coast Live Oak	1	24	22.0	22	0	0	0	0	65	55	Good	Fair	Retain		6204986	2178350
2692	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	40	15	Fair	Fair	Retain		6204988	2178363
2696b	*Quercus agrifolia*	Coast Live Oak	1	30	28.0	28	0	0	0	0	55	50	Fair	Fair	Retain		6204971	2178362
2694	*Quercus agrifolia*	Coast Live Oak	1	15	13.0	13	0	0	0	0	25	20	Fair	Fair	Retain		6204986	2178367
2693	*Quercus agrifolia*	Coast Live Oak	1	5	4.0	4	0	0	0	0	20	15	Fair	Fair	Retain		6204987	2178368
2695	*Quercus agrifolia*	Coast Live Oak	1	15	13.0	13	0	0	0	0	35	25	Fair	Fair	Retain		6204988	2178377
2696	*Quercus agrifolia*	Coast Live Oak	2	26	21.3	16	14	0	0	0	45	25	Fair	Poor	Retain	1 dead stem	6204980	2178373
2696a	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	20	8	Fair	Fair	Retain		6204968	2178371
2696b	*Quercus agrifolia*	Coast Live Oak	1	7	5.0	5	0	0	0	0	20	8	Fair	Fair	Retain		6204967	2178374
2696c	*Quercus agrifolia*	Coast Live Oak	1	23	21.0	21	0	0	0	0	50	45	Fair	Fair	Retain		6204966	2178379
2696d	*Quercus agrifolia*	Coast Live Oak	1	14	12.0	12	0	0	0	0	40	20	Fair	Fair	Retain		6204968	2178388
2696e	*Quercus agrifolia*	Coast Live Oak	1	18	16.0	16	0	0	0	0	40	30	Fair	Fair	Retain		6204973	2178376
2696f	*Quercus agrifolia*	Coast Live Oak	2	22	14.6	14	4	0	0	0	40	30	Fair	Fair	Retain		6204980	2178404
2696g	*Quercus agrifolia*	Coast Live Oak	1	39	38.0	38	0	0	0	0	60	50	Good	Fair	Retain		6204967	2178431
2696h	*Quercus agrifolia*	Coast Live Oak	1	22	20.0	20	0	0	0	0	55	45	Good	Fair	Retain		6204964	2178452
2696i	*Quercus agrifolia*	Coast Live Oak	1	23	22.0	22	0	0	0	0	40	35	Good	Fair	Retain		6204972	2178461
2696j	*Quercus agrifolia*	Coast Live Oak	1	12	10.0	10	0	0	0	0	25	20	Good	Fair	Retain		6204986	2178518
2696k	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	50	30	Good	Fair	Retain		6205006	2178536
2696l	*Quercus agrifolia*	Coast Live Oak	1	15	13.0	13	0	0	0	0	40	30	Good	Fair	Retain		6204979	2178526
2696m	*Quercus agrifolia*	Coast Live Oak	1	5	3.0	3	0	0	0	0	20	10	Good	Fair	Retain		6204986	2178537
2696n	*Quercus agrifolia*	Coast Live Oak	1	15	13.0	13	0	0	0	0	40	28	Good	Fair	Retain		6204986	2178535
2696o	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	40	28	Good	Fair	Retain		6204993	2178561
2696p	*Quercus agrifolia*	Coast Live Oak	2	25	18.4	13	13	0	0	0	35	30	Good	Fair	Retain		6204998	2178554
2696q	*Quercus agrifolia*	Coast Live Oak	1	33	32.0	32	0	0	0	0	42	40	Good	Fair	Retain		6205006	2178557
2696r	*Quercus agrifolia*	Coast Live Oak	1	24	2.0	2	0	0	0	0	50	40	Good	Fair	Retain		6205008	2178607
2696s	*Quercus agrifolia*	Coast Live Oak	1	24	22.0	22	0	0	0	0	50	35	Good	Fair	Retain		6205014	2178620
2696t	*Quercus agrifolia*	Coast Live Oak	1	10	8.0	8	0	0	0	0	20	15	Good	Fair	Retain		6205024	2178620
2696u	*Quercus agrifolia*	Coast Live Oak	2	14	12.4	12	3	0	0	0	35	25	Good	Fair	Retain		6205024	2178628
2696v	*Quercus agrifolia*	Coast Live Oak	1	15	9.0	9	0	0	0	0	40	25	Good	Fair	Retain		6205011	2178645
2696w	*Quercus agrifolia*	Coast Live Oak	3	32	12.1	11	3	4	0	0	40	30	Good	Fair	Retain		6205006	2178653
2696x	*Quercus agrifolia*	Coast Live Oak	1	40	38.0	38	0	0	0	0	50	45	Good	Fair	Retain		6205025	2178679
2696y	*Quercus agrifolia*	Coast Live Oak	2	22	21.2	15	15	0	0	0	40	35	Good	Fair	Retain		6205026	2178689
2696z	*Quercus agrifolia*	Coast Live Oak	1	8	5.0	5	0	0	0	0	20	12	Good	Fair	Retain		6205035	2178704
2697a	*Quercus agrifolia*	Coast Live Oak	1	14	12.0	12	0	0	0	0	40	20	Good	Fair	Retain		6205033	2178712
2697b	*Quercus agrifolia*	Coast Live Oak	2	32	27.3	24	13	0	0	0	40	45	Good	Fair	Retain		6205018	2178723
2697c	*Quercus agrifolia*	Coast Live Oak	1	22	20.0	20	0	0	0	0	40	35	Good	Fair	Retain		6205028	2178729
2697d	*Quercus agrifolia*	Coast Live Oak	1	14	12.0	12	0	0	0	0	40	30	Good	Fair	Retain		6205032	2178740
2697e	*Quercus agrifolia*	Coast Live Oak	2	6	2.2	2	1	0	0	0	12	8	Fair	Poor	Retain		6205041	2178730
2697f	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	35	25	Good	Fair	Retain		6205041	2178730
2697g	*Quercus agrifolia*	Coast Live Oak	4	30	26.2	13	18	12	7	0	40	40	Fair	Fair	Retain		6205061	2178586
2697h	*Quercus agrifolia*	Coast Live Oak	2	32	10.0	6	8	0	0	0	30	20	Poor	Poor	Retain		6205057	2178574
2697i	*Quercus agrifolia*	Coast Live Oak	2	25	21.2	15	15	0	0	0	35	40	Fair	Fair	Retain		6205061	2178539

2697j	*Quercus agrifolia*	Coast Live Oak	2	1	7.1	5	5	0	0	0	25	20	Fair	Fair	Retain		6205066	2178522
2697k	*Quercus agrifolia*	Coast Live Oak	1	2	19.0	19	0	0	0	0	20	15	Poor	Poor	Retain		6205055	2178505
2697l	*Quercus agrifolia*	Coast Live Oak	1	15	13.0	13	0	0	0	0	20	15	Fair	Fair	Retain		6205063	2178504
2697m	*Quercus agrifolia*	Coast Live Oak	1	5	4.0	4	0	0	0	0	17	8	Fair	Fair	Retain		6205063	2178500
2697n	*Quercus agrifolia*	Coast Live Oak	1	8	6.0	6	0	0	0	0	17	8	Fair	Fair	Retain		6205057	2178487
2697o	*Quercus agrifolia*	Coast Live Oak	1	18	16.0	16	0	0	0	0	30	18	Fair	Fair	Retain		6205057	2178463
2697p	*Quercus agrifolia*	Coast Live Oak	1	42	40.0	40	0	0	0	0	25	20	Fair	Poor	Retain		6205057	2178465
2697q	*Quercus agrifolia*	Coast Live Oak	2	20	11.2	10	5	0	0	0	25	20	Good	Fair	Retain		6205054	2178439
2697r	*Quercus agrifolia*	Coast Live Oak	1	42	40.0	40	0	0	0	0	30	30	Fair	Poor	Retain		6205054	2178427
2697s	*Quercus agrifolia*	Coast Live Oak	1	16	14.0	14	0	0	0	0	30	20	Fair	Fair	Retain		6205053	2178396
2697t	*Quercus agrifolia*	Coast Live Oak	3	34	21.8	18	12	3	0	0	40	25	Fair	Fair	Retain		6205050	2178396
2697u	*Quercus agrifolia*	Coast Live Oak	1	4	3.0	3	0	0	0	0	15	8	Fair	Fair	Retain		6205048	2178394
2697v	*Quercus agrifolia*	Coast Live Oak	2	14	7.2	6	4	0	0	0	20	5	Fair	Fair	Retain		6205054	2178370
2697w	*Quercus agrifolia*	Coast Live Oak	1	18	16.0	16	0	0	0	0	40	25	Fair	Fair	Retain		6205054	2178362
2697x	*Quercus agrifolia*	Coast Live Oak	2	18	16.5	16	4	0	0	0	45	25	Good	Fair	Retain		6205057	2178356
2697y	*Quercus agrifolia*	Coast Live Oak	1	16	14.0	14	0	0	0	0	40	25	Good	Fair	Retain		6205052	2178353
2697z	*Quercus agrifolia*	Coast Live Oak	1	16	14.0	14	0	0	0	0	55	25	Good	Fair	Retain		6205050	2178344
2697	*Quercus agrifolia*	Coast Live Oak	1	34	32.0	32	0	0	0	0	60	60	Good	Fair	Retain		6205054	2178319
2699	*Quercus agrifolia*	Coast Live Oak	1	32	30.0	30	0	0	0	0	60	35	Good	Fair	Retain		6205070	2178325
2698	*Quercus agrifolia*	Coast Live Oak	1	37	35.0	35	0	0	0	0	60	35	Good	Fair	Retain		6205075	2178298
2018	*Quercus agrifolia*	Coast Live Oak	1	24	20.0	20	0	0	0	0	60	45	Good	Fair	Retain		6205065	2177964
2017	*Quercus agrifolia*	Coast Live Oak	1	24	18.0	18	0	0	0	0	50	25	Good	Fair	Retain		6205073	2177963
2016	*Quercus agrifolia*	Coast Live Oak	3	36	31.4	20	19	15	0	0	50	55	Good	Fair	Retain		6205057	2177948
2010	*Quercus agrifolia*	Coast Live Oak	1	14	12.0	12	0	0	0	0	25	20	Good	Fair	Retain		6205047	2177919
2011	*Quercus agrifolia*	Coast Live Oak	2	32	32.2	28	16	0	0	0	55	50	Good	Fair	Retain		6205057	2177924
2013	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	35	25	Fair	Fair	Retain		6205053	2177908
2014	*Quercus agrifolia*	Coast Live Oak	1	24	23.0	23	0	0	0	0	55	50	Fair	Fair	Retain		6205055	2177904
2012	*Quercus agrifolia*	Coast Live Oak	3	36	33.1	22	18	17	0	0	60	55	Good	Fair	Retain		6205072	2177837
2011a	*Quercus agrifolia*	Coast Live Oak	1	22	19.0	19	0	0	0	0	40	30	Good	Poor	Retain		6205067	2177829
2015	*Quercus agrifolia*	Coast Live Oak	1	15	13.0	13	0	0	0	0	40	30	Good	Fair	Retain		6205064	2177816
2009	*Quercus agrifolia*	Coast Live Oak	3	25	17.5	17	3	3	0	0	25	18	Fair	Fair	Retain		6205025	2177754
2008	*Quercus agrifolia*	Coast Live Oak	1	25	17.0	17	0	0	0	0	25	18	Fair	Fair	Retain	dead and down	6205031	2177744
2798a	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	38	25	Good	Good	Retain		6205041	2178740
2798b	*Quercus agrifolia*	Coast Live Oak	1	13	11.0	11	0	0	0	0	35	20	Good	Fair	Retain		6205044	2178751
2798c	*Quercus agrifolia*	Coast Live Oak	1	18	16.0	16	0	0	0	0	38	25	Good	Fair	Retain		6205052	2178758
2798d	*Quercus agrifolia*	Coast Live Oak	1	16	14.0	14	0	0	0	0	38	25	Good	Fair	Retain		6205042	2178763
2798e	*Quercus agrifolia*	Coast Live Oak	1	18	16.0	16	0	0	0	0	38	25	Good	Fair	Retain		6205038	2178773
2798f	*Quercus agrifolia*	Coast Live Oak	1	10	8.0	8	0	0	0	0	35	20	Good	Fair	Retain		6205044	2178774
2798g	*Quercus agrifolia*	Coast Live Oak	1	12	11.0	11	0	0	0	0	22	18	Good	Fair	Retain		6205052	2178774
2798h	*Quercus agrifolia*	Coast Live Oak	2	26	15.5	15	4	0	0	0	35	28	Good	Fair	Retain		6205040	2178789
2798i	*Quercus agrifolia*	Coast Live Oak	2	35	19.1	14	13	0	0	0	35	28	Good	Fair	Retain		6205057	2178820
2798j	*Quercus agrifolia*	Coast Live Oak	1	24	22.0	22	0	0	0	0	45	35	Good	Fair	Retain		6205046	2178805
2798k	*Quercus agrifolia*	Coast Live Oak	2	10	4.2	3	3	0	0	0	18	12	Good	Fair	Retain		6205077	2178850
2798l	*Quercus agrifolia*	Coast Live Oak	2	12	10.0	8	6	0	0	0	20	12	Good	Fair	Retain		6205076	2178853
2798m	*Quercus agrifolia*	Coast Live Oak	1	6	3.0	3	0	0	0	0	16	8	Poor	Fair	Retain		6205082	2178867
2798n	*Quercus agrifolia*	Coast Live Oak	1	9	7.0	7	0	0	0	0	16	12	Fair	Fair	Retain		6205080	2178867
2798o	*Quercus agrifolia*	Coast Live Oak	1	21	19.0	19	0	0	0	0	45	35	Fair	Fair	Retain		6205095	2178920
2798p	*Quercus agrifolia*	Coast Live Oak	1	21	19.0	19	0	0	0	0	45	35	Good	Fair	Retain		6205118	2178860
2798q	*Quercus agrifolia*	Coast Live Oak	1	21	19.0	19	0	0	0	0	28	25	Good	Fair	Retain		6205105	2178775
2798r	*Quercus agrifolia*	Coast Live Oak	3	36	23.1	18	12	8	0	0	35	30	Good	Fair	Retain		6204245	2176350
2798s	*Quercus agrifolia*	Coast Live Oak	2	36	38.2	28	26	0	0	0	38	40	Good	Fair	Retain		6204216	2176260
2798t	*Quercus agrifolia*	Coast Live Oak	2	25	26.4	23	13	0	0	0	45	40	Good	Fair	Retain		6204190	2176181

2798u	*Quercus agrifolia*	Coast Live Oak	1	34	27.0	27	0	0	0	0	40	35	Fair	Fair	Retain		6204137	2176108
2798v	*Quercus agrifolia*	Coast Live Oak	1	19	17.0	17	0	0	0	0	45	35	Good	Fair	Retain		6204109	2176142
2798w	*Quercus agrifolia*	Coast Live Oak	1	25	24.0	24	0	0	0	0	50	35	Good	Fair	Retain		6204121	2176172
2798x	*Quercus agrifolia*	Coast Live Oak	1	20	18.0	18	0	0	0	0	40	30	Good	Fair	Retain		6204130	2176180
2798y	*Quercus agrifolia*	Coast Live Oak	1	17	15.0	15	0	0	0	0	30	20	Good	Fair	Retain		6204219	2176475
2798z	*Quercus agrifolia*	Coast Live Oak	2	18	15.5	15	4	0	0	0	35	25	Good	Fair	Retain		6204259	2176544
2799a	*Quercus agrifolia*	Coast Live Oak	1	20	18.0	18	0	0	0	0	35	30	Good	Fair	Retain		6204275	2176570
2795	*Quercus agrifolia*	Coast Live Oak	1	28	26.0	26	0	0	0	0	40	35	Good	Fair	Remove		6203323	2178189
889	*Quercus agrifolia*	Coast Live Oak	1	40	45.3	32	32	0	0	0	35	35	Fair	Fair	Remove		6202323	2177069
890	*Quercus agrifolia*	Coast Live Oak	1	24	31.1	22	22	0	0	0	8	4	Dead	Dead	Remove		6202328	2177075
945	*Quercus agrifolia*	Coast Live Oak	1	22	22.0	22	0	0	0	0	18	18	Fair	Fair	Remove		6202556	2177434
916	*Quercus agrifolia*	Coast Live Oak	2	28	26.3	15	18	12	0	0	25	25	Fair	Fair	FMZ D		6202396	2177125
917	*Quercus agrifolia*	Coast Live Oak	2	30	30.0	15.5	25	6	0	0	20	25	Fair	Poor	FMZ D		6202412	2177133
918	*Quercus agrifolia*	Coast Live Oak	1	36	36.8	26	26	0	0	0	40	25	Fair	Fair	FMZ D		6202415	2177126
919	*Quercus agrifolia*	Coast Live Oak	1	28	31.1	22	22	0	0	0	30	20	Fair	Fair	FMZ D		6202396	2177144
920	*Platanus racemosa*	Sycamore	2	36	20.8	12	12	12	0	0	25	40	Fair	Fair	FMZ D		6202398	2177154
921	*Quercus agrifolia*	Coast Live Oak	1	28	33.9	24	24	0	0	0	35	25	Fair	Fair	FMZ D		6202407	2177156
922	*Quercus agrifolia*	Coast Live Oak	1	22	25.5	18	18	0	0	0	20	15	Fair	Fair	FMZ D		6202403	2177158
949	*Quercus agrifolia*	Coast Live Oak	2	48	35.5	20.5	21	20	0	0	40	35	Fair	Fair	FMZ D		6202444	2177173
950	*Quercus agrifolia*	Coast Live Oak	1	16	18.4	13	13	0	0	0	35	18	Fair	Fair	REMOVE		6202440	2177154
951	*Quercus agrifolia*	Coast Live Oak	1	20	22.6	16	16	0	0	0	30	25	Fair	Fair	REMOVE		6202456	2177147
952	*Platanus racemosa*	Sycamore	1	24	22.6	16	16	0	0	0	35	15	Fair	Fair	REMOVE		6202466	2177148
953	*Quercus agrifolia*	Coast Live Oak	1	36	38.2	27	27	0	0	0	35	25	Fair	Fair	REMOVE		6202472	2177159
954	*Quercus agrifolia*	Coast Live Oak	2	36	27.7	16	16	16	0	0	25	20	Fair	Fair	REMOVE		6202483	2177134
955	*Quercus agrifolia*	Coast Live Oak	2	30	27.8	15	22	8	0	0	25	30	Fair	Fair	FMZ D		6202452	2177194
956	*Quercus agrifolia*	Coast Live Oak	1	18	19.8	14	14	0	0	0	20	20	Fair	Fair	FMZ D		6202450	2177195
960	*Quercus agrifolia*	Coast Live Oak	3	40	33.6	16.3	22	16	11	0	35	30	Fair	Fair	REMOVE		6202487	2177227
961	*Quercus agrifolia*	Coast Live Oak	1	24	31.1	22	22	0	0	0	28	22	Fair	Fair	REMOVE		6202500	2177219
962	*Quercus agrifolia*	Coast Live Oak	2	30	25.3	14	19	9	0	0	25	25	Fair	Fair	REMOVE		6202502	2177223
963	*Quercus agrifolia*	Coast Live Oak	3	40	41.4	20.7	22	20	20	0	25	45	Fair	Fair	REMOVE		6202525	2177269
964	*Quercus agrifolia*	Coast Live Oak	1	32	36.8	26	26	0	0	0	20	25	Fair	Fair	REMOVE		6202557	2177240
965	*Quercus agrifolia*	Coast Live Oak	2	40	33.2	18	26	10	0	0	25	32	Fair	Fair	REMOVE		6202561	2177243
966	*Quercus agrifolia*	Coast Live Oak	4	60	20.4	9	11	10	8	7	18	30	Fair	Fair	REMOVE		6202566	2177238
967	*Platanus racemosa*	Sycamore	3	48	20.9	10	13	12	5	0	35	35	Fair	Poor	REMOVE		6202566	2177225
968	*Quercus agrifolia*	Coast Live Oak	3	30	15.8	7.7	10	8	5	0	15	15	Fair	Fair	REMOVE		6202581	2177223
969	*Quercus agrifolia*	Coast Live Oak	5	54	20.2	7.6	14	8	8	5	25	22	Fair	Fair	REMOVE		6202588	2177224
1010	*Quercus agrifolia*	Coast Live Oak	1	10	11.3	8	8	0	0	0	20	10	Good	Fair	REMOVE		6202498	2177170
1011	*Quercus agrifolia*	Coast Live Oak	1	18	22.6	16	16	0	0	0	22	15	Fair	Fair	REMOVE		6202501	2177154
1012	*Quercus agrifolia*	Coast Live Oak	3	60	36.8	18	22	20	12	0	45	35	Fair	Poor	REMOVE		6202507	2177133
1013	*Quercus agrifolia*	Coast Live Oak	3	36	22.4	11	14	11	8	0	20	22	Good	Fair	FMZ D		6202505	2177108
1014	*Quercus agrifolia*	Coast Live Oak	1	22	25.5	18	18	0	0	0	20	10	Fair	Fair	REMOVE		6202515	2177164
1015	*Quercus agrifolia*	Coast Live Oak	1	10	9.9	7	7	0	0	0	15	10	Fair	Poor	REMOVE		6202500	2177113
1016	*Quercus agrifolia*	Coast Live Oak	1	20	22.6	16	16	0	0	0	35	20	Fair	Fair	REMOVE		6202507	2177118
1017	*Quercus agrifolia*	Coast Live Oak	1	26	33.9	24	24	0	0	0	35	25	Fair	Fair	FMZ D		6202519	2177121
1018	*Quercus agrifolia*	Coast Live Oak	1	12	12.7	9	9	0	0	0	18	10	Fair	Fair	FMZ D		6202530	2177121
1019	*Quercus agrifolia*	Coast Live Oak	1	16	19.8	14	14	0	0	0	35	15	Fair	Fair	FMZ D		6202519	2177105
1029	*Quercus agrifolia*	Coast Live Oak	1	8	7.1	5	5	0	0	0	15	10	Fair	Fair	FMZ D		6202543	2177110
1030	*Quercus agrifolia*	Coast Live Oak	1	26	32.5	23	23	0	0	0	40	40	Fair	Good	FMZ D		6202548	2177116
1031	*Quercus agrifolia*	Coast Live Oak	1	10	8.5	6	6	0	0	0	20	15	Fair	Fair	FMZ D		6202560	2177113
1032	*Quercus agrifolia*	Coast Live Oak	1	14	14.1	10	10	0	0	0	18	20	Fair	Fair	FMZ D		6202547	2177127
1033	*Quercus agrifolia*	Coast Live Oak	1	16	17.0	12	12	0	0	0	20	12	Poor	Fair	FMZ D		6202550	2177137
1034	*Quercus agrifolia*	Coast Live Oak	1	12	11.3	8	8	0	0	0	15	10	Fair	Fair	FMZ D		6202548	2177137

1035	*Quercus agrifolia*	Coast Live Oak	1	8	7.1	5	5	0	0	0	15	10	Fair	Fair	FMZ D		6202550	2177139
1036	*Quercus agrifolia*	Coast Live Oak	1	12	12.7	9	9	0	0	0	20	15	Fair	Fair	REMOVE		6202548	2177147
1042	*Platanus racemosa*	Sycamore	1	20	18.4	13	13	0	0	0	40	20	Fair	Good	REMOVE		6202557	2177165
1043	*Quercus agrifolia*	Coast Live Oak	1	16	17.0	12	12	0	0	0	20	20	Fair	Fair	REMOVE		6202544	2177156
1044	*Quercus agrifolia*	Coast Live Oak	1	14	17.0	12	12	0	0	0	25	15	Fair	Fair	REMOVE		6202523	2177148
1045	*Quercus agrifolia*	Coast Live Oak	1	18	22.6	16	16	0	0	0	20	15	Fair	Fair	REMOVE		6202520	2177166
1046	*Quercus agrifolia*	Coast Live Oak	2	42	34.7	20	21	19	0	0	35	40	Fair	Fair	REMOVE		6202538	2177172
1047	*Quercus agrifolia*	Coast Live Oak	1	24	26.9	19	19	0	0	0	30	20	Fair	Fair	REMOVE		6202549	2177168
1048	*Quercus agrifolia*	Coast Live Oak	1	20	22.6	16	16	0	0	0	25	20	Fair	Poor	REMOVE		6202549	2177172
1049	*Quercus agrifolia*	Coast Live Oak	2	18	10.2	5.5	8	3	0	0	18	20	Fair	Fair	REMOVE		6202556	2177189
1050	*Quercus agrifolia*	Coast Live Oak	2	36	31.7	17.5	24	11	0	0	40	55	Good	Fair	REMOVE		6202569	2177181
2390	*Platanus racemosa*	Sycamore	1	10	8.5	6	6	0	0	0	18	18	Fair	Fair	FMZ D		6202373	2177118
2391	*Platanus racemosa*	Sycamore	2	22	12.2	7	8	6	0	0	25	16	Poor	Poor	FMZ D		6202388	2177143
2392	*Quercus agrifolia*	Coast Live Oak	1	7	7.1	5	5	0	0	0	16	8	Fair	Fair	REMOVE		6202444	2177141
2393	*Quercus agrifolia*	Coast Live Oak	2	13	8.8	5	6	4	0	0	17	13	Good	Fair	REMOVE		6202463	2177107
2394	*Quercus agrifolia*	Coast Live Oak	3	16	6.2	3	4	3	2	0	14	12	Good	Fair	REMOVE		6202492	2177133
2395	*Quercus agrifolia*	Coast Live Oak	1	9	7.1	5	5	0	0	0	16	13	Good	Fair	FMZ D		6202537	2177102
2396	*Quercus agrifolia*	Coast Live Oak	1	8	7.1	5	5	0	0	0	18	16	Good	Fair	FMZ D		6202549	2177108
2400	*Quercus agrifolia*	Coast Live Oak	2	16	7.8	4.5	5	4	0	0	14	20	Fair	Poor	FMZ D		6202564	2177121
2401	*Quercus agrifolia*	Coast Live Oak	1	7	4.2	3	3	0	0	0	15	8	Fair	Fair	FMZ D		6202567	2177134
2402	*Quercus agrifolia*	Coast Live Oak	1	10	8.5	6	6	0	0	0	24	14	Fair	Fair	FMZ D		6202564	2177141
2403	*Quercus agrifolia*	Coast Live Oak	1	9	8.5	6	6	0	0	0	21	11	Fair	Fair	FMZ D		6202562	2177142
2404	*Quercus agrifolia*	Coast Live Oak	1	10	9.9	7	7	0	0	0	20	10	Fair	Fair	FMZ D		6202555	2177143
2405	*Quercus agrifolia*	Coast Live Oak	2	8	5.4	3	4	2	0	0	13	14	Fair	Poor	REMOVE		6202507	2177166
2406	*Platanus racemosa*	Sycamore	1	4	4.2	3	3	0	0	0	18	14	Fair	Fair	REMOVE		6202503	2177160
2407	*Platanus racemosa*	Sycamore	1	4	4.2	3	3	0	0	0	18	14	Fair	Fair	REMOVE		6202508	2177161
2408	*Quercus agrifolia*	Coast Live Oak	3	30	8.0	4	4	4	4	0	17	15	Fair	Fair	REMOVE		6202487	2177165
2415	*Platanus racemosa*	Sycamore	2	8	4.8	2.5	4	1	0	0	12	10	Fair	Poor	REMOVE		6202589	2177222
2416	*Platanus racemosa*	Sycamore	1	7	5.7	4	4	0	0	0	21	10	Fair	Fair	FMZ D		6202595	2177220
1964	*Salix lasiolepis*	Arroyo Willow	2	36	19.1	11	12	10	0	0	35	25	Good	Good	FMZ D		6204711	2177606
1963	*Salix lasiolepis*	Arroyo Willow	1	14	15.6	11	11	0	0	0	18	15	Fair	Fair	FMZ D		6204657	2177627
1954	*Quercus agrifolia*	Coast Live Oak	2	16	14.5	7.5	12	3	0	0	25	25	Fair	Fair	FMZ D		6204563	2177671
1953	*Quercus agrifolia*	Coast Live Oak	1	8	7.1	5	5	0	0	0	20	15	Fair	Fair	FMZ D		6204562	2177675
1945	*Quercus agrifolia*	Coast Live Oak	3	18	11.5	4.7	10	3	1	0	18	20	Fair	Fair	FMZ D		6204116	2177849
1935	*Quercus agrifolia*	Coast Live Oak	1	18	22.6	16	16	0	0	0	30	25	Fair	Fair	FMZ D		6204026	2177963
1933	*Quercus agrifolia*	Coast Live Oak	1	16	15.6	11	11	0	0	0	30	20	Fair	Fair	FMZ D		6204013	2177966
1932	*Quercus agrifolia*	Coast Live Oak	2	10	7.8	4.5	5	4	0	0	15	15	Fair	Fair	FMZ D		6204015	2177954
1873	*Quercus agrifolia*	Coast Live Oak	2	10	5.4	3	4	2	0	0	20	15	Fair	Fair	FMZ D		6203985	2177987
1872	*Quercus agrifolia*	Coast Live Oak	3	48	38.0	19	20	19	18	0	30	45	Good	Fair	FMZ D		6203955	2178009
1839	*Quercus agrifolia*	Coast Live Oak	1	8	5.7	4	4	0	0	0	15	8	Fair	Fair	FMZ D		6203672	2178191
1828	*Quercus agrifolia*	Coast Live Oak	2	30	17.1	9	14	4	0	0	20	25	Fair	Fair	FMZ D		6203719	2178181
1827	*Quercus agrifolia*	Coast Live Oak	1	12	14.1	10	10	0	0	0	15	10	Fair	Fair	FMZ D		6203759	2178184
1822	*Quercus agrifolia*	Coast Live Oak	1	6	5.7	4	4	0	0	0	12	12	Fair	Fair	FMZ D		6203829	2178165
1821	*Quercus agrifolia*	Coast Live Oak	1	16	19.8	14	14	0	0	0	20	25	Good	Fair	FMZ D		6203826	2178159
1820	*Quercus agrifolia*	Coast Live Oak	4	18	5.9	2.5	4	2	2	2	15	12	Fair	Fair	FMZ D		6203842	2178155
1819	*Quercus agrifolia*	Coast Live Oak	2	15	7.1	4	5	3	0	0	14	12	Good	Fair	FMZ D		6203844	2178161
1816	*Quercus agrifolia*	Coast Live Oak	1	16	18.4	13	13	0	0	0	18	20	Poor	Poor	FMZ D		6203874	2178148
1815	*Quercus agrifolia*	Coast Live Oak	1	18	17.0	12	12	0	0	0	10	20	Fair	Poor	FMZ D		6203875	2178152
1809	*Quercus agrifolia*	Coast Live Oak	1	12	14.1	10	10	0	0	0	25	20	Fair	Fair	FMZ D		6203955	2178118
1805	*Quercus agrifolia*	Coast Live Oak	1	4	4.2	3	3	0	0	0	12	8	Fair	Fair	FMZ D		6203933	2178147
1803	*Quercus agrifolia*	Coast Live Oak	1	36	36.8	26	26	0	0	0	30	30	Fair	Fair	FMZ D		6203901	2178150
643	*Quercus agrifolia*	Coast Live Oak	1	22	25.5	18	18	0	0	0	10	12	Poor	Fair	FMZ D		6204784	2177605

1535	*Quercus agrifolia*	Coast Live Oak	1	14	17.0	12	12	0	0	0	28	20	Good	Good	FMZ D		6204502	2177808
1536	*Quercus agrifolia*	Coast Live Oak	1	9	11.3	8	8	0	0	0	17	12	Good	Fair	FMZ D		6204488	2177804
1537	*Quercus agrifolia*	Coast Live Oak	2	24	27.7	16	16	16	0	0	28	30	Good	Fair	FMZ D		6204471	2177815
1538	*Quercus agrifolia*	Coast Live Oak	2	22	23.0	12.5	18	7	0	0	30	25	Good	Good	FMZ D		6204459	2177814
1539	*Quercus agrifolia*	Coast Live Oak	3	44	22.9	11	15	12	6	0	28	28	Good	Fair	FMZ D		6204431	2177827
1540	*Quercus agrifolia*	Coast Live Oak	1	18	22.6	16	16	0	0	0	25	22	Good	Fair	FMZ D		6204439	2177800
1541	*Quercus agrifolia*	Coast Live Oak	1	8	7.1	5	5	0	0	0	18	6	Fair	Fair	FMZ D		6204404	2177818
1544	*Quercus agrifolia*	Coast Live Oak	2	36	47.3	27	32	22	0	0	40	45	Good	Fair	FMZ D		6204393	2177837
1715	*Quercus agrifolia*	Coast Live Oak	2	40	15.5	8.5	12	5	0	0	25	20	Fair	Fair	FMZ D		6204385	2177846
1716	*Quercus agrifolia*	Coast Live Oak	2	36	21.8	12.5	14	11	0	0	30	20	Fair	Fair	FMZ D		6204378	2177834
1722	*Quercus agrifolia*	Coast Live Oak	1	18	17.0	12	12	0	0	0	30	20	Fair	Fair	FMZ D		6204394	2177821
1725	*Quercus agrifolia*	Coast Live Oak	3	40	20.9	10	13	12	5	0	25	25	Poor	Fair	FMZ D		6204368	2177840
1726	*Quercus agrifolia*	Coast Live Oak	1	24	22.6	16	16	0	0	0	30	30	Fair	Good	FMZ D		6204361	2177855
1727	*Quercus agrifolia*	Coast Live Oak	3	36	22.3	11	13	12	8	0	25	30	Fair	Fair	FMZ D		6204347	2177834
1728	*Quercus agrifolia*	Coast Live Oak	1	14	15.6	11	11	0	0	0	20	20	Fair	Fair	FMZ D		6204340	2177834
1732	*Quercus agrifolia*	Coast Live Oak	1	22	21.2	15	15	0	0	0	30	25	Fair	Fair	FMZ D		6204333	2177842
1734	*Quercus agrifolia*	Coast Live Oak	2	8	6.4	3.5	5	2	0	0	15	10	Good	Good	FMZ D		6204239	2177871
1740	*Quercus agrifolia*	Coast Live Oak	2	6	3.5	2	2	2	0	0	12	10	Fair	Fair	FMZ D		6204200	2177926
1747	*Quercus agrifolia*	Coast Live Oak	2	13	11.8	6	10	2	0	0	25	15	Fair	Fair	FMZ D		6204165	2177978
1748	*Quercus agrifolia*	Coast Live Oak	1	12	12.7	9	9	0	0	0	15	15	Fair	Fair	FMZ D		6204158	2177945
1749	*Quercus agrifolia*	Coast Live Oak	1	12	12.7	9	9	0	0	0	20	15	Fair	Fair	FMZ D		6204160	2177951
1763	*Quercus agrifolia*	Coast Live Oak	2	48	42.4	24.5	25	24	0	0	30	45	Fair	Poor	FMZ D		6204142	2178008
1766	*Quercus agrifolia*	Coast Live Oak	3	25	16.6	7.3	11	10	1	0	25	20	Fair	Fair	FMZ D		6204060	2178055
1770	*Quercus agrifolia*	Coast Live Oak	1	17	19.8	14	14	0	0	0	25	18	Fair	Fair	FMZ D		6204055	2178076
1776	*Quercus agrifolia*	Coast Live Oak	1	5	4.2	3	3	0	0	0	20	10	Fair	Fair	FMZ D		6204010	2178106
1777	*Quercus agrifolia*	Coast Live Oak	1	5	2.8	2	2	0	0	0	15	15	Fair	Fair	FMZ D		6203988	2178107

APPENDIX D

The Preserve at San Juan TMPP – Orange County

APPENDIX E

Tree Impact Status – Riverside County

DUDEK

TREE IMPACT STATUS - Riverside County
THE PRESERVE AT SAN JUAN TMPP

Appendix
E

APPENDIX F

Tree Protection Measures

Appendix F
Tree Protection Specifications

The following sections are included as general guidelines for tree protection from construction impacts. The measures presented should be monitored and enforced by arborists 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 not been root pruned, shall not be irrigated during the summer or fall. This section applies only to those trees that have had more than 30% of their root zone removed. Note: In cases where natural drainage flows (above or below ground) have been diverted away from trees by land modifications, irrigation may be necessitated.*** 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 preserved 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 oak and sycamore trees.

Mulch: Maintain the natural duff layer under all preserved trees.

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. Once native oaks are placed in an improved landscape setting, there is a greater concern for over-watering than under-watering.

Watering Adjacent Plant Material: All plants near the preserved 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 preserved 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.

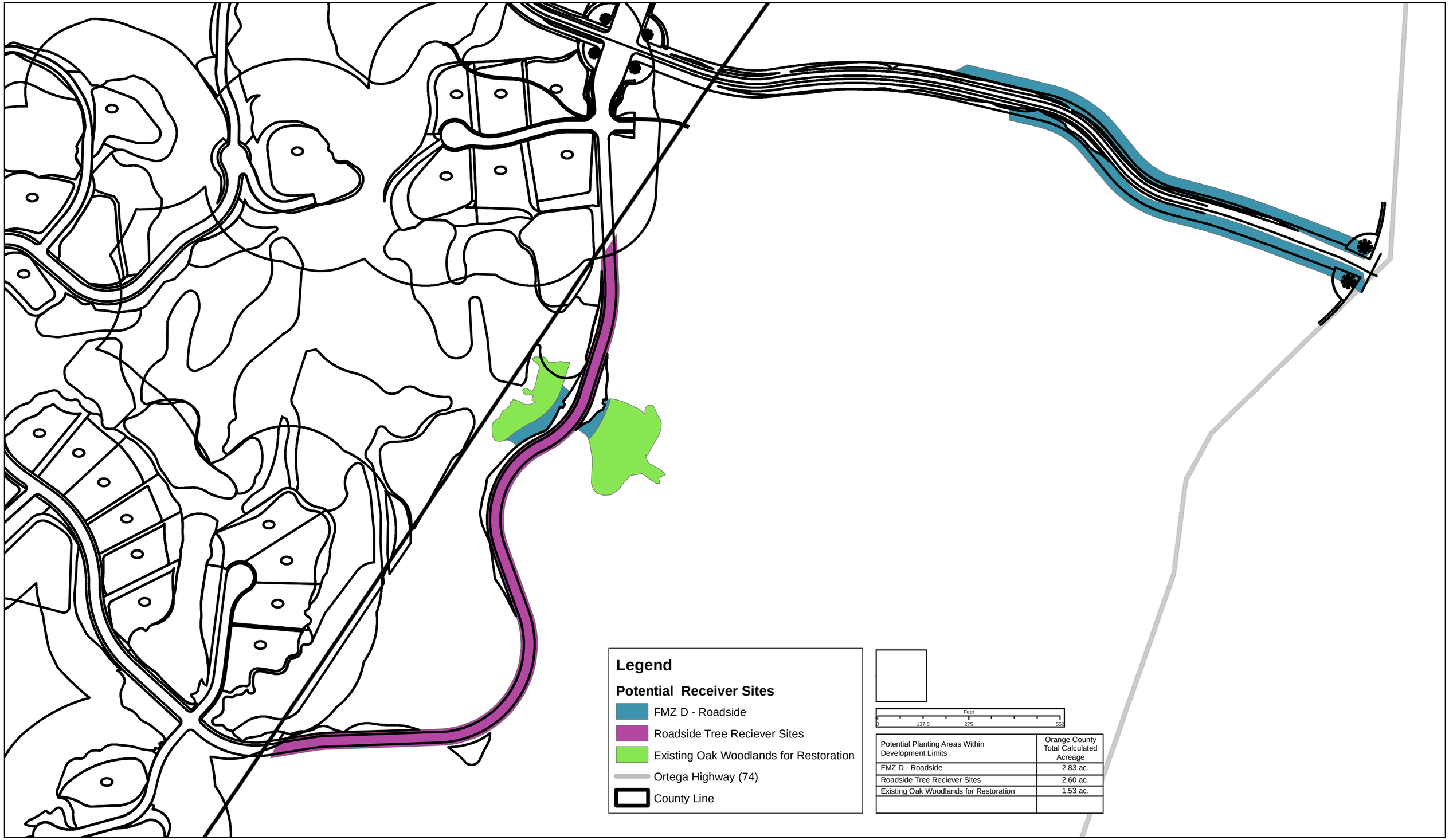
Washing: Periodic washing of the foliage is recommended during construction but no more than once every two weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the construction period at a less frequent rate with a high-powered hose only in the 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 G

Preliminary Tree Reciever Areas –
Riverside County



Potential Planting Areas Within Development Limits	Orange County Total Calculated Acreage
FMZ D - Roadside	2.83 ac.
Roadside Tree Reciever Sites	2.60 ac.
Existing Oak Woodlands for Restoration	1.53 ac.

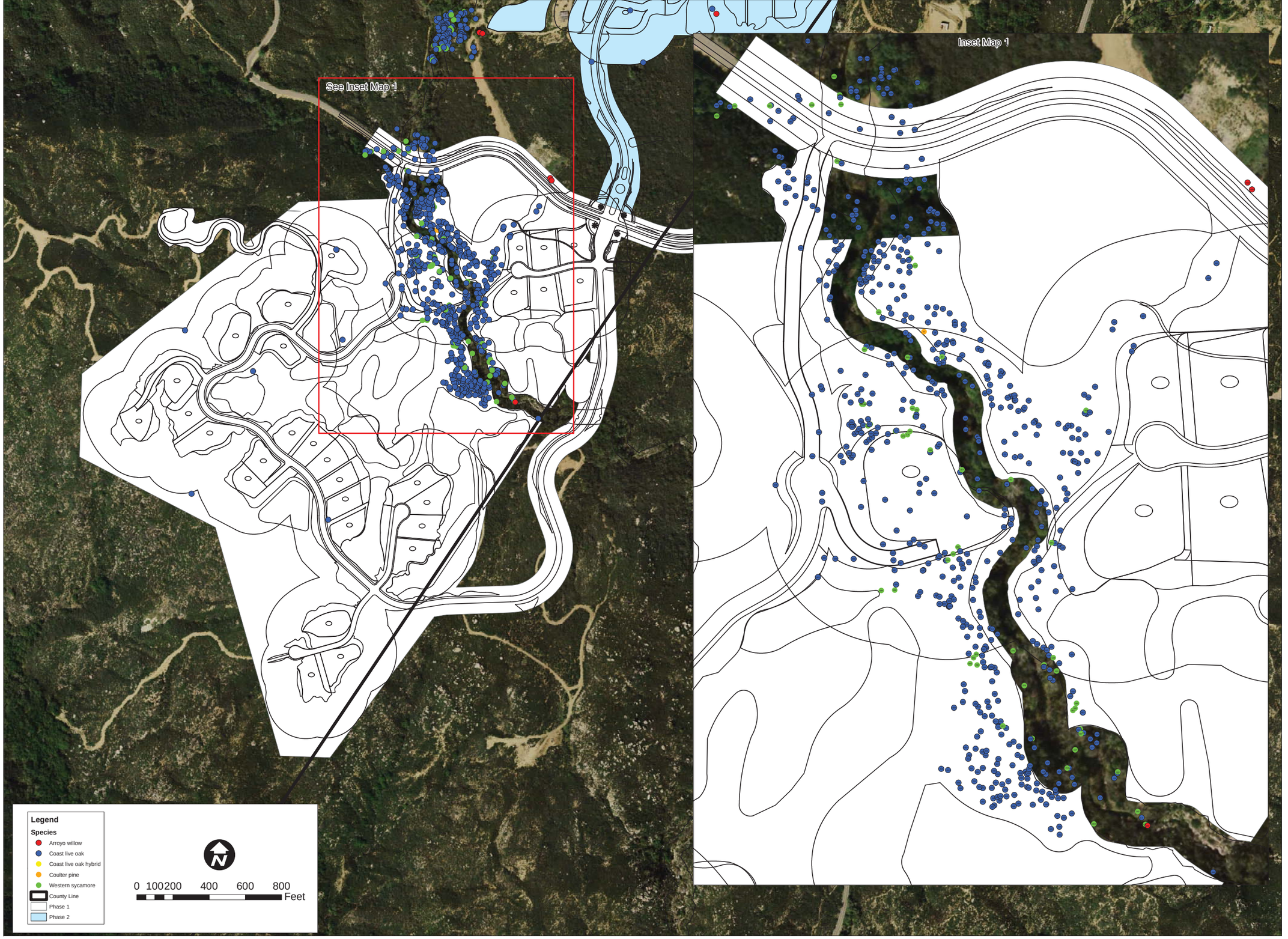
DUDEK

PRELIMINARY TREE RECIEVER AREAS - RIVERSIDE COUNTY
THE PRESERVE AT SAN JUAN TMPP

Appendix G

APPENDIX B

GPS Inventory Area – Phase 1



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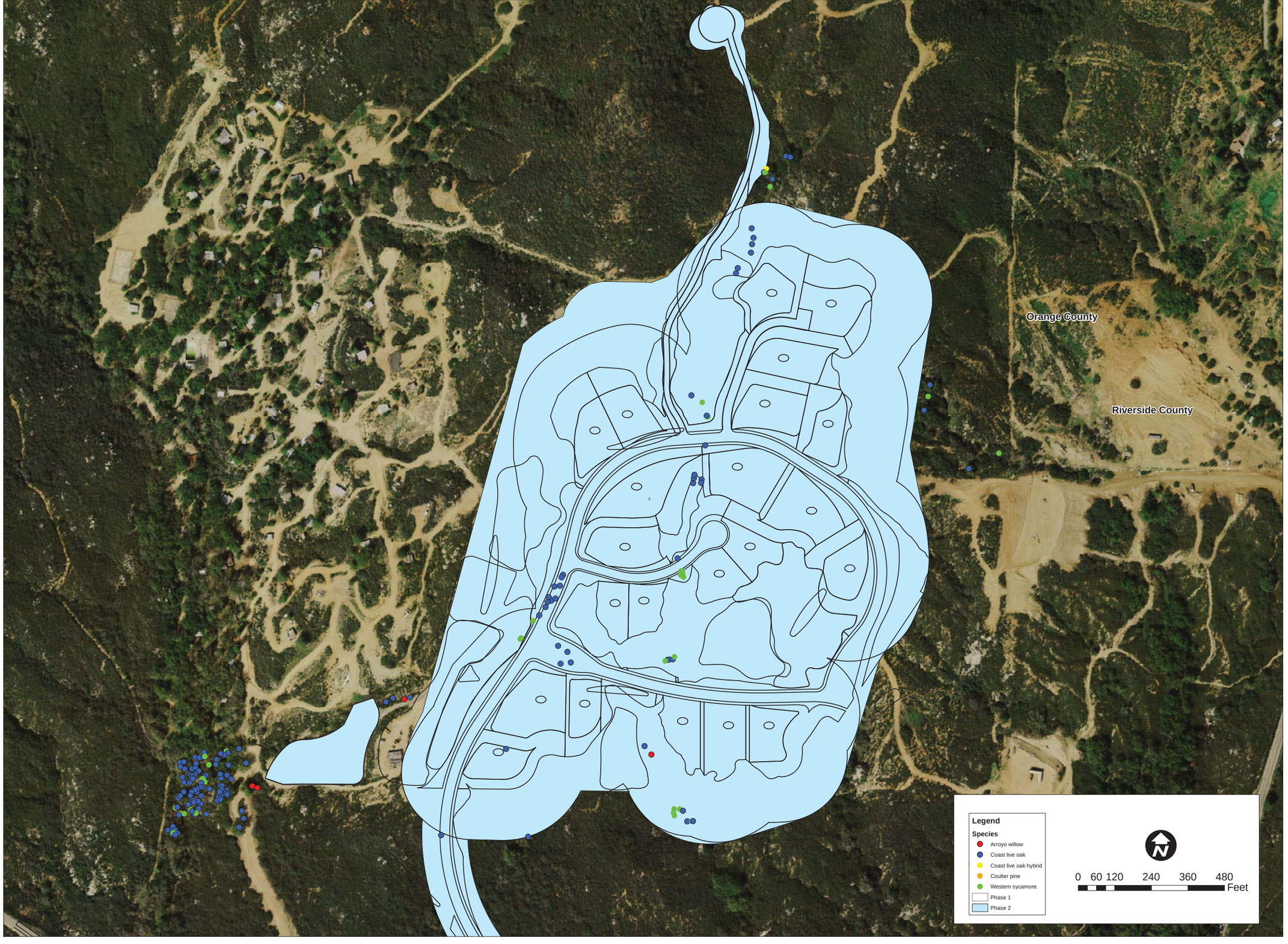
GPS INVENTORY AREA - PHASE 1
THE PRESERVE AT SAN JUAN TMPP

Appendix
B

APPENDIX C

GPS Inventory Area – Phase 2



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GPS INVENTORY AREA - PHASE 2
THE PRESERVE AT SAN JUAN TMPP

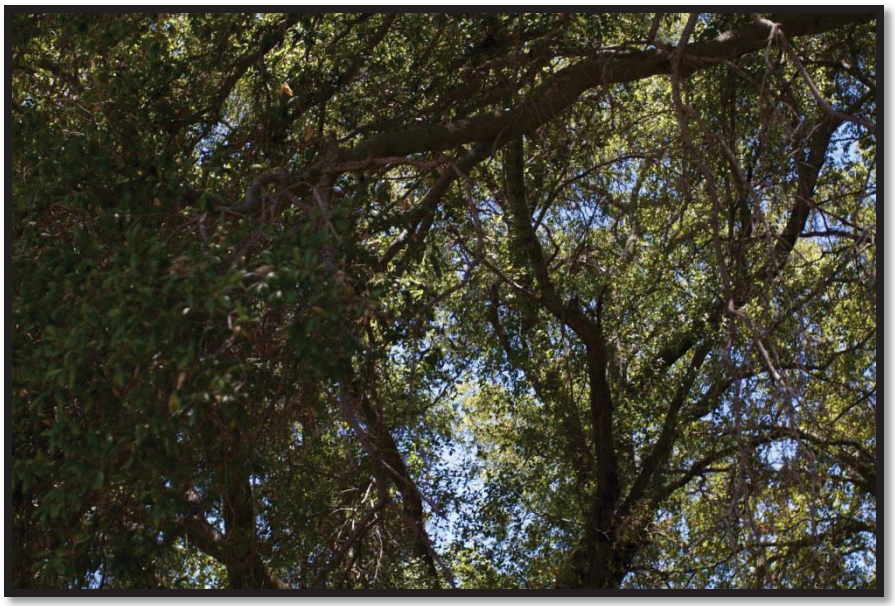
Appendix
C

APPENDIX D

Photograph Log

Appendix D

Photograph Log

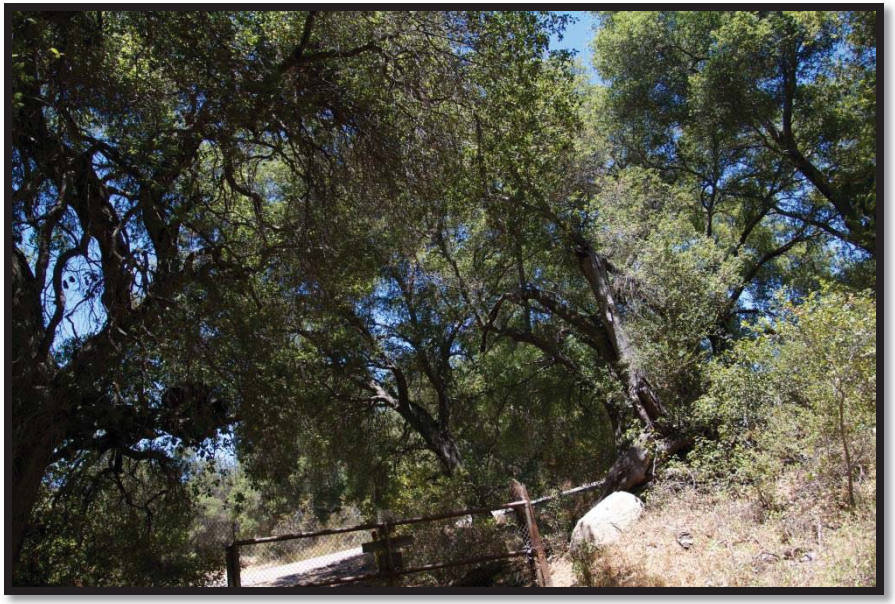


Photograph 1 – Dense canopy within oak woodland

Photograph 2 – Oak woodland within phase 1

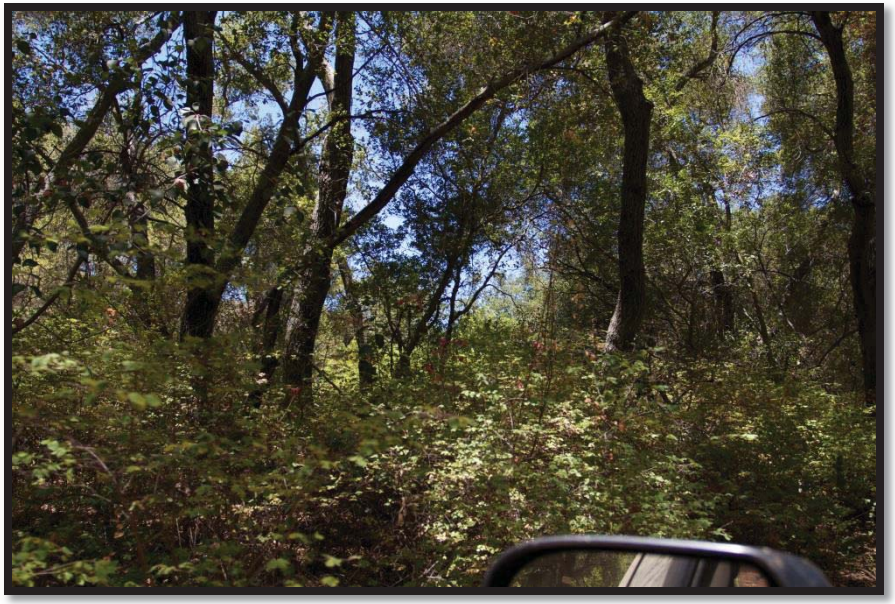
Photograph 3 – View of mature oaks along long canyon road

Photograph 4 – View of oak woodland bordered by chamise scrub vegetation



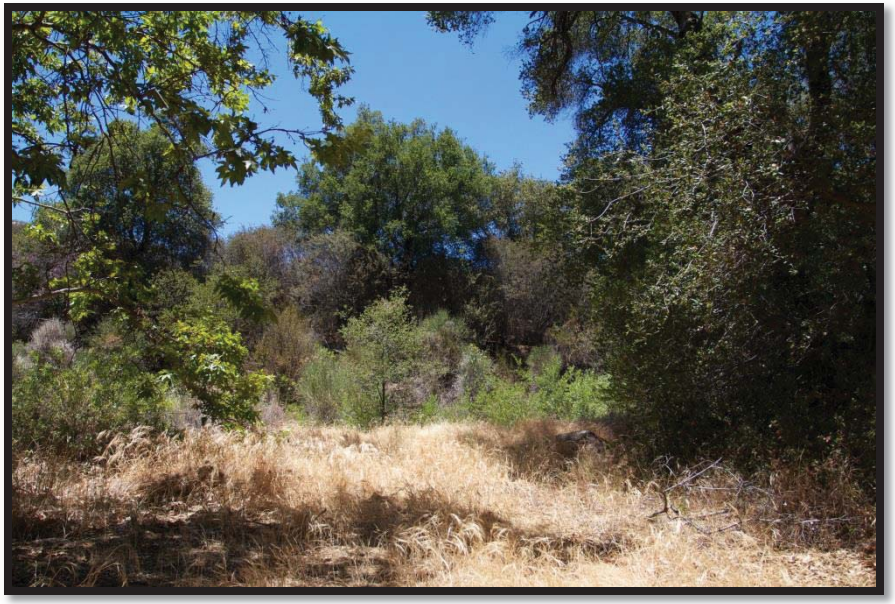
Photograph 5 – View of mature oak woodland – current entrance into phase 1

Photograph 6 – View of mature coast live oak

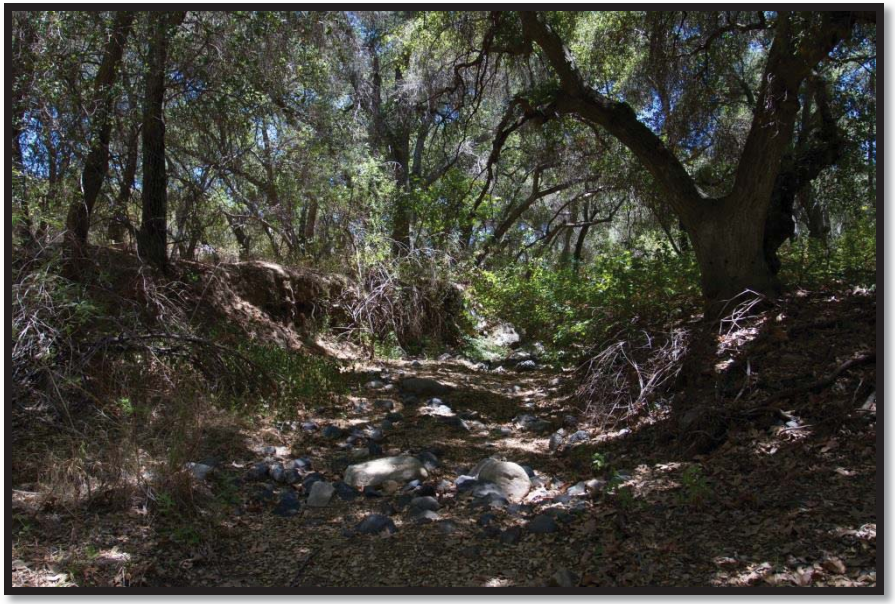


Photograph 7 – View of dense understory with "heavy" poison oak component

Photograph 8 – View of coast live oak woodland with minimal understory

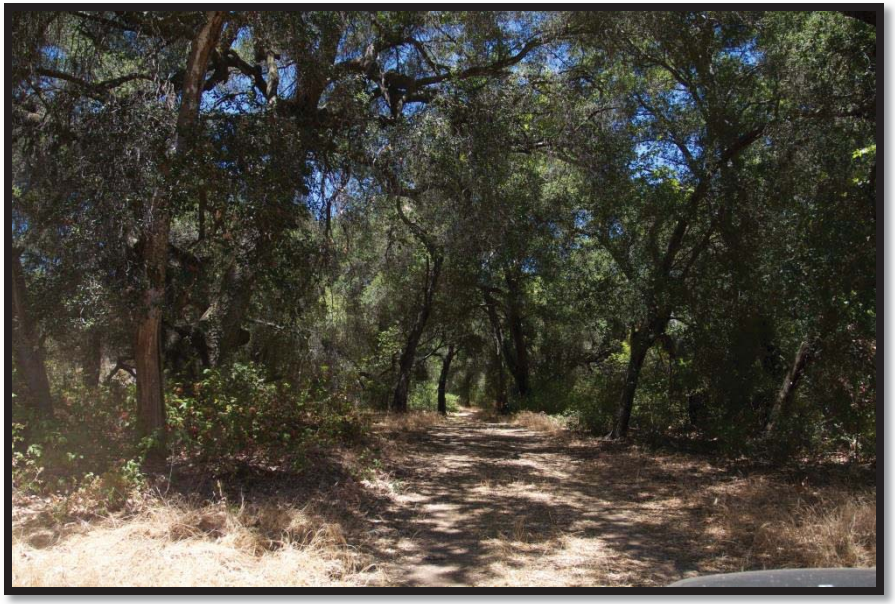


Photograph 9 – View of open areas within and adjacent to oak woodlands



Photograph 10 – View of streamside oak woodland component – Phase 1

Photograph 11 – View of open oak woodland with seedling and sapling regeneration



Photograph 12 – View of oak woodland

Photograph 13 – View of mature coast live oak

Photograph 14 – View of oak woodland

Photograph 15 – View of mortality in oak woodland – snag/wildlife trees

Photograph 16 – View of preserved oak woodland outside of development footprint

Photograph 17 – View of dense understory within preserved oak woodland outside of development footprint

Photograph 18 – View of transition zone adjacent to preserved oak woodland outside of development footprint

Photograph 19 – View of preserved oak woodland outside of development footprint with minimal seedling/sapling recruitment

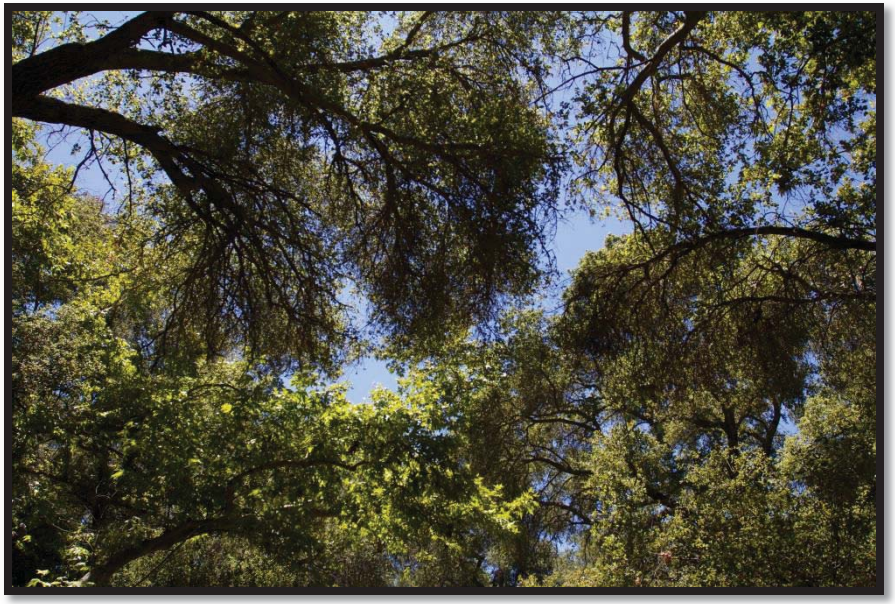
Photograph 20– View of preserved oak woodland outside of development footprint with minimal seedling/sapling recruitment

Photograph 21 – View of preserved oak woodland outside of development footprint with minimal seedling/sapling recruitment

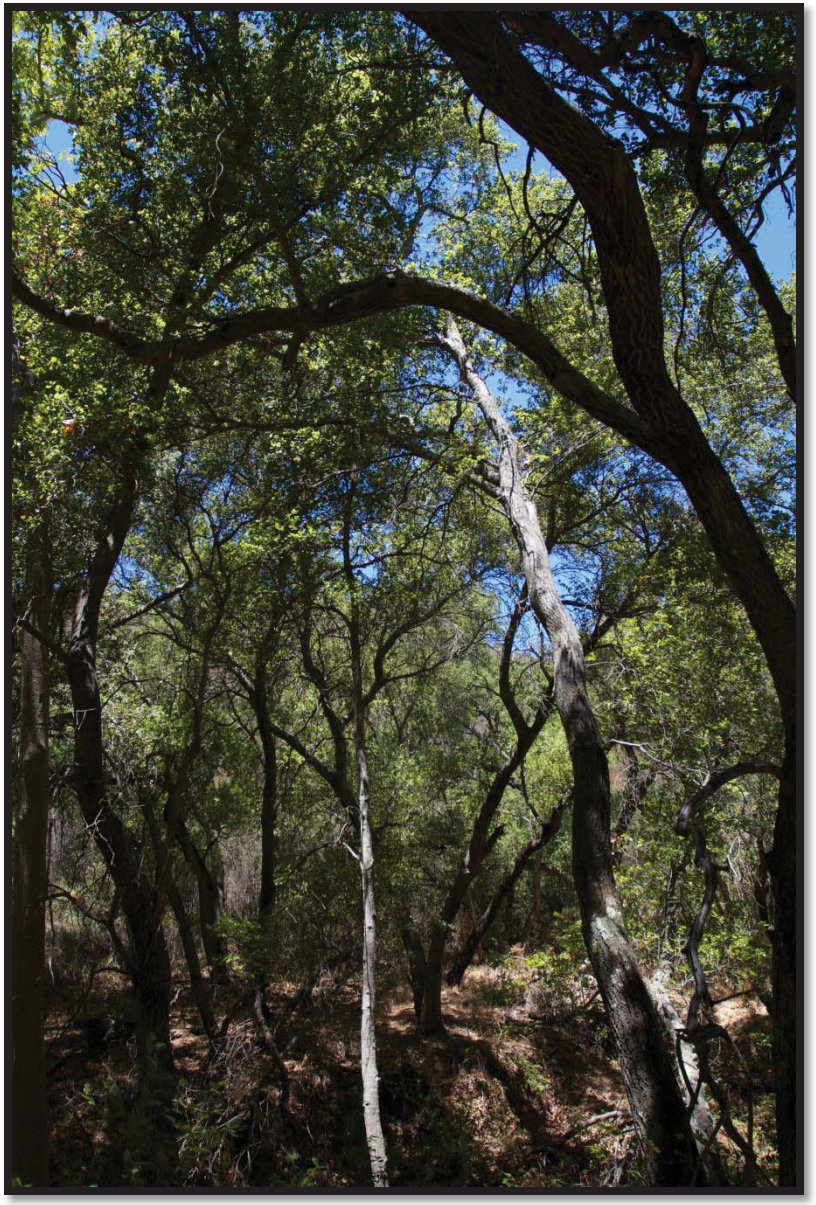
Photograph 22 – View of preserved oak woodland outside of development footprint

Photograph 23 - View of preserved oak woodland outside of development footprint with dense canopy

Photograph 24 - View of preserved oak woodland outside of development footprint with dense canopy



Photograph 25 – View of preserved oak woodland canopy



Photograph 26 – View of preserved oak woodland

APPENDIX E

Master Tree Information Matrices

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
1.0	Quercus agrifolia	Coast live oak	2	30	28.43	22	18	0	0							35	40	Fair	Fair	RETAIN	TTM 17270	6201616.57	2178266.59
1.1	Quercus agrifolia	Coast live oak	1	7	5.00	5	0	0	0							30	15	Good	Fair	REMOVE	TTM 17270	6201710.14	2177999.59
1.2	Quercus agrifolia	Coast live oak	4	12	8.06	4	6	3	2							20	15	Fair	Poor	REMOVE	TTM 17270	6201543.88	2177978.53
1.3	Platanus racemosa	Western sycamore	1	14	10.00	10	0	0	0							55	20	Fair	Fair	REMOVE	TTM 17270	6201652.01	2178022.55
1.4	Platanus racemosa	Western sycamore	1	8	7.00	7	0	0	0							35	12	Fair	Fair	REMOVE	TTM 17270	6201628.74	2178029.60
1.5	Quercus agrifolia	Coast live oak	1	9	7.00	7	0	0	0							35	10	Good	Fair	REMOVE	TTM 17270	6201630.52	2178030.27
1.7	Quercus agrifolia	Coast live oak	1	10	12.00	12	0	0	0							20	10	Fair	Poor	RETAIN	TTM 17270	6201524.67	2178387.01
1.9	Quercus agrifolia	Coast live oak	2	8	5.00	4	3	0	0							10	20	Good	Fair	REMOVE	TTM 17270	6201456.00	2178477.66
2.0	Quercus agrifolia	Coast live oak	1	24	22.00	22	0	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201620.75	2178255.64
2.3	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	12	Good	Fair	RETAIN	TTM 17270	6202022.98	2177323.32
2.4	Quercus agrifolia	Coast live oak	1	9	7.00	7	0	0	0							15	10	Fair	Fair	RETAIN	TTM 17270	6202102.78	2177285.29
2.5	Platanus racemosa	Western sycamore	6	72	11.18	4	4	4	4	6	5					35	35	Fair	Fair	RETAIN	TTM 17270	6202110.28	2177272.11
3.0	Quercus agrifolia	Coast live oak	2	24	16.97	12	12	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6201648.15	2178253.18
4.0	Quercus agrifolia	Coast live oak	2	24	14.14	10	10	0	0							20	20	Fair	Fair	RETAIN	TTM 17270	6201659.24	2178247.72
4.3	Quercus agrifloia hybrid	Coast live oak hybrid	9	72	18.73	9	9	8	6	5	4	4	4	4		40	30	Good	Fair	RETAIN	TTM 17269	6203601.92	2181336.76
5.0	Quercus agrifolia	Coast live oak	1	7	6.00	6	0	0	0							15	15	Fair	Fair	RETAIN	TTM 17270	6201645.22	2178241.89
6.0	Quercus agrifolia	Coast live oak	1	14	11.00	11	0	0	0							20	18	Fair	Fair	RETAIN	TTM 17270	6201654.73	2178213.50
7.0	Quercus agrifolia	Coast live oak	2	36	11.18	10	5	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201648.29	2178218.35
8.0	Quercus agrifolia	Coast live oak	1	18	12.00	12	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201658.40	2178203.44
9.0	Pinus coulteri	Coulter pine	1	21	19.00	19	0	0	0							55	15	Good	Good	RETAIN	TTM 17270	6201683.60	2178220.66
10.0	Quercus agrifolia	Coast live oak	2	30	19.21	15	12	0	0							35	15	Fair	Fair	RETAIN	TTM 17270	6201691.31	2178238.92
11.0	Quercus agrifolia	Coast live oak	2	20	10.82	9	6	0	0							25	10	Fair	Poor	RETAIN	TTM 17270	6201703.80	2178254.41
12.0	Quercus agrifolia	Coast live oak	1	19	17.00	17	0	0	0							35	22	Fair	Fair	RETAIN	TTM 17270	6201707.15	2178267.81
13.0	Quercus agrifolia	Coast live oak	2	36	27.78	24	14	0	0							40	30	Fair	Fair	RETAIN	TTM 17270	6201631.74	2178283.13
13.0	Quercus agrifolia	Coast live oak	4	48	27.75	15	15	16	8							35	30	Fair	Fair	RETAIN	TTM 17270	6201690.26	2178267.83
14.0	Quercus agrifolia	Coast live oak	2	36	28.84	16	24	0	0							45	30	Fair	Fair	RETAIN	TTM 17270	6201645.57	2178289.89
15.0	Quercus agrifolia	Coast live oak	1	25	25.00	25	0	0	0							35	20	Fair	Fair	RETAIN	TTM 17270	6201720.16	2178264.68
16.0	Quercus agrifolia	Coast live oak	2	18	12.04	9	8	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201732.92	2178255.97
17.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							35	20	Fair	Fair	RETAIN	TTM 17270	6201743.04	2178239.46
18.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							30	18	Fair	Fair	RETAIN	TTM 17270	6201705.00	2178218.79
19.0	Quercus agrifolia	Coast live oak	1	8	5.00	5	0	0	0							10	10	Dead	Dead	RETAIN	TTM 17270	6201708.85	2178196.11
20.0	Quercus agrifolia	Coast live oak	3	60	30.85	18	22	12	0							45	60	Fair	Fair	RETAIN	TTM 17270	6201700.88	2178186.45
21.0	Quercus agrifolia	Coast live oak	3	36	22.45	18	12	6	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201712.05	2178199.19
22.0	Quercus agrifolia	Coast live oak	1	14	11.00	11	0	0	0							40	20	Fair	Fair	RETAIN	TTM 17270	6201725.52	2178196.21
23.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							40	20	Good	Good	RETAIN	TTM 17270	6201722.90	2178195.84
24.0	Quercus agrifolia	Coast live oak	3	36	11.87	10	5	4	0							25	30	Fair	Fair	RETAIN	TTM 17270	6201727.83	2178203.28
25.0	Quercus agrifolia	Coast live oak	1	22	18.00	18	0	0	0							30	30	Fair	Fair	RETAIN	TTM 17270	6201738.87	2178202.04
26.0	Quercus agrifolia	Coast live oak	3	30	23.09	17	12	10	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201739.73	2178198.87
27.0	Quercus agrifolia	Coast live oak	3	24	12.33	10	6	4	0							30	15	Good	Fair	RETAIN	TTM 17270	6201760.18	2178234.50
28.0	Quercus agrifolia	Coast live oak	2	24	20.52	14	15	0	0							40	40	Good	Good	RETAIN	TTM 17270	6201759.96	2178224.52
29.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							24	18	Fair	Fair	RETAIN	TTM 17270	6201792.31	2178204.84
30.0	Quercus agrifolia	Coast live oak	1	20	16.00	16	0	0	0							38	25	Good	Fair	RETAIN	TTM 17270	6201787.76	2178187.78
31.0	Quercus agrifolia	Coast live oak	2	15	13.42	12	6	0	0							28	40	Good	Poor	RETAIN	TTM 17270	6201794.11	2178185.21
32.0	Quercus agrifolia	Coast live oak	1	26	24.00	24	0	0	0							55	50	Good	Fair	RETAIN	TTM 17270	6201757.32	2178175.46

Appendix E - Master Tree Information Matrices																						
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
33.0	Quercus agrifolia	Coast live oak	1	20	15.00	15	0	0	0							25	20	Fair	Poor	RETAIN	TTM 17270	6201752.12	2178167.70
34.0	Quercus agrifolia	Coast live oak	6	60	25.94	16	14	12	6	5	4					35	35	Fair	Fair	RETAIN	TTM 17270	6201719.14	2178179.69
35.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							35	15	Good	Fair	FMZ D	TTM 17270	6201721.84	2178169.23
36.0	Quercus agrifolia	Coast live oak	1	10	6.00	6	0	0	0							15	20	Fair	Poor	FMZ D	TTM 17270	6201708.22	2178167.69
37.0	Platanus racemosa	Western sycamore	1	12	10.00	10	0	0	0							20	18	Fair	Poor	RETAIN	TTM 17270	6201718.50	2178172.25
38.0	Quercus agrifolia	Coast live oak	2	18	12.65	12	4	0	0							25	20	Fair	Fair	FMZ D	TTM 17270	6201720.50	2178161.00
39.0	Quercus agrifolia	Coast live oak	1	11	9.00	9	0	0	0							28	20	Good	Fair	FMZ D	TTM 17270	6201751.27	2178136.89
40.0	Quercus agrifolia	Coast live oak	2	12	10.00	8	6	0	0							24	20	Fair	Fair	FMZ D	TTM 17270	6201777.04	2178115.88
41.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							40	40	Fair	Fair	FMZ D	TTM 17270	6201806.08	2178129.97
42.0	Quercus agrifolia	Coast live oak	2	16	13.00	12	5	0	0							30	22	Fair	Fair	RETAIN	TTM 17270	6201804.46	2178135.29
43.0	Quercus agrifolia	Coast live oak	2	22	13.45	9	10	0	0							40	36	Good	Fair	RETAIN	TTM 17270	6201806.24	2178161.08
44.0	Quercus agrifolia	Coast live oak	1	16	12.00	12	0	0	0							22	25	Fair	Poor	RETAIN	TTM 17270	6201801.89	2178159.73
45.0	Quercus agrifolia	Coast live oak	1	22	18.00	18	0	0	0							40	38	Good	Good	RETAIN	TTM 17270	6201807.41	2178155.46
46.0	Quercus agrifolia	Coast live oak	4	36	22.11	12	16	8	5							45	40	Good	Fair	RETAIN	TTM 17270	6201808.15	2178158.36
47.0	Quercus agrifolia	Coast live oak	1	9	7.00	7	0	0	0							20	10	Fair	Poor	RETAIN	TTM 17270	6201835.02	2178141.08
48.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							45	35	Good	Good	RETAIN	TTM 17270	6201832.07	2178144.45
49.0	Quercus agrifolia	Coast live oak	1	15	10.00	10	0	0	0							60	20	Fair	Fair	RETAIN	TTM 17270	6201830.83	2178135.90
50.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							45	30	Fair	Fair	RETAIN	TTM 17270	6201849.34	2178116.43
51.0	Quercus agrifolia	Coast live oak	2	32	19.85	13	15	0	0							40	45	Fair	Fair	FMZ D	TTM 17270	6201810.87	2178118.36
52.0	Quercus agrifolia	Coast live oak	1	15	12.00	12	0	0	0							40	25	Good	Fair	FMZ D	TTM 17270	6201801.14	2178102.18
53.0	Quercus agrifolia	Coast live oak	2	48	24.08	18	16	0	0							35	45	Fair	Poor	FMZ D	TTM 17270	6201808.97	2178105.51
54.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							15	25	Fair	Poor	FMZ D	TTM 17270	6201813.21	2178092.43
55.0	Quercus agrifolia	Coast live oak	1	22	20.00	20	0	0	0							30	25	Good	Fair	FMZ D	TTM 17270	6201814.63	2178079.51
56.0	Quercus agrifolia	Coast live oak	2	20	16.12	14	8	0	0							20	18	Fair	Fair	FMZ D	TTM 17270	6201831.57	2178074.54
57.0	Quercus agrifolia	Coast live oak	1	16	15.00	15	0	0	0							50	25	Fair	Fair	FMZ D	TTM 17270	6201859.54	2178024.12
58.0	Quercus agrifolia	Coast live oak	2	15	12.21	10	7	0	0							40	25	Fair	Fair	FMZ D	TTM 17270	6201850.14	2178076.05
59.0	Quercus agrifolia	Coast live oak	2	18	15.26	13	8	0	0							30	30	Fair	Fair	RETAIN	TTM 17270	6201885.25	2178088.06
60.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							35	15	Fair	Fair	RETAIN	TTM 17270	6201858.55	2178088.06
61.0	Quercus agrifolia	Coast live oak	1	13	12.00	12	0	0	0							30	15	Fair	Fair	RETAIN	TTM 17270	6201854.85	2178097.06
62.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201850.23	2178095.72
63.0	Quercus agrifolia	Coast live oak	1	64	64.00	64	0	0	0							45	65	Fair	Fair	FMZ D	TTM 17270	6201844.96	2178093.52
64.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							15	15	Fair	Poor	RETAIN	TTM 17270	6201875.31	2178070.90
65.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							20	20	Fair	Fair	RETAIN	TTM 17270	6201877.25	2178074.47
66.0	Quercus agrifolia	Coast live oak	1	24	22.00	22	0	0	0							55	45	Good	Fair	FMZ D	TTM 17270	6201865.38	2178067.93
67.0	Quercus agrifolia	Coast live oak	1	24	27.00	27	0	0	0							30	40	Fair	Fair	FMZ D	TTM 17270	6201877.44	2178037.76
68.0	Quercus agrifolia	Coast live oak	1	24	18.00	18	0	0	0							35	30	Fair	Fair	RETAIN	TTM 17270	6201897.99	2178048.65
69.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201904.49	2178040.17
70.0	Quercus agrifolia	Coast live oak	1	44	36.00	36	0	0	0							55	55	Good	Fair	RETAIN	TTM 17270	6201894.93	2178045.79
71.0	Quercus agrifolia	Coast live oak	1	20	18.00	18	0	0	0							35	35	Fair	Fair	FMZ D	TTM 17270	6201900.71	2178022.14
72.0	Quercus agrifolia	Coast live oak	4	72	56.61	36	28	30	15							70	55	Fair	Fair	FMZ C	TTM 17270	6201838.24	2178008.75
73.0	Quercus agrifolia	Coast live oak	1	16	13.00	13	0	0	0							25	26	Fair	Fair	FMZ C	TTM 17270	6201786.16	2178018.44
74.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							20	22	Fair	Fair	FMZ C	TTM 17270	6201788.54	2178014.64
75.0	Quercus agrifolia	Coast live oak	2	14	10.77	10	4	0	0							20	18	Fair	Fair	FMZ C	TTM 17270	6201789.08	2178009.92
76.0	Quercus agrifolia	Coast live oak	1	38	34.00	34	0	0	0							40	45	Good	Fair	FMZ B	TTM 17270	6201791.26	2177987.65

Appendix E - Master Tree Information Matrices																						
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
77.0	Quercus agrifolia	Coast live oak	1	18	14.00	14	0	0	0							30	10	Fair	Poor	FMZ C	TTM 17270	6201839.45	2177984.37
78.0	Quercus agrifolia	Coast live oak	1	15	13.00	13	0	0	0							35	20	Fair	Fair	FMZ C	TTM 17270	6201858.73	2177978.98
79.0	Quercus agrifolia	Coast live oak	1	7	6.00	6	0	0	0							25	10	Fair	Fair	FMZ C	TTM 17270	6201869.54	2177980.66
80.0	Quercus agrifolia	Coast live oak	1	58	56.00	56	0	0	0							55	50	Good	Fair	FMZ C	TTM 17270	6201885.90	2177967.18
81.0	Platanus racemosa	Western sycamore	10	62	33.94	22	12	12	12	13	5	5	3	2	2	20	50	Fair	Poor	FMZ B	TTM 17270	6201850.85	2177936.04
82.0	Quercus agrifolia	Coast live oak	1	15	14.00	14	0	0	0							30	25	Fair	Fair	FMZ C	TTM 17270	6201892.14	2177918.39
83.0	Quercus agrifolia	Coast live oak	4	28	23.11	14	13	12	5							40	35	Fair	Fair	FMZ C	TTM 17270	6201910.08	2177913.69
84.0	Quercus agrifolia	Coast live oak	1	12	9.00	9	0	0	0							30	25	Fair	Fair	FMZ C	TTM 17270	6201971.31	2177971.73
85.0	Quercus agrifolia	Coast live oak	4	60	27.93	14	14	18	8							35	55	Fair	Fair	FMZ C	TTM 17270	6201945.56	2177940.00
86.0	Quercus agrifolia	Coast live oak	1	14	13.00	13	0	0	0							35	30	Fair	Fair	FMZ B	TTM 17270	6201843.30	2177927.17
87.0	Quercus agrifolia	Coast live oak	1	32	26.00	26	0	0	0							35	45	Fair	Fair	FMZ C	TTM 17270	6201980.50	2177967.12
88.0	Quercus agrifolia	Coast live oak	2	36	25.63	24	9	0	0							35	35	Fair	Poor	FMZ C	TTM 17270	6201974.73	2177970.40
89.0	Quercus agrifolia	Coast live oak	1	30	30.00	30	0	0	0							40	60	Fair	Fair	FMZ D	TTM 17270	6201965.72	2177986.67
90.0	Quercus agrifolia	Coast live oak	3	9	8.66	5	5	5	0							12	15	Poor	Poor	FMZ D	TTM 17270	6201951.43	2177987.49
91.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							15	15	Good	Good	FMZ C	TTM 17270	6201986.45	2177987.56
92.0	Quercus agrifolia	Coast live oak	1	27	24.00	24	0	0	0							35	35	Fair	Fair	FMZ D	TTM 17270	6201969.32	2178016.12
93.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							30	25	Fair	Fair	FMZ C	TTM 17270	6201994.32	2178022.84
94.0	Quercus agrifolia	Coast live oak	2	40	22.20	18	13	0	0							45	40	Fair	Fair	FMZ C	TTM 17270	6201981.26	2178013.67
95.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							30	30	Good	Fair	FMZ C	TTM 17270	6201981.31	2178032.65
96.0	Quercus agrifolia	Coast live oak	1	9	7.00	7	0	0	0							25	10	Good	Fair	FMZ D	TTM 17270	6201967.41	2178039.57
97.0	Quercus agrifolia	Coast live oak	2	30	17.20	14	10	0	0							35	30	Fair	Fair	FMZ D	TTM 17270	6201956.45	2178034.93
98.0	Quercus agrifolia	Coast live oak	2	16	9.43	5	8	0	0							25	20	Fair	Fair	FMZ D	TTM 17270	6201961.15	2178039.87
99.0	Quercus agrifolia	Coast live oak	1	13	10.00	10	0	0	0							30	25	Good	Fair	FMZ D	TTM 17270	6201942.14	2178043.30
100.0	Quercus agrifolia	Coast live oak	1	28	24.00	24	0	0	0							40	40	Fair	Fair	FMZ C	TTM 17270	6201996.94	2178062.32
101.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							30	30	Fair	Fair	FMZ C	TTM 17270	6201993.32	2178063.77
102.0	Platanus racemosa	Western sycamore	3	54	14.87	13	6	4	0							25	30	Poor	Poor	FMZ C	TTM 17270	6201995.78	2178069.26
103.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							30	30	Fair	Fair	FMZ C	TTM 17270	6202002.99	2178065.28
104.0	Quercus agrifolia	Coast live oak	1	22	14.00	14	0	0	0							30	25	Fair	Fair	FMZ C	TTM 17270	6202000.26	2178094.24
105.0	Quercus agrifolia	Coast live oak	1	15	12.00	12	0	0	0							25	20	Fair	Fair	FMZ C	TTM 17270	6201992.04	2178099.49
106.0	Quercus agrifolia	Coast live oak	1	22	17.00	17	0	0	0							30	30	Fair	Fair	FMZ C	TTM 17270	6202013.19	2178114.55
107.0	Quercus agrifolia	Coast live oak	1	32	28.00	28	0	0	0							35	35	Fair	Fair	FMZ C	TTM 17270	6202046.76	2178224.90
108.0	Quercus agrifolia	Coast live oak	1	22	24.00	24	0	0	0							35	35	Fair	Fair	FMZ C	TTM 17270	6202050.05	2178239.27
109.0	Quercus agrifolia	Coast live oak	1	30	24.00	24	0	0	0							25	20	Poor	Poor	FMZ C	TTM 17270	6202105.54	2178250.73
110.0	Quercus agrifolia	Coast live oak	2	40	26.40	21	16	0	0							20	15	Poor	Poor	REMOVE	TTM 17270	6202087.33	2178193.32
111.0	Quercus agrifolia	Coast live oak	3	26	20.32	12	13	10	0							25	30	Fair	Fair	REMOVE	TTM 17270	6202083.88	2178182.81
112.0	Quercus agrifolia	Coast live oak	1	20	14.00	14	0	0	0							25	25	Fair	Fair	ENCROACH	TTM 17270	6202039.10	2178027.79
113.0	Quercus agrifolia	Coast live oak	1	26	20.00	20	0	0	0							30	30	Fair	Fair	REMOVE	TTM 17270	6202018.27	2177986.53
114.0	Quercus agrifolia	Coast live oak	1	12	11.00	11	0	0	0							35	20	Fair	Fair	REMOVE	TTM 17270	6201997.80	2177971.71
115.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							35	20	Fair	Fair	FMZ C	TTM 17270	6201980.44	2177948.66
116.0	Quercus agrifolia	Coast live oak	1	30	24.00	24	0	0	0							35	25	Fair	Good	FMZ C	TTM 17270	6201954.37	2177918.89
117.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							35	30	Fair	Fair	FMZ C	TTM 17270	6201917.93	2177888.27
118.0	Quercus agrifolia	Coast live oak	3	17	48.80	16	35	30	0							35	30	Fair	Fair	FMZ C	TTM 17270	6201906.96	2177888.73
119.0	Quercus agrifolia	Coast live oak	1	17	16.00	16	0	0	0							30	3	Fair	Fair	FMZ C	TTM 17270	6201900.39	2177872.70
120.0	Quercus agrifolia	Coast live oak	1	22	21.00	21	0	0	0							40	35	Poor	Poor	ENCROACH	TTM 17270	6201923.27	2177872.87

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
121.0	Quercus agrifolia	Coast live oak	1	40	30.00	30	0	0	0							35	55	Fair	Fair	ENCROACH	TTM 17270	6201938.91	2177881.58
122.0	Quercus agrifolia	Coast live oak	2	60	63.91	22	60	0	0							45	55	Poor	Poor	REMOVE	TTM 17270	6201957.80	2177897.15
123.0	Quercus agrifolia	Coast live oak	3	48	45.30	24	30	24	0							40	60	Fair	Fair	REMOVE	TTM 17270	6201946.47	2177837.85
124.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							45	30	Fair	Fair	ENCROACH	TTM 17270	6201959.62	2177909.11
125.0	Quercus agrifolia	Coast live oak	1	11	9.00	9	0	0	0							35	15	Fair	Fair	REMOVE	TTM 17270	6201935.58	2177813.70
126.0	Quercus agrifolia	Coast live oak	1	17	15.00	15	0	0	0							20	25	Poor	Fair	FMZ C	TTM 17270	6201903.14	2177819.80
127.0	Platanus racemosa	Western sycamore	1	20	16.00	16	0	0	0							35	30	Fair	Fair	REMOVE	TTM 17270	6201929.11	2177814.48
128.0	Quercus agrifolia	Coast live oak	1	24	30.00	30	0	0	0							35	40	Fair	Fair	REMOVE	TTM 17270	6201945.11	2177808.50
129.0	Quercus agrifolia	Coast live oak	1	25	22.00	22	0	0	0							35	30	Fair	Fair	REMOVE	TTM 17270	6201950.79	2177804.95
130.0	Quercus agrifolia	Coast live oak	1	16	15.00	15	0	0	0							25	24	Fair	Fair	FMZ C	TTM 17270	6201901.02	2177807.66
131.0	Quercus agrifolia	Coast live oak	1	8	5.00	5	0	0	0							15	15	Fair	Fair	FMZ C	TTM 17270	6201896.67	2177799.36
132.0	Quercus agrifolia	Coast live oak	1	24	18.00	18	0	0	0							25	10	Poor	Poor	FMZ C	TTM 17270	6201880.51	2177804.73
133.0	Quercus agrifolia	Coast live oak	1	16	12.00	12	0	0	0							25	12	Poor	Poor	FMZ B	TTM 17270	6201854.25	2177819.82
134.0	Quercus agrifolia	Coast live oak	2	10	9.22	7	6	0	0							15	15	Fair	Fair	ENCROACH	TTM 17270	6201934.28	2177769.22
135.0	Quercus agrifolia	Coast live oak	1	12	8.00	8	0	0	0							10	10	Fair	Fair	ENCROACH	TTM 17270	6201946.37	2177749.81
136.0	Quercus agrifolia	Coast live oak	1	60	50.00	50	0	0	0							35	30	Poor	Poor	REMOVE	TTM 17270	6201969.37	2177725.33
137.0	Quercus agrifolia	Coast live oak	2	26	19.85	13	15	0	0							40	35	Fair	Fair	ENCROACH	TTM 17270	6201937.23	2177720.86
138.0	Quercus agrifolia	Coast live oak	2	28	27.29	24	13	0	0							50	50	Fair	Fair	FMZ D	TTM 17270	6201899.09	2177708.03
139.0	Quercus agrifolia	Coast live oak	2	32	23.35	17	16	0	0							35	30	Fair	Poor	FMZ D	TTM 17270	6201904.07	2177686.19
140.0	Quercus agrifolia	Coast live oak	1	22	21.00	21	0	0	0							50	40	Fair	Fair	FMZ D	TTM 17270	6201868.29	2177704.65
141.0	Quercus agrifolia	Coast live oak	1	23	18.00	18	0	0	0							35	30	Fair	Poor	RETAIN	TTM 17270	6201865.11	2177676.86
142.0	Quercus agrifolia	Coast live oak	2	42	26.31	26	4	0	0							45	30	Poor	Poor	RETAIN	TTM 17270	6201893.10	2177625.12
143.0	Quercus agrifolia	Coast live oak	1	18	10.00	10	0	0	0							15	15	Poor	Poor	RETAIN	TTM 17270	6201901.41	2177619.26
145.0	Quercus agrifolia	Coast live oak	1	22	12.00	12	0	0	0							45	30	Fair	Poor	RETAIN	TTM 17270	6201928.91	2177613.91
146.0	Quercus agrifolia	Coast live oak	2	14	13.42	6	12	0	0							20	25	Poor	Poor	RETAIN	TTM 17270	6201913.41	2177612.53
147.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							10	8	Poor	Poor	RETAIN	TTM 17270	6201920.25	2177607.64
148.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	15	Fair	Poor	RETAIN	TTM 17270	6201923.81	2177597.56
149.0	Platanus racemosa	Western sycamore	2	50	14.14	10	10	0	0							30	55	Fair	Poor	RETAIN	TTM 17270	6201932.68	2177593.05
150.0	Platanus racemosa	Western sycamore	3	30	14.87	14	3	4	0							35	25	Fair	Fair	RETAIN	TTM 17270	6201914.82	2177579.27
151.0	Quercus agrifolia	Coast live oak	1	9	6.00	6	0	0	0							15	10	Poor	Poor	RETAIN	TTM 17270	6201914.54	2177575.48
152.0	Quercus agrifolia	Coast live oak	2	24	9.90	7	7	0	0							25	20	Poor	Poor	RETAIN	TTM 17270	6201925.62	2177569.63
153.0	Platanus racemosa	Western sycamore	3	70	16.91	15	6	5	0							40	55	Fair	Fair	RETAIN	TTM 17270	6201938.92	2177567.64
154.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							12	15	Poor	Fair	RETAIN	TTM 17270	6201944.19	2177582.27
155.0	Quercus agrifolia	Coast live oak	4	48	63.31	48	32	22	14							45	40	Poor	Poor	RETAIN	TTM 17270	6201968.38	2177599.22
156.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							20	15	Fair	Poor	RETAIN	TTM 17270	6201932.25	2177549.39
157.0	Quercus agrifolia	Coast live oak	1	13	10.00	10	0	0	0							20	15	Fair	Poor	RETAIN	TTM 17270	6201926.31	2177553.87
158.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							25	15	Fair	Poor	RETAIN	TTM 17270	6201970.34	2177528.49
159.0	Quercus agrifolia	Coast live oak	1	12	7.00	7	0	0	0							10	15	Poor	Poor	RETAIN	TTM 17270	6201965.19	2177518.81
160.0	Platanus racemosa	Western sycamore	6	120	14.46	4	4	4	6	10	5					40	35	Fair	Fair	RETAIN	TTM 17270	6201977.40	2177505.30
161.0	Platanus racemosa	Western sycamore	5	54	17.32	4	3	15	5	5						25	35	Poor	Poor	RETAIN	TTM 17270	6201970.40	2177491.57
162.0	Platanus racemosa	Western sycamore	2	24	10.82	9	6	0	0							45	25	Fair	Fair	RETAIN	TTM 17270	6201974.73	2177495.82
163.0	Quercus agrifolia	Coast live oak	1	14	13.00	13	0	0	0							35	25	Poor	Poor	RETAIN	TTM 17270	6201989.47	2177487.39
164.0	Platanus racemosa	Western sycamore	1	16	14.00	14	0	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201984.73	2177455.75
165.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201981.48	2177454.32

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Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
166.0	Quercus agrifolia	Coast live oak	1	15	12.00	12	0	0	0							25	25	Poor	Poor	RETAIN	TTM 17270	6201991.26	2177448.53
167.0	Platanus racemosa	Western sycamore	3	60	51.26	50	8	8	0							45	40	Poor	Fair	RETAIN	TTM 17270	6201974.77	2177415.78
168.0	Quercus agrifolia	Coast live oak	1	32	24.00	24	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6202004.04	2177436.63
169.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6202016.84	2177445.45
170.0	Quercus agrifolia	Coast live oak	2	26	11.31	8	8	0	0							10	12	Poor	Poor	RETAIN	TTM 17270	6202016.29	2177429.08
171.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6202007.22	2177420.62
172.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							30	20	Fair	Fair	FMZ C	TTM 17270	6201904.28	2177785.18
173.0	Quercus agrifolia	Coast live oak	1	18	14.00	14	0	0	0							30	25	Fair	Fair	FMZ C	TTM 17270	6201897.36	2177774.59
174.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							30	25	Poor	Poor	FMZ C	TTM 17270	6201895.04	2177777.87
174.1	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							45	55	Fair	Fair	ENCROACH	TTM 17270	6201905.44	2177781.39
175.0	Quercus agrifolia	Coast live oak	4	42	31.59	20	18	15	7							45	55	Fair	Fair	FMZ C	TTM 17270	6201909.89	2177761.71
176.0	Quercus agrifolia	Coast live oak	1	26	21.00	21	0	0	0							30	25	Poor	Poor	FMZ D	TTM 17270	6201903.87	2177739.97
177.0	Quercus agrifolia	Coast live oak	1	26	22.00	22	0	0	0							30	35	Fair	Fair	FMZ D	TTM 17270	6201890.40	2177728.52
178.0	Quercus agrifolia	Coast live oak	1	18	18.00	18	0	0	0							15	15	Poor	Poor	RETAIN	TTM 17270	6202049.94	2177361.29
179.0	Quercus agrifolia	Coast live oak	1	22	14.00	14	0	0	0							40	30	Fair	Fair	RETAIN	TTM 17270	6202055.99	2177370.64
180.0	Platanus racemosa	Western sycamore	1	16	12.00	12	0	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6202056.72	2177373.31
181.0	Platanus racemosa	Western sycamore	7	72	7.21	4	6	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6202095.28	2177297.00
182.0	Arroyo willow	Arroyo willow	2	22	10.63	8	7	0	0							15	20	Fair	Fair	RETAIN	TTM 17270	6202114.20	2177269.82
183.0	Platanus racemosa	Western sycamore	3	24	10.39	6	6	6	0							30	20	Poor	Poor	RETAIN	TTM 17270	6202010.88	2177273.11
184.0	Quercus agrifolia	Coast live oak	3	30	23.32	16	12	12	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201944.95	2177252.30
185.0	Quercus agrifolia	Coast live oak	1	28	26.00	26	0	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201928.11	2177263.26
186.0	Quercus agrifolia	Coast live oak	2	22	12.81	8	10	0	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201944.36	2177267.59
187.0	Quercus agrifolia	Coast live oak	3	42	30.07	18	18	16	0							40	45	Fair	Fair	RETAIN	TTM 17270	6201940.60	2177288.43
188.0	Quercus agrifolia	Coast live oak	1	28	24.00	24	0	0	0							40	35	Fair	Fair	RETAIN	TTM 17270	6201953.01	2177284.81
189.0	Quercus agrifolia	Coast live oak	2	18	12.17	12	2	0	0							25	20	Poor	Poor	RETAIN	TTM 17270	6201968.13	2177293.10
190.0	Quercus agrifolia	Coast live oak	3	50	39.70	26	24	18	0							30	40	Dead	Dead	RETAIN	TTM 17270	6201918.87	2177310.70
191.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							25	15	Poor	Poor	RETAIN	TTM 17270	6201908.68	2177319.56
192.0	Quercus agrifolia	Coast live oak	1	14	11.00	11	0	0	0							25	15	Fair	Fair	RETAIN	TTM 17270	6201893.03	2177309.96
193.0	Quercus agrifolia	Coast live oak	1	18	14.00	14	0	0	0							30	20	Fair	Fair	RETAIN	TTM 17270	6201857.50	2177328.94
194.0	Quercus agrifolia	Coast live oak	1	24	13.00	13	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6201865.46	2177312.18
195.0	Quercus agrifolia	Coast live oak	2	28	18.38	13	13	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6201856.39	2177307.26
196.0	Quercus agrifolia	Coast live oak	1	20	19.00	19	0	0	0							40	40	Fair	Fair	RETAIN	TTM 17270	6201828.82	2177317.98
197.0	Quercus agrifolia	Coast live oak	1	15	12.00	12	0	0	0							25	30	Fair	Fair	RETAIN	TTM 17270	6201819.02	2177308.65
198.0	Quercus agrifolia	Coast live oak	1	22	16.00	16	0	0	0							25	30	Fair	Fair	RETAIN	TTM 17270	6201817.10	2177322.45
199.0	Quercus agrifolia	Coast live oak	1	12	8.00	8	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201825.26	2177324.88
200.0	Quercus agrifolia	Coast live oak	1	12	11.00	11	0	0	0							25	15	Fair	Fair	RETAIN	TTM 17270	6201842.70	2177326.01
201.0	Quercus agrifolia	Coast live oak	1	16	11.00	11	0	0	0							30	15	Fair	Fair	RETAIN	TTM 17270	6201882.51	2177344.25
201.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							25	25	Fair	Fair	RETAIN	TTM 17270	6201899.97	2177337.40
202.0	Quercus agrifolia	Coast live oak	3	12	7.14	7	1	1	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201885.37	2177342.60
203.0	Quercus agrifolia	Coast live oak	1	13	9.00	9	0	0	0							35	25	Fair	Fair	RETAIN	TTM 17270	6201871.59	2177349.00
204.0	Quercus agrifolia	Coast live oak	1	14	11.00	11	0	0	0							25	20	Fair	Poor	RETAIN	TTM 17270	6201911.38	2177335.13
205.0	Quercus agrifolia	Coast live oak	1	8	6.00	6	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201924.95	2177330.59
206.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							35	20	Poor	Fair	RETAIN	TTM 17270	6201929.71	2177324.86
207.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							25	15	Poor	Poor	RETAIN	TTM 17270	6201941.94	2177322.57

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
208.0	Quercus agrifolia	Coast live oak	1	11	9.00	9	0	0	0							20	20	Poor	Poor	RETAIN	TTM 17270	6201952.34	2177323.08
209.0	Quercus agrifolia	Coast live oak	1	30	22.00	22	0	0	0							30	30	Fair	Fair	RETAIN	TTM 17270	6201937.70	2177333.27
210.0	Quercus agrifolia	Coast live oak	1	12	9.00	9	0	0	0							25	15	Fair	Fair	RETAIN	TTM 17270	6201936.58	2177339.06
211.0	Quercus agrifolia	Coast live oak	1	14	8.00	8	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201943.17	2177350.99
212.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							25	15	Poor	Poor	RETAIN	TTM 17270	6201973.22	2177349.05
213.0	Quercus agrifolia	Coast live oak	2	25	15.56	11	11	0	0							25	35	Fair	Fair	RETAIN	TTM 17270	6201969.14	2177362.73
214.0	Quercus agrifolia	Coast live oak	1	16	16.00	16	0	0	0							30	30	Fair	Fair	RETAIN	TTM 17270	6201963.42	2177380.47
215.0	Platanus racemosa	Western sycamore	4	60	27.06	22	14	4	6							60	60	Poor	Poor	RETAIN	TTM 17270	6201959.46	2177380.57
216.0	Quercus agrifolia	Coast live oak	2	30	13.45	10	9	0	0							20	20	Fair	Fair	RETAIN	TTM 17270	6201943.97	2177373.43
217.0	Quercus agrifolia	Coast live oak	2	14	8.06	7	4	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201918.41	2177368.62
218.0	Quercus agrifolia	Coast live oak	2	38	34.93	32	14	0	0							55	45	Poor	Poor	RETAIN	TTM 17270	6201913.30	2177373.75
219.0	Quercus agrifolia	Coast live oak	2	28	24.08	16	18	0	0							35	35	Fair	Poor	RETAIN	TTM 17270	6201921.55	2177390.60
220.0	Quercus agrifolia	Coast live oak	1	22	18.00	18	0	0	0							35	30	Poor	Poor	RETAIN	TTM 17270	6201901.03	2177351.23
221.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							25	12	Dead	Dead	RETAIN	TTM 17270	6201882.72	2177360.36
222.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							25	20	Fair	Poor	RETAIN	TTM 17270	6201879.21	2177373.58
223.0	Quercus agrifolia	Coast live oak	1	8	7.00	7	0	0	0							15	4	Poor	Poor	RETAIN	TTM 17270	6201881.64	2177369.17
224.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							20	15	Poor	Poor	RETAIN	TTM 17270	6201884.85	2177371.15
225.0	Quercus agrifolia	Coast live oak	2	32	27.66	18	21	0	0							50	25	Fair	Poor	RETAIN	TTM 17270	6201886.02	2177378.90
226.0	Quercus agrifolia	Coast live oak	1	14	11.00	11	0	0	0							25	20	Poor	Poor	RETAIN	TTM 17270	6201888.00	2177385.49
227.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							40	25	Fair	Fair	RETAIN	TTM 17270	6201896.32	2177419.83
228.0	Quercus agrifolia	Coast live oak	1	8	7.00	7	0	0	0							25	15	Fair	Fair	RETAIN	TTM 17270	6201866.70	2177422.20
229.0	Quercus agrifolia	Coast live oak	2	20	18.44	12	14	0	0							50	30	Fair	Fair	RETAIN	TTM 17270	6201871.63	2177401.35
230.0	Quercus agrifolia	Coast live oak	1	21	20.00	20	0	0	0							50	35	Fair	Fair	RETAIN	TTM 17270	6201863.86	2177405.54
232.0	Quercus agrifolia	Coast live oak	3	60	35.34	22	21	18	0							60	50	Fair	Fair	RETAIN	TTM 17270	6201854.14	2177385.89
233.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							25	10	Poor	Poor	RETAIN	TTM 17270	6201856.29	2177431.42
234.0	Quercus agrifolia	Coast live oak	1	24	18.00	18	0	0	0							40	30	Fair	Poor	RETAIN	TTM 17270	6201848.14	2177426.24
235.0	Quercus agrifolia	Coast live oak	2	26	19.80	14	14	0	0							40	45	Fair	Fair	RETAIN	TTM 17270	6201869.04	2177371.10
236.0	Quercus agrifolia	Coast live oak	1	8	6.00	6	0	0	0							20	8	Fair	Fair	RETAIN	TTM 17270	6201871.02	2177361.51
237.0	Quercus agrifolia	Coast live oak	1	30	14.00	14	0	0	0							25	25	Fair	Fair	RETAIN	TTM 17270	6201846.11	2177355.26
238.0	Quercus agrifolia	Coast live oak	1	28	24.00	24	0	0	0							35	30	Fair	Fair	RETAIN	TTM 17270	6201839.99	2177339.08
239.0	Quercus agrifolia	Coast live oak	1	13	9.00	9	0	0	0							25	18	Fair	Fair	RETAIN	TTM 17270	6201831.02	2177326.61
240.0	Quercus agrifolia	Coast live oak	1	24	21.00	21	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6201815.35	2177305.75
241.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							25	15	Fair	Fair	RETAIN	TTM 17270	6201834.22	2177349.32
242.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							16	20	Fair	Fair	RETAIN	TTM 17270	6201822.03	2177352.49
243.0	Quercus agrifolia	Coast live oak	1	14	9.00	9	0	0	0							20	22	Fair	Fair	RETAIN	TTM 17270	6201814.34	2177342.27
244.0	Quercus agrifolia	Coast live oak	4	60	26.38	16	14	12	10							30	40	Fair	Fair	RETAIN	TTM 17270	6201825.83	2177368.90
245.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201796.85	2177342.15
246.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201818.61	2177375.17
247.0	Quercus agrifolia	Coast live oak	3	36	19.10	14	12	5	0							40	55	Fair	Fair	RETAIN	TTM 17270	6201824.68	2177388.64
248.0	Quercus agrifolia	Coast live oak	1	14	11.00	11	0	0	0							35	15	Fair	Fair	RETAIN	TTM 17270	6201826.97	2177398.12
249.0	Quercus agrifolia	Coast live oak	1	20	13.00	13	0	0	0							30	20	Fair	Good	RETAIN	TTM 17270	6201796.83	2177380.74
250.0	Quercus agrifolia	Coast live oak	1	11	8.00	8	0	0	0							25	15	Fair	Fair	RETAIN	TTM 17270	6201787.27	2177373.05
251.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							40	30	Fair	Fair	RETAIN	TTM 17270	6201775.14	2177380.11
252.0	Quercus agrifolia	Coast live oak	1	28	22.00	22	0	0	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201796.95	2177315.83

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
253.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							25	25	Fair	Fair	RETAIN	TTM 17270	6201790.34	2177344.13
254.0	Quercus agrifolia	Coast live oak	2	28	20.62	16	13	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201780.56	2177355.22
255.0	Quercus agrifolia	Coast live oak	2	20	13.00	12	5	0	0							20	22	Fair	Fair	RETAIN	TTM 17270	6201754.01	2177341.69
256.0	Quercus agrifolia	Coast live oak	2	36	25.46	18	18	0	0							30	30	Fair	Good	RETAIN	TTM 17270	6201749.91	2177352.49
257.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							20	18	Fair	Fair	RETAIN	TTM 17270	6201729.87	2177376.74
258.0	Quercus agrifolia	Coast live oak	1	19	15.00	15	0	0	0							20	14	Fair	Fair	RETAIN	TTM 17270	6201716.98	2177379.23
259.0	Quercus agrifolia	Coast live oak	1	10	9.00	9	0	0	0							20	20	Poor	Poor	RETAIN	TTM 17270	6201802.36	2177405.09
260.0	Quercus agrifolia	Coast live oak	2	40	24.17	22	10	0	0							40	35	Fair	Fair	RETAIN	TTM 17270	6201770.67	2177405.34
261.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							35	20	Fair	Fair	RETAIN	TTM 17270	6201768.70	2177398.69
262.0	Quercus agrifolia	Coast live oak	2	24	14.14	10	10	0	0							25	35	Fair	Fair	RETAIN	TTM 17270	6201764.39	2177420.12
263.0	Quercus agrifolia	Coast live oak	1	24	22.00	22	0	0	0							35	40	Fair	Fair	RETAIN	TTM 17270	6201782.99	2177417.79
264.0	Quercus agrifolia	Coast live oak	4	34	20.20	10	10	8	12							45	45	Fair	Fair	RETAIN	TTM 17270	6201796.40	2177412.23
265.0	Quercus agrifolia	Coast live oak	2	14	12.81	8	10	0	0							35	35	Fair	Poor	RETAIN	TTM 17270	6201803.95	2177413.88
266.0	Quercus agrifolia	Coast live oak	2	60	39.60	28	28	0	0							45	60	Fair	Fair	RETAIN	TTM 17270	6201832.65	2177445.14
267.0	Quercus agrifolia	Coast live oak	2	48	35.36	35	5	0	0							40	50	Fair	Fair	RETAIN	TTM 17270	6201841.83	2177457.53
268.0	Quercus agrifolia	Coast live oak	1	12	11.00	11	0	0	0							25	10	Fair	Fair	RETAIN	TTM 17270	6201826.55	2177465.67
269.0	Quercus agrifolia	Coast live oak	1	18	17.00	17	0	0	0							50	25	Fair	Fair	RETAIN	TTM 17270	6201832.66	2177462.20
270.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							30	15	Fair	Fair	RETAIN	TTM 17270	6201831.28	2177470.53
271.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							45	15	Fair	Fair	RETAIN	TTM 17270	6201821.84	2177470.50
272.0	Quercus agrifolia	Coast live oak	2	20	15.23	6	14	0	0							45	35	Fair	Fair	RETAIN	TTM 17270	6201826.58	2177459.70
273.0	Quercus agrifolia	Coast live oak	1	12	8.00	8	0	0	0							30	20	Fair	Fair	RETAIN	TTM 17270	6201785.99	2177441.18
274.0	Quercus agrifolia	Coast live oak	2	24	17.49	15	9	0	0							35	40	Fair	Fair	RETAIN	TTM 17270	6201793.12	2177451.28
275.0	Platanus racemosa	Western sycamore	6	62	27.28	16	15	15	5	3	2					50	45	Fair	Poor	RETAIN	TTM 17270	6201855.25	2177606.28
276.0	Platanus racemosa	Western sycamore	2	28	19.80	14	14	0	0							35	25	Poor	Poor	RETAIN	TTM 17270	6201876.75	2177539.38
277.0	Platanus racemosa	Western sycamore	2	30	25.46	18	18	0	0							45	35	Fair	Fair	RETAIN	TTM 17270	6201835.66	2177461.68
278.0	Platanus racemosa	Western sycamore	1	16	15.00	15	0	0	0							40	20	Fair	Poor	RETAIN	TTM 17270	6201892.24	2177437.52
279.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							30	15	Good	Good	RETAIN	TTM 17270	6201888.65	2177436.86
280.0	Quercus agrifolia	Coast live oak	3	54	38.21	24	22	20	0							35	45	Fair	Fair	RETAIN	TTM 17270	6201826.15	2177510.03
281.0	Quercus agrifolia	Coast live oak	1	12	9.00	9	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201808.41	2177497.99
282.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201805.66	2177508.63
283.0	Quercus agrifolia	Coast live oak	1	16	12.00	12	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201787.84	2177498.64
284.0	Quercus agrifolia	Coast live oak	2	36	26.08	22	14	0	0							30	40	Fair	Fair	RETAIN	TTM 17270	6201791.68	2177487.80
285.0	Quercus agrifolia	Coast live oak	1	18	12.00	12	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6201782.89	2177504.25
286.0	Quercus agrifolia	Coast live oak	2	20	17.20	14	10	0	0							30	30	Fair	Fair	RETAIN	TTM 17270	6201800.57	2177480.43
287.0	Quercus agrifolia	Coast live oak	2	32	18.38	13	13	0	0							35	20	Fair	Fair	RETAIN	TTM 17270	6201814.49	2177481.37
288.0	Quercus agrifolia	Coast live oak	1	26	20.00	20	0	0	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201758.76	2177507.90
289.0	Quercus agrifolia	Coast live oak	3	54	30.85	22	12	18	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201741.44	2177496.65
290.0	Quercus agrifolia	Coast live oak	1	40	26.00	26	0	0	0							30	30	Poor	Poor	RETAIN	TTM 17270	6201762.49	2177528.83
291.0	Quercus agrifolia	Coast live oak	2	36	17.20	10	14	0	0							25	25	Fair	Poor	RETAIN	TTM 17270	6201760.17	2177541.74
292.0	Quercus agrifolia	Coast live oak	1	8	5.00	5	0	0	0							15	12	Fair	Fair	RETAIN	TTM 17270	6201819.87	2177523.31
293.0	Quercus agrifolia	Coast live oak	1	32	26.00	26	0	0	0							40	40	Fair	Fair	RETAIN	TTM 17270	6201823.92	2177564.87
294.0	Quercus agrifolia	Coast live oak	2	24	21.47	19	10	0	0							40	25	Fair	Fair	RETAIN	TTM 17270	6201819.79	2177573.59
295.0	Quercus agrifolia	Coast live oak	1	30	25.00	25	0	0	0							25	30	Fair	Poor	RETAIN	TTM 17270	6201800.28	2177574.84
296.0	Quercus agrifolia	Coast live oak	1	18	11.00	11	0	0	0							30	30	Fair	Poor	RETAIN	TTM 17270	6201811.63	2177574.50

Appendix E - Master Tree Information Matrices																						
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
297.0	Quercus agrifolia	Coast live oak	1	30	24.00	24	0	0	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201797.49	2177584.56
298.0	Quercus agrifolia	Coast live oak	1	25	26.00	26	0	0	0							30	40	Fair	Poor	RETAIN	TTM 17270	6201813.47	2177575.79
299.0	Platanus racemosa	Western sycamore	1	10	7.00	7	0	0	0							13	20	Fair	Poor	RETAIN	TTM 17270	6201785.82	2177578.86
300.0	Platanus racemosa	Western sycamore	1	13	10.00	10	0	0	0							22	25	Fair	Poor	RETAIN	TTM 17270	6201772.35	2177581.69
301.0	Platanus racemosa	Western sycamore	1	12	10.00	10	0	0	0							10	20	Fair	Poor	RETAIN	TTM 17270	6201779.10	2177593.13
302.0	Quercus agrifolia	Coast live oak	2	40	31.24	24	20	0	0							30	30	Fair	Fair	RETAIN	TTM 17270	6201769.78	2177600.86
303.0	Platanus racemosa	Western sycamore	4	60	26.38	18	16	4	10							35	30	Fair	Fair	RETAIN	TTM 17270	6201784.38	2177599.61
304.0	Quercus agrifolia	Coast live oak	1	20	18.00	18	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6201795.75	2177597.16
305.0	Quercus agrifolia	Coast live oak	1	24	22.00	22	0	0	0							35	30	Fair	Fair	RETAIN	TTM 17270	6201803.13	2177611.77
306.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							15	15	Fair	Poor	RETAIN	TTM 17270	6201801.92	2177614.70
307.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	10	Fair	Fair	RETAIN	TTM 17270	6201799.01	2177609.13
308.0	Quercus agrifolia	Coast live oak	2	30	25.00	20	15	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201782.87	2177614.12
309.0	Quercus agrifolia	Coast live oak	2	30	24.52	24	5	0	0							20	30	Fair	Fair	RETAIN	TTM 17270	6201791.49	2177635.43
310.0	Quercus agrifolia	Coast live oak	1	28	24.00	24	0	0	0							35	30	Fair	Fair	RETAIN	TTM 17270	6201791.12	2177650.39
311.0	Quercus agrifolia	Coast live oak	1	20	18.00	18	0	0	0							40	25	Fair	Fair	RETAIN	TTM 17270	6201811.70	2177649.84
312.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							35	30	Fair	Poor	RETAIN	TTM 17270	6201815.29	2177648.46
313.0	Quercus agrifolia	Coast live oak	1	28	22.00	22	0	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201813.12	2177627.09
314.0	Quercus agrifolia	Coast live oak	2	22	12.81	10	8	0	0							22	15	Fair	Fair	RETAIN	TTM 17270	6201825.20	2177638.47
315.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							35	20	Poor	Poor	FMZ D	TTM 17270	6201773.82	2177651.29
316.0	Quercus agrifolia	Coast live oak	1	28	26.00	26	0	0	0							35	45	Fair	Fair	RETAIN	TTM 17270	6201767.06	2177633.37
317.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							40	30	Fair	Fair	FMZ D	TTM 17270	6201765.33	2177656.94
318.0	Quercus agrifolia	Coast live oak	2	30	34.99	18	30	0	0							30	30	Fair	Fair	FMZ D	TTM 17270	6201758.58	2177652.47
319.0	Quercus agrifolia	Coast live oak	1	36	24.00	24	0	0	0							40	30	Fair	Fair	FMZ D	TTM 17270	6201759.12	2177663.50
320.0	Quercus agrifolia	Coast live oak	1	28	22.00	22	0	0	0							35	40	Fair	Fair	FMZ D	TTM 17270	6201790.42	2177681.30
321.0	Quercus agrifolia	Coast live oak	1	50	54.00	54	0	0	0							45	60	Good	Good	FMZ D	TTM 17270	6201792.96	2177671.30
322.0	Quercus agrifolia	Coast live oak	3	26	12.41	9	8	3	0							15	18	Fair	Fair	FMZ C	TTM 17270	6201778.15	2177704.34
323.0	Quercus agrifolia	Coast live oak	1	30	28.00	28	0	0	0							30	30	Dead	Dead	FMZ C	TTM 17270	6201736.65	2177711.28
324.0	Quercus agrifolia	Coast live oak	1	11	8.00	8	0	0	0							20	18	Fair	Poor	FMZ C	TTM 17270	6201741.23	2177705.26
325.0	Quercus agrifolia	Coast live oak	1	14	13.00	13	0	0	0							10	5	Poor	Poor	FMZ C	TTM 17270	6201732.14	2177702.01
326.0	Quercus agrifolia	Coast live oak	2	28	19.10	14	13	0	0							55	35	Poor	Poor	FMZ C	TTM 17270	6201731.72	2177691.22
327.0	Quercus agrifolia	Coast live oak	1	8	7.00	7	0	0	0							25	20	Poor	Poor	FMZ C	TTM 17270	6201732.16	2177691.69
328.0	Quercus agrifolia	Coast live oak	2	24	22.80	14	18	0	0							20	30	Poor	Poor	FMZ D	TTM 17270	6201749.93	2177668.57
329.0	Quercus agrifolia	Coast live oak	1	28	23.00	23	0	0	0							45	35	Fair	Poor	FMZ C	TTM 17270	6201733.58	2177692.40
330.0	Quercus agrifolia	Coast live oak	3	28	34.32	13	15	28	0							45	45	Fair	Fair	FMZ C	TTM 17270	6201723.06	2177696.82
331.0	Quercus agrifolia	Coast live oak	2	40	24.08	18	16	0	0							35	25	Fair	Poor	FMZ C	TTM 17270	6201713.60	2177696.48
332.0	Quercus agrifolia	Coast live oak	3	16	10.86	3	10	3	0							30	20	Fair	Poor	FMZ C	TTM 17270	6201707.32	2177712.86
333.0	Quercus agrifolia	Coast live oak	2	70	45.61	36	28	0	0							40	50	Good	Fair	FMZ C	TTM 17270	6201713.49	2177710.36
334.0	Quercus agrifolia	Coast live oak	4	78	25.06	12	12	12	14							50	35	Fair	Fair	FMZ C	TTM 17270	6201776.99	2177727.58
335.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							35	15	Fair	Fair	FMZ C	TTM 17270	6201783.31	2177738.24
336.0	Quercus agrifolia	Coast live oak	7	60	36.50	18	24	14	10	10	6					50	50	Fair	Fair	FMZ C	TTM 17270	6201782.45	2177747.61
337.0	Quercus agrifolia	Coast live oak	1	60	54.00	54	0	0	0							30	30	Dead	Dead	FMZ B	TTM 17270	6201805.29	2177778.67
338.0	Quercus agrifolia	Coast live oak	1	42	40.00	40	0	0	0							30	10	Poor	Poor	FMZ B	TTM 17270	6201830.48	2177794.93
339.0	Quercus agrifolia	Coast live oak	1	26	24.00	24	0	0	0							35	25	Fair	Fair	REMOVE	TTM 17270	6201837.77	2177844.36
340.0	Quercus agrifolia	Coast live oak	1	22	18.00	18	0	0	0							35	25	Good	Fair	REMOVE	TTM 17270	6201850.75	2177849.75

Appendix E - Master Tree Information Matrices																						
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
341.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							30	25	Good	Fair	REMOVE	TTM 17270	6201852.20	2177860.90
342.0	Quercus agrifolia	Coast live oak	2	28	25.30	24	8	0	0							35	20	Poor	Poor	REMOVE	TTM 17270	6201838.88	2177867.38
343.0	Quercus agrifolia	Coast live oak	4	28	24.90	22	8	6	6							35	30	Fair	Poor	REMOVE	TTM 17270	6201839.36	2177879.26
344.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							15	18	Fair	Poor	REMOVE	TTM 17270	6201789.64	2177914.68
345.0	Quercus agrifolia	Coast live oak	2	54	41.04	30	28	0	0							35	40	Fair	Fair	ENCROACH	TTM 17270	6201786.56	2177937.28
346.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							20	20	Fair	Fair	REMOVE	TTM 17270	6201753.40	2177950.16
347.0	Platanus racemosa	Western sycamore	2	40	24.08	18	16	0	0							35	25	Poor	Poor	ENCROACH	TTM 17270	6201756.79	2177954.85
348.0	Quercus agrifolia	Coast live oak	1	18	18.00	18	0	0	0							30	30	Fair	Fair	FMZ B	TTM 17270	6201764.10	2178032.25
349.0	Quercus agrifolia	Coast live oak	1	18	17.00	17	0	0	0							40	25	Fair	Fair	FMZ C	TTM 17270	6201763.40	2178054.11
350.0	Quercus agrifolia	Coast live oak	2	28	26.91	20	18	0	0							45	40	Fair	Fair	FMZ C	TTM 17270	6201722.61	2178098.46
351.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							30	15	Poor	Fair	FMZ C	TTM 17270	6201718.16	2178107.53
352.0	Quercus agrifolia	Coast live oak	2	35	19.70	18	8	0	0							35	30	Fair	Poor	FMZ C	TTM 17270	6201704.03	2178121.06
353.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							30	20	Poor	Poor	FMZ C	TTM 17270	6201693.56	2178111.00
354.0	Quercus agrifolia	Coast live oak	2	26	18.68	18	5	0	0							20	25	Fair	Poor	FMZ D	TTM 17270	6201699.60	2178124.76
355.0	Quercus agrifolia	Coast live oak	1	17	16.00	16	0	0	0							50	40	Fair	Fair	FMZ D	TTM 17270	6201692.96	2178132.57
356.0	Quercus agrifolia	Coast live oak	2	26	16.16	15	6	0	0							35	20	Poor	Fair	FMZ D	TTM 17270	6201712.67	2178159.35
357.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							45	50	Good	Fair	FMZ D	TTM 17270	6201663.66	2178146.92
358.0	Quercus agrifolia	Coast live oak	3	45	30.03	17	17	18	0							30	35	Fair	Fair	FMZ D	TTM 17270	6201657.16	2178170.91
359.0	Platanus racemosa	Western sycamore	3	60	16.67	11	11	6	0							60	45	Fair	Fair	FMZ D	TTM 17270	6201651.99	2178171.33
360.0	Quercus agrifolia	Coast live oak	1	24	22.00	22	0	0	0							45	35	Fair	Fair	RETAIN	TTM 17270	6201626.17	2178179.01
361.0	Quercus agrifolia	Coast live oak	1	14	9.00	9	0	0	0							15	10	Poor	Poor	FMZ D	TTM 17270	6201613.87	2178173.44
362.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201582.32	2178189.84
363.0	Quercus agrifolia	Coast live oak	2	16	14.76	13	7	0	0							25	35	Fair	Fair	RETAIN	TTM 17270	6201573.02	2178192.96
364.0	Platanus racemosa	Western sycamore	2	65	34.53	34	6	0	0							30	30	Poor	Poor	RETAIN	TTM 17270	6201569.07	2178186.40
365.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							30	15	Good	Good	FMZ D	TTM 17270	6201523.09	2178145.20
366.0	Quercus agrifolia	Coast live oak	1	15	14.00	14	0	0	0							30	25	Fair	Fair	REMOVE	TTM 17270	6201487.34	2178109.58
367.0	Quercus agrifolia	Coast live oak	1	12	8.00	8	0	0	0							15	15	Fair	Fair	REMOVE	TTM 17270	6201485.19	2178115.53
368.0	Quercus agrifolia	Coast live oak	1	23	14.00	14	0	0	0							35	25	Fair	Fair	REMOVE	TTM 17270	6201467.88	2178099.46
369.0	Quercus agrifolia	Coast live oak	1	22	20.00	20	0	0	0							35	30	Fair	Fair	RETAIN	TTM 17270	6201497.20	2178244.00
370.0	Quercus agrifolia	Coast live oak	1	18	13.00	13	0	0	0							30	25	Good	Fair	RETAIN	TTM 17270	6201502.37	2178283.10
371.0	Quercus agrifolia	Coast live oak	2	36	19.21	15	12	0	0							40	45	Good	Fair	RETAIN	TTM 17270	6201503.61	2178287.59
372.0	Quercus agrifolia	Coast live oak	2	20	15.62	12	10	0	0							40	30	Fair	Poor	ENCROACH	TTM 17270	6201495.85	2178309.55
373.0	Quercus agrifolia	Coast live oak	3	60	39.51	27	24	16	0							40	55	Fair	Poor	REMOVE	TTM 17270	6201481.68	2178319.32
374.0	Quercus agrifolia	Coast live oak	1	38	18.00	18	0	0	0							45	35	Fair	Poor	ENCROACH	TTM 17270	6201500.37	2178333.75
375.0	Quercus agrifolia	Coast live oak	1	38	26.00	26	0	0	0							50	50	Fair	Poor	ENCROACH	TTM 17270	6201510.42	2178336.92
376.0	Quercus agrifolia	Coast live oak	2	21	20.81	17	12	0	0							30	30	Fair	Poor	ENCROACH	TTM 17270	6201500.31	2178355.94
377.0	Quercus agrifolia	Coast live oak	1	18	20.00	20	0	0	0							30	35	Fair	Poor	RETAIN	TTM 17270	6201515.87	2178347.20
378.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							25	20	Fair	Poor	RETAIN	TTM 17270	6201515.10	2178348.80
379.0	Quercus agrifolia	Coast live oak	2	14	10.30	9	5	0	0							20	20	Fair	Poor	RETAIN	TTM 17270	6201511.77	2178378.22
380.0	Quercus agrifolia	Coast live oak	1	13	10.00	10	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201515.48	2178376.35
381.0	Quercus agrifolia	Coast live oak	1	18	14.00	14	0	0	0							40	25	Good	Fair	RETAIN	TTM 17270	6201519.47	2178379.76
382.0	Quercus agrifolia	Coast live oak	2	22	18.44	14	12	0	0							30	20	Poor	Poor	RETAIN	TTM 17270	6201513.75	2178395.24
383.0	Quercus agrifolia	Coast live oak	1	48	40.00	40	0	0	0							60	60	Poor	Poor	RETAIN	TTM 17270	6201502.02	2178405.50
384.0	Quercus agrifolia	Coast live oak	1	17	14.00	14	0	0	0							25	30	Good	Poor	ENCROACH	TTM 17270	6201495.22	2178417.03

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
385.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							45	35	Fair	Poor	REMOVE	TTM 17270	6201478.61	2178455.46
386.0	Quercus agrifolia	Coast live oak	1	20	16.00	16	0	0	0							30	25	Fair	Poor	REMOVE	TTM 17270	6201469.29	2178462.39
387.0	Quercus agrifolia	Coast live oak	1	17	15.00	15	0	0	0							35	30	Fair	Fair	REMOVE	TTM 17270	6201436.34	2178482.05
388.0	Quercus agrifolia	Coast live oak	1	42	38.00	38	0	0	0							60	55	Fair	Fair	REMOVE	TTM 17270	6201417.60	2178468.90
390.0	Quercus agrifolia	Coast live oak	3	22	22.38	16	14	7	0							30	35	Fair	Poor	REMOVE	TTM 17270	6201446.53	2178381.78
391.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							25	25	Fair	Poor	REMOVE	TTM 17270	6201402.88	2178509.97
392.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							20	15	Fair	Poor	REMOVE	TTM 17270	6201417.84	2178496.45
393.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							20	15	Fair	Fair	REMOVE	TTM 17270	6201417.63	2178499.82
394.0	Quercus agrifolia	Coast live oak	1	15	12.00	12	0	0	0							20	15	Fair	Poor	REMOVE	TTM 17270	6201423.56	2178496.94
395.0	Quercus agrifolia	Coast live oak	2	15	5.39	5	2	0	0							20	10	Fair	Fair	REMOVE	TTM 17270	6201458.46	2178506.16
396.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							15	5	Fair	Poor	REMOVE	TTM 17270	6201458.71	2178509.09
397.0	Quercus agrifolia	Coast live oak	1	22	18.00	18	0	0	0							50	35	Good	Fair	REMOVE	TTM 17270	6201432.49	2178514.02
398.0	Quercus agrifolia	Coast live oak	1	15	13.00	13	0	0	0							25	15	Fair	Poor	REMOVE	TTM 17270	6201422.31	2178527.32
399.0	Quercus agrifolia	Coast live oak	1	22	19.00	19	0	0	0							40	30	Fair	Fair	REMOVE	TTM 17270	6201413.81	2178539.72
400.0	Quercus agrifolia	Coast live oak	2	18	12.81	10	8	0	0							20	20	Dead	Dead	RETAIN	TTM 17270	6201409.30	2178556.32
401.0	Quercus agrifolia	Coast live oak	1	9	7.00	7	0	0	0							14	10	Fair	Fair	RETAIN	TTM 17270	6201404.59	2178557.71
402.0	Quercus agrifolia	Coast live oak	1	13	9.00	9	0	0	0							12	10	Poor	Poor	RETAIN	TTM 17270	6201396.85	2178569.39
403.0	Quercus agrifolia	Coast live oak	1	20	15.00	15	0	0	0							25	20	Fair	Poor	REMOVE	TTM 17270	6201461.55	2178517.79
404.0	Quercus agrifolia	Coast live oak	2	30	18.44	14	12	0	0							18	15	Fair	Poor	REMOVE	TTM 17270	6201471.68	2178493.52
405.0	Platanus racemosa	Western sycamore	6	54	28.28	20	20	0	0							35	30	Poor	Poor	ENCROACH	TTM 17270	6201516.43	2178549.07
406.0	Platanus racemosa	Western sycamore	3	48	21.66	15	12	10	0							30	25	Fair	Poor	ENCROACH	TTM 17270	6201523.86	2178545.99
407.0	Quercus agrifolia	Coast live oak	2	48	35.38	26	24	0	0							30	30	Fair	Fair	ENCROACH	TTM 17270	6201524.99	2178544.80
408.0	Quercus agrifolia	Coast live oak	1	12	11.00	11	0	0	0							20	18	Fair	Fair	RETAIN	TTM 17270	6201509.82	2178443.43
409.0	Quercus agrifolia	Coast live oak	2	18	14.42	12	8	0	0							25	20	Fair	Poor	RETAIN	TTM 17270	6201557.41	2178421.27
410.0	Quercus agrifolia	Coast live oak	1	12	8.00	8	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201548.10	2178435.36
411.0	Quercus agrifolia	Coast live oak	2	30	22.83	11	20	0	0							30	30	Fair	Fair	RETAIN	TTM 17270	6201552.65	2178446.21
412.0	Quercus agrifolia	Coast live oak	1	22	20.00	20	0	0	0							35	20	Fair	Fair	RETAIN	TTM 17270	6201545.39	2178445.14
413.0	Quercus agrifolia	Coast live oak	1	24	22.00	22	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6201552.25	2178454.81
414.0	Quercus agrifolia	Coast live oak	1	26	22.00	22	0	0	0							30	20	Fair	Poor	RETAIN	TTM 17270	6201554.88	2178471.31
415.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							20	20	Poor	Poor	RETAIN	TTM 17270	6201537.69	2178480.87
416.0	Quercus agrifolia	Coast live oak	2	50	39.60	28	28	0	0							40	55	Fair	Fair	RETAIN	TTM 17270	6201604.08	2178246.94
417.0	Platanus racemosa	Western sycamore	2	36	19.31	18	7	0	0							25	25	Fair	Fair	RETAIN	TTM 17270	6201596.40	2178258.29
418.0	Platanus racemosa	Western sycamore	5	30	10.63	10	3	2	0							25	20	Fair	Poor	RETAIN	TTM 17270	6201596.60	2178258.67
419.0	Quercus agrifolia	Coast live oak	2	35	20.59	18	10	0	0							20	15	Poor	Poor	RETAIN	TTM 17270	6201584.51	2178297.41
420.0	Quercus agrifolia	Coast live oak	2	48	45.61	44	12	0	0							45	55	Fair	Fair	RETAIN	TTM 17270	6201563.51	2178297.38
421.0	Quercus agrifolia	Coast live oak	1	18	14.42	12	8	0	0							20	20	Fair	Fair	RETAIN	TTM 17270	6201561.77	2178312.42
422.0	Quercus agrifolia	Coast live oak	1	14	37.70	35	14	0	0							15	15	Fair	Poor	RETAIN	TTM 17270	6201564.88	2178315.48
423.0	Quercus agrifolia	Coast live oak	1	16	41.62	34	24	0	0							25	15	Poor	Poor	RETAIN	TTM 17270	6201560.47	2178322.02
424.0	Quercus agrifolia	Coast live oak	1	10	7.00	7	0	0	0							15	10	Fair	Poor	RETAIN	TTM 17270	6201572.46	2178316.98
425.0	Quercus agrifolia	Coast live oak	1	35	19.31	18	7	0	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201598.39	2178311.51
426.0	Quercus agrifolia	Coast live oak	1	14	22.80	18	14	0	0							30	15	Fair	Poor	RETAIN	TTM 17270	6201583.62	2178324.62
427.0	Quercus agrifolia	Coast live oak	1	28	25.46	18	18	0	0							35	25	Fair	Fair	RETAIN	TTM 17270	6201571.81	2178321.11
428.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							15	10	Fair	Fair	RETAIN	TTM 17270	6201576.89	2178324.94
429.0	Quercus agrifolia	Coast live oak	2	22	14.42	12	8	0	0							20	15	Fair	Fair	RETAIN	TTM 17270	6201567.94	2178332.49

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
430.0	Quercus agrifolia	Coast live oak	1	16	35.00	35	0	0	0							25	15	Fair	Fair	RETAIN	TTM 17270	6201568.32	2178341.36
431.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201573.06	2178347.47
432.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							20	15	Fair	Poor	RETAIN	TTM 17270	6201584.16	2178343.90
433.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201567.91	2178365.85
434.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	20	Fair	Fair	RETAIN	TTM 17270	6201570.58	2178375.31
435.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							25	15	Fair	Poor	RETAIN	TTM 17270	6201586.49	2178364.72
436.0	Quercus agrifolia	Coast live oak	1	30	24.00	24	0	0	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201587.83	2178356.13
437.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201582.14	2178376.94
438.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							20	10	Poor	Poor	RETAIN	TTM 17270	6201596.18	2178356.35
439.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							35	40	Poor	Poor	RETAIN	TTM 17270	6201612.63	2178345.07
440.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							35	25	Fair	Fair	RETAIN	TTM 17270	6201606.58	2178367.55
441.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							35	25	Fair	Fair	RETAIN	TTM 17270	6201605.82	2178388.74
442.0	Quercus agrifolia	Coast live oak	1	12	8.00	8	0	0	0							20	20	Fair	Fair	RETAIN	TTM 17270	6201598.19	2178374.19
443.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							35	20	Fair	Fair	RETAIN	TTM 17270	6201625.21	2178382.38
444.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6201595.65	2178394.20
445.0	Quercus agrifolia	Coast live oak	1	30	25.00	25	0	0	0							35	45	Fair	Fair	RETAIN	TTM 17270	6201638.39	2178403.60
446.0	Quercus agrifolia	Coast live oak	1	40	38.00	38	0	0	0							35	45	Good	Fair	RETAIN	TTM 17270	6201624.04	2178441.43
447.0	Quercus agrifolia	Coast live oak	1	48	46.00	46	0	0	0							60	65	Good	Fair	RETAIN	TTM 17270	6201649.33	2178506.63
448.0	Quercus agrifolia	Coast live oak	1	28	24.00	24	0	0	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201598.55	2178506.97
449.0	Quercus agrifolia	Coast live oak	1	45	38.00	38	0	0	0							35	40	Fair	Fair	FMZ D	TTM 17270	6202230.97	2178323.85
450.0	Quercus agrifolia	Coast live oak	2	40	37.70	35	14	0	0							35	40	Good	Fair	FMZ D	TTM 17270	6202246.92	2178352.64
451.0	Quercus agrifolia	Coast live oak	3	60	52.95	42	28	16	0							55	60	Good	Fair	FMZ D	OFFSITE	6201679.49	2178553.28
452.0	Quercus agrifolia	Coast live oak	2	50	41.62	34	24	0	0							35	40	Good	Fair	RETAIN	TTM 17270	6201684.68	2178513.24
453.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6201674.71	2178496.58
454.0	Quercus agrifolia	Coast live oak	2	38	23.09	7	22	0	0							50	60	Good	Good	FMZ D	TTM 17270	6201650.56	2178537.91
455.0	Quercus agrifolia	Coast live oak	1	20	18.00	18	0	0	0							35	20	Fair	Fair	RETAIN	TTM 17270	6201649.55	2178513.22
456.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							35	20	Fair	Fair	RETAIN	TTM 17270	6201657.44	2178513.67
457.0	Quercus agrifolia	Coast live oak	1	48	34.00	34	0	0	0							35	25	Fair	Poor	RETAIN	TTM 17270	6201634.60	2178492.80
458.0	Quercus agrifolia	Coast live oak	1	36	30.00	30	0	0	0							35	45	Good	Fair	RETAIN	TTM 17270	6201657.85	2178438.12
459.0	Quercus agrifolia	Coast live oak	2	36	19.31	18	7	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201650.58	2178423.89
460.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							35	30	Fair	Fair	RETAIN	TTM 17270	6201653.17	2178401.61
461.0	Quercus agrifolia	Coast live oak	1	12	8.00	8	0	0	0							20	15	Good	Fair	RETAIN	TTM 17270	6201692.70	2178452.81
462.0	Quercus agrifolia	Coast live oak	1	12	7.00	7	0	0	0							18	15	Good	Good	RETAIN	TTM 17270	6201696.16	2178457.10
463.0	Quercus agrifolia	Coast live oak	1	12	8.00	8	0	0	0							18	12	Fair	Fair	RETAIN	TTM 17270	6201702.57	2178451.91
464.0	Quercus agrifolia	Coast live oak	1	14	9.00	9	0	0	0							20	12	Fair	Fair	RETAIN	TTM 17270	6201709.57	2178448.45
465.0	Quercus agrifolia	Coast live oak	1	16	13.00	13	0	0	0							18	15	Fair	Poor	RETAIN	TTM 17270	6201696.92	2178432.75
466.0	Quercus agrifolia	Coast live oak	1	14	11.00	11	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201720.76	2178427.95
467.0	Quercus agrifolia	Coast live oak	1	20	18.00	18	0	0	0							25	25	Good	Fair	RETAIN	TTM 17270	6201708.55	2178428.65
468.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							15	20	Fair	Fair	RETAIN	TTM 17270	6201721.65	2178418.42
469.0	Quercus agrifolia	Coast live oak	2	32	22.80	18	14	0	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201692.51	2178418.83
470.0	Quercus agrifolia	Coast live oak	1	22	19.00	19	0	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201683.52	2178409.99
471.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							20	25	Fair	Poor	RETAIN	TTM 17270	6201690.49	2178389.28
472.0	Quercus agrifolia	Coast live oak	1	30	26.00	26	0	0	0							30	35	Fair	Fair	RETAIN	TTM 17270	6201712.73	2178375.63
473.0	Platanus racemosa	Western sycamore	1	32	30.00	30	0	0	0							40	25	Fair	Fair	RETAIN	TTM 17270	6201658.39	2178362.09

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
474.0	Platanus racemosa	Western sycamore	2	36	21.63	12	18	0	0							35	40	Fair	Fair	RETAIN	TTM 17270	6201666.68	2178348.07
475.0	Quercus agrifolia	Coast live oak	1	16	15.00	15	0	0	0							50	30	Fair	Fair	RETAIN	TTM 17270	6201656.17	2178346.07
476.0	Quercus agrifolia	Coast live oak	1	32	28.00	28	0	0	0							40	35	Fair	Fair	RETAIN	TTM 17270	6201655.38	2178334.63
477.0	Quercus agrifolia	Coast live oak	1	20	18.00	18	0	0	0							35	25	Fair	Fair	RETAIN	TTM 17270	6201654.08	2178358.61
478.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17270	6201643.15	2178357.03
479.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	20	Fair	Fair	RETAIN	TTM 17270	6201651.32	2178373.70
480.0	Quercus agrifolia	Coast live oak	1	26	23.00	23	0	0	0							35	35	Fair	Fair	RETAIN	TTM 17270	6201634.82	2178365.48
481.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							20	20	Fair	Fair	RETAIN	TTM 17270	6201639.52	2178378.61
482.0	Quercus agrifolia	Coast live oak	1	22	20.00	20	0	0	0							35	25	Fair	Fair	RETAIN	TTM 17270	6201647.30	2178396.19
483.0	Quercus agrifolia	Coast live oak	1	48	36.00	36	0	0	0							38	30	Fair	Poor	RETAIN	TTM 17270	6201636.48	2178337.46
484.0	Quercus agrifolia	Coast live oak	1	18	17.00	17	0	0	0							50	45	Good	Good	RETAIN	TTM 17270	6201621.19	2178310.50
485.0	Quercus agrifolia	Coast live oak	1	25	20.00	20	0	0	0							50	20	Poor	Fair	RETAIN	TTM 17270	6201642.25	2178307.49
486.0	Quercus agrifolia	Coast live oak	3	30	22.02	14	15	8	0							45	25	Fair	Fair	FMZ D	TTM 17270	6201649.30	2178152.06
487.0	Quercus agrifolia	Coast live oak	1	30	23.00	23	0	0	0							50	50	Good	Fair	FMZ D	TTM 17270	6201644.35	2178140.19
488.0	Quercus agrifolia	Coast live oak	2	54	41.76	40	12	0	0							60	60	Good	Fair	FMZ C	TTM 17270	6201696.38	2178109.95
489.0	Quercus agrifolia	Coast live oak	1	11	13.00	13	0	0	0							25	20	Good	Fair	FMZ C	TTM 17270	6201708.35	2178101.75
490.0	Quercus agrifolia	Coast live oak	2	54	32.80	26	20	0	0							60	50	Good	Poor	FMZ C	TTM 17270	6201661.56	2178085.74
491.0	Platanus racemosa	Western sycamore	1	18	15.00	15	0	0	0							35	15	Poor	Poor	FMZ B	TTM 17270	6201661.60	2178073.39
492.0	Platanus racemosa	Western sycamore	1	12	9.00	9	0	0	0							25	15	Fair	Poor	FMZ B	TTM 17270	6201669.76	2178070.50
493.0	Quercus agrifolia	Coast live oak	1	17	28.00	28	0	0	0							60	30	Fair	Poor	FMZ B	TTM 17270	6201669.02	2178061.01
494.0	Platanus racemosa	Western sycamore	1	16	14.00	14	0	0	0							25	20	Fair	Poor	ENCROACH	TTM 17270	6201666.65	2178056.88
495.0	Quercus agrifolia	Coast live oak	1	13	11.00	11	0	0	0							20	20	Poor	Poor	ENCROACH	TTM 17270	6201668.48	2178056.91
496.0	Quercus agrifolia	Coast live oak	1	26	24.00	24	0	0	0							50	40	Good	Fair	ENCROACH	TTM 17270	6201681.81	2178038.51
497.0	Quercus agrifolia	Coast live oak	1	54	46.00	46	0	0	0							60	65	Fair	Poor	REMOVE	TTM 17270	6201713.11	2178004.05
498.0	Quercus agrifolia	Coast live oak	2	40	34.23	34	4	0	0							35	30	Fair	Poor	REMOVE	TTM 17270	6201695.49	2177988.57
499.0	Platanus racemosa	Western sycamore	2	11	7.21	6	4	0	0							30	18	Fair	Fair	REMOVE	TTM 17270	6201695.74	2177993.00
500.0	Quercus agrifolia	Coast live oak	1	28	27.00	27	0	0	0							50	40	Fair	Poor	REMOVE	TTM 17270	6201687.74	2177937.60
501.0	Quercus agrifolia	Coast live oak	2	42	28.43	22	18	0	0							55	40	Fair	Fair	REMOVE	TTM 17270	6201675.60	2177927.61
502.0	Quercus agrifolia	Coast live oak	2	24	22.20	18	13	0	0							45	35	Fair	Fair	REMOVE	TTM 17270	6201674.66	2177910.69
503.0	Quercus agrifolia	Coast live oak	1	42	32.00	32	0	0	0							55	50	Fair	Poor	REMOVE	TTM 17270	6201703.49	2177909.80
504.0	Quercus agrifolia	Coast live oak	4	54	29.70	22	18	5	7							25	25	Fair	Poor	REMOVE	TTM 17270	6201766.35	2177865.10
505.0	Platanus racemosa	Western sycamore	1	16	12.00	12	0	0	0							8	20	Poor	Poor	REMOVE	TTM 17270	6201749.11	2177806.22
506.0	Platanus racemosa	Western sycamore	1	30	18.00	18	0	0	0							45	15	Poor	Poor	REMOVE	TTM 17270	6201739.99	2177792.95
507.0	Quercus agrifolia	Coast live oak	1	36	29.00	29	0	0	0							40	40	Good	Fair	REMOVE	TTM 17270	6201753.41	2177798.29
508.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							35	25	Fair	Fair	ENCROACH	TTM 17270	6201766.56	2177793.01
509.0	Quercus agrifolia	Coast live oak	1	9	8.00	8	0	0	0							25	18	Good	Poor	FMZ B	TTM 17270	6201770.15	2177777.10
510.0	Quercus agrifolia	Coast live oak	1	32	28.00	28	0	0	0							55	50	Good	Fair	ENCROACH	TTM 17270	6201751.84	2177782.61
511.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							40	35	Good	Fair	FMZ B	TTM 17270	6201756.58	2177773.57
512.0	Quercus agrifolia	Coast live oak	1	19	17.00	17	0	0	0							40	30	Good	Fair	FMZ B	TTM 17270	6201758.99	2177765.16
513.0	Quercus agrifolia	Coast live oak	1	32	21.00	21	0	0	0							55	40	Poor	Fair	FMZ B	TTM 17270	6201738.94	2177766.64
514.0	Quercus agrifolia	Coast live oak	1	12	8.00	8	0	0	0							30	20	Fair	Fair	ENCROACH	TTM 17270	6201726.01	2177780.22
516.0	Platanus racemosa	Western sycamore	1	14	9.00	9	0	0	0							30	15	Poor	Poor	ENCROACH	TTM 17270	6201729.74	2177781.04
517.0	Quercus agrifolia	Coast live oak	1	36	38.00	38	0	0	0							22	10	Poor	Poor	REMOVE	TTM 17270	6201723.89	2177794.77
518.0	Quercus agrifolia	Coast live oak	1	35	32.00	32	0	0	0							22	12	Poor	Poor	REMOVE	TTM 17270	6201711.43	2177785.70

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
519.0	Quercus agrifolia	Coast live oak	1	34	28.00	28	0	0	0							30	15	Poor	Poor	REMOVE	TTM 17270	6201713.27	2177789.04
520.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							35	25	Good	Poor	FMZ B	TTM 17270	6201719.45	2177749.27
521.0	Quercus agrifolia	Coast live oak	2	40	23.32	20	12	0	0							25	30	Fair	Poor	FMZ B	TTM 17270	6201750.37	2177746.91
522.0	Quercus agrifolia	Coast live oak	2	22	24.17	22	10	0	0							40	20	Poor	Poor	FMZ C	TTM 17270	6201741.19	2177740.96
523.0	Quercus agrifolia	Coast live oak	2	32	36.77	34	14	0	0							30	35	Fair	Fair	FMZ C	TTM 17270	6201753.94	2177729.78
524.0	Quercus agrifolia	Coast live oak	1	24	21.00	21	0	0	0							40	30	Good	Fair	ENCROACH	TTM 17270	6201682.44	2177761.84
525.0	Quercus agrifolia	Coast live oak	1	12	9.00	9	0	0	0							30	15	Fair	Fair	ENCROACH	TTM 17270	6201681.37	2177760.78
526.0	Quercus agrifolia	Coast live oak	1	28	21.00	21	0	0	0							40	35	Good	Poor	REMOVE	TTM 17270	6201692.22	2177774.52
527.0	Quercus agrifolia	Coast live oak	1	30	26.00	26	0	0	0							35	50	Poor	Poor	REMOVE	TTM 17270	6201638.96	2177775.26
528.0	Quercus agrifolia	Coast live oak	3	60	40.52	25	21	24	0							45	50	Good	Fair	REMOVE	TTM 17270	6201624.78	2177780.56
529.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							40	20	Good	Fair	REMOVE	TTM 17270	6201623.97	2177794.44
530.0	Quercus agrifolia	Coast live oak	1	38	28.00	28	0	0	0							40	40	Fair	Poor	REMOVE	TTM 17270	6201604.83	2177811.20
531.0	Quercus agrifolia	Coast live oak	1	30	26.00	26	0	0	0							50	20	Good	Poor	REMOVE	TTM 17270	6201630.93	2177837.91
532.0	Quercus agrifolia	Coast live oak	2	24	21.26	14	16	0	0							50	30	Fair	Fair	REMOVE	TTM 17270	6201663.86	2177820.28
533.0	Quercus agrifolia	Coast live oak	2	18	17.20	10	14	0	0							25	25	Good	Poor	REMOVE	TTM 17270	6201656.30	2177813.13
534.0	Quercus agrifolia	Coast live oak	1	38	28.00	28	0	0	0							55	20	Fair	Poor	REMOVE	TTM 17270	6201674.83	2177811.47
535.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							35	40	Dead	Dead	REMOVE	TTM 17270	6201684.69	2177807.06
536.0	Quercus agrifolia	Coast live oak	4	42	23.41	15	15	7	7							50	40	Fair	Poor	REMOVE	TTM 17270	6201656.60	2177876.42
537.0	Quercus agrifolia	Coast live oak	2	28	26.91	20	18	0	0							45	50	Fair	Poor	REMOVE	TTM 17270	6201608.86	2177897.36
539.0	Quercus agrifolia	Coast live oak	3	60	34.64	20	20	20	0							30	45	Fair	Fair	REMOVE	TTM 17270	6201562.57	2177883.36
540.0	Quercus agrifolia	Coast live oak	4	72	48.33	20	24	28	24							40	30	Good	Fair	REMOVE	TTM 17270	6201567.47	2177933.25
541.0	Quercus agrifolia	Coast live oak	2	50	32.56	24	22	0	0							55	50	Good	Fair	REMOVE	TTM 17270	6201546.76	2177982.84
542.0	Quercus agrifolia	Coast live oak	1	13	11.00	11	0	0	0							20	15	Poor	Poor	REMOVE	TTM 17270	6201523.23	2177981.65
543.0	Quercus agrifolia	Coast live oak	1	8	7.00	7	0	0	0							15	15	Poor	Fair	REMOVE	TTM 17270	6201539.19	2177987.32
544.0	Quercus agrifolia	Coast live oak	1	24	22.00	22	0	0	0							45	30	Good	Fair	REMOVE	TTM 17270	6201527.67	2177969.62
545.0	Quercus agrifolia	Coast live oak	1	12	9.00	9	0	0	0							10	10	Fair	Fair	ENCROACH	TTM 17270	6201534.06	2177999.38
546.0	Quercus agrifolia	Coast live oak	1	30	27.00	27	0	0	0							35	40	Fair	Poor	REMOVE	TTM 17270	6201487.58	2177910.46
547.0	Quercus agrifolia	Coast live oak	3	72	32.70	22	3	24	0							35	40	Fair	Poor	REMOVE	TTM 17270	6201487.39	2177893.64
548.0	Quercus agrifolia	Coast live oak	5	36	31.06	25	14	12	0							20	25	Good	Fair	REMOVE	TTM 17270	6201397.87	2177925.59
549.0	Quercus agrifolia	Coast live oak	1	42	40.00	40	0	0	0							30	40	Dead	Dead	REMOVE	TTM 17270	6201468.82	2177981.05
550.0	Quercus agrifolia	Coast live oak	2	62	38.21	28	26	0	0							55	60	Good	Good	REMOVE	TTM 17270	6201481.22	2178027.35
551.0	Quercus agrifolia	Coast live oak	3	24	16.16	12	9	6	0							20	30	Fair	Fair	ENCROACH	TTM 17270	6201550.17	2178023.93
552.0	Quercus agrifolia	Coast live oak	1	10	9.00	9	0	0	0							30	20	Fair	Fair	FMZ B	TTM 17270	6201547.97	2178039.81
553.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							35	20	Fair	Fair	ENCROACH	TTM 17270	6201539.83	2178041.93
554.0	Quercus agrifolia	Coast live oak	1	7	6.00	6	0	0	0							20	5	Fair	Poor	FMZ C	TTM 17270	6201544.51	2178046.53
555.0	Quercus agrifolia	Coast live oak	1	26	22.00	22	0	0	0							30	20	Fair	Poor	FMZ C	TTM 17270	6201545.30	2178037.20
556.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							40	25	Good	Fair	ENCROACH	TTM 17270	6201555.73	2178027.87
557.0	Quercus agrifolia	Coast live oak	1	13	12.00	12	0	0	0							45	20	Good	Fair	FMZ B	TTM 17270	6201558.89	2178033.53
558.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							30	25	Fair	Fair	FMZ B	TTM 17270	6201562.34	2178048.43
559.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							25	20	Fair	Poor	ENCROACH	TTM 17270	6201566.43	2178040.65
560.0	Quercus agrifolia	Coast live oak	1	22	20.00	20	0	0	0							35	30	Fair	Poor	ENCROACH	TTM 17270	6201563.13	2178025.76
561.0	Quercus agrifolia	Coast live oak	1	24	24.00	24	0	0	0							20	15	Poor	Poor	REMOVE	TTM 17270	6201572.87	2178008.02
562.0	Quercus agrifolia	Coast live oak	1	18	18.00	18	0	0	0							30	20	Poor	Poor	REMOVE	TTM 17270	6201578.75	2178013.10
563.0	Quercus agrifolia	Coast live oak	1	26	24.00	24	0	0	0							50	30	Poor	Poor	REMOVE	TTM 17270	6201583.60	2178016.88

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
564.0	Quercus agrifolia	Coast live oak	2	26	19.31	18	7	0	0							35	25	Poor	Poor	REMOVE	TTM 17270	6201591.25	2178025.19
565.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							15	10	Poor	Poor	REMOVE	TTM 17270	6201581.94	2178024.56
566.0	Quercus agrifolia	Coast live oak	2	15	14.21	11	9	0	0							25	20	Fair	Fair	REMOVE	TTM 17270	6201582.77	2177993.29
567.0	Quercus agrifolia	Coast live oak	1	25	22.00	22	0	0	0							35	30	Fair	Fair	REMOVE	TTM 17270	6201612.73	2178008.47
568.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							30	15	Poor	Poor	REMOVE	TTM 17270	6201614.18	2178023.50
569.0	Platanus racemosa	Western sycamore	1	12	12.00	12	0	0	0							45	20	Fair	Fair	REMOVE	TTM 17270	6201656.82	2178028.76
570.0	Platanus racemosa	Western sycamore	2	60	17.69	13	12	0	0							30	30	Fair	Poor	REMOVE	TTM 17270	6201643.60	2178019.79
571.0	Quercus agrifolia	Coast live oak	1	20	15.00	15	0	0	0							35	15	Poor	Fair	FMZ C	TTM 17270	6201644.22	2178089.34
572.0	Quercus agrifolia	Coast live oak	1	72	48.00	48	0	0	0							50	50	Fair	Fair	FMZ B	TTM 17270	6201641.55	2178070.47
573.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							25	5	Poor	Poor	REMOVE	TTM 17270	6201594.46	2178036.17
574.0	Platanus racemosa	Western sycamore	1	24	16.00	16	0	0	0							35	20	Fair	Fair	ENCROACH	TTM 17270	6201575.97	2178039.43
575.0	Platanus racemosa	Western sycamore	1	10	10.00	10	0	0	0							35	10	Poor	Fair	FMZ B	TTM 17270	6201580.25	2178042.66
576.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							30	15	Fair	Poor	ENCROACH	TTM 17270	6201578.96	2178042.49
577.0	Quercus agrifolia	Coast live oak	3	38	35.10	24	20	16	0							35	45	Fair	Fair	FMZ B	TTM 17270	6201575.87	2178052.20
578.0	Quercus agrifolia	Coast live oak	2	20	14.87	14	5	0	0							45	25	Fair	Fair	FMZ C	TTM 17270	6201578.72	2178082.73
579.0	Quercus agrifolia	Coast live oak	1	18	13.00	13	0	0	0							40	25	Fair	Fair	ENCROACH	TTM 17270	6201542.37	2178084.44
580.0	Platanus racemosa	Western sycamore	1	18	14.00	14	0	0	0							35	25	Poor	Poor	FMZ C	TTM 17270	6201567.54	2178081.32
581.0	Platanus racemosa	Western sycamore	1	18	14.00	14	0	0	0							25	20	Poor	Poor	FMZ C	TTM 17270	6201563.97	2178081.42
582.0	Quercus agrifolia	Coast live oak	3	30	19.72	14	12	7	0							50	50	Good	Fair	FMZ C	TTM 17270	6201584.59	2178101.53
585.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							50	25	Good	Fair	FMZ C	TTM 17270	6201562.60	2178087.73
586.0	Quercus agrifolia	Coast live oak	2	40	37.36	10	36	0	0							40	35	Fair	Fair	ENCROACH	TTM 17270	6201531.54	2178097.02
587.0	Quercus agrifolia	Coast live oak	1	22	18.00	18	0	0	0							55	35	Good	Good	FMZ C	TTM 17270	6201555.80	2178100.53
588.0	Quercus agrifolia	Coast live oak	2	26	15.23	14	6	0	0							40	30	Good	Fair	FMZ C	TTM 17270	6201562.92	2178109.78
589.0	Quercus agrifolia	Coast live oak	2	52	42.43	30	30	0	0							45	50	Fair	Fair	FMZ D	TTM 17270	6201571.01	2178137.80
590.0	Quercus agrifolia	Coast live oak	2	18	15.00	12	9	0	0							30	30	Fair	Fair	FMZ D	TTM 17270	6201620.79	2178158.51
591.0	Quercus agrifolia	Coast live oak	4	36	33.88	22	18	14	12							50	55	Good	Fair	FMZ D	TTM 17270	6201616.39	2178157.81
593.0	Quercus agrifolia	Coast live oak	2	22	18.68	18	5	0	0							30	35	Fair	Fair	REMOVE	TTM 17270	6201479.56	2177748.25
594.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							25	20	Fair	Fair	REMOVE	TTM 17270	6201491.66	2177785.22
595.0	Quercus agrifolia	Coast live oak	2	18	13.34	13	3	0	0							30	25	Fair	Fair	REMOVE	TTM 17270	6201513.03	2177783.47
596.0	Quercus agrifolia	Coast live oak	1	60	54.00	54	0	0	0							55	60	Fair	Fair	REMOVE	TTM 17270	6201548.33	2177783.33
597.0	Quercus agrifolia	Coast live oak	1	30	28.00	28	0	0	0							25	25	Fair	Poor	ENCROACH	TTM 17270	6201627.15	2177761.47
598.0	Platanus racemosa	Western sycamore	1	14	9.00	9	0	0	0							15	10	Poor	Poor	FMZ C	TTM 17270	6201627.36	2177723.10
599.0	Platanus racemosa	Western sycamore	1	12	10.00	10	0	0	0							25	15	Fair	Fair	FMZ C	TTM 17270	6201601.45	2177722.35
600.0	Quercus agrifolia	Coast live oak	3	24	18.22	14	10	6	0							40	35	Fair	Fair	FMZ C	TTM 17270	6201629.94	2177733.94
601.0	Quercus agrifolia	Coast live oak	3	28	23.71	16	15	9	0							35	40	Fair	Fair	FMZ C	TTM 17270	6201672.04	2177711.63
602.0	Quercus agrifolia	Coast live oak	1	16	16.00	16	0	0	0							30	35	Fair	Fair	FMZ C	TTM 17270	6201676.38	2177719.64
603.0	Quercus agrifolia	Coast live oak	3	48	26.02	14	15	16	0							35	45	Good	Poor	RETAIN	TTM 17270	6201159.75	2177614.77
604.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							30	25	Good	Fair	REMOVE	TTM 17270	6201127.11	2178111.16
605.0	Quercus agrifolia	Coast live oak	1	32	13.00	13	0	0	0							30	25	Good	Fair	REMOVE	TTM 17270	6201124.76	2178114.20
606.0	Quercus agrifolia	Coast live oak	3	16	16.73	10	12	6	0							38	26	Good	Fair	RETAIN	TTM 17270	6200289.71	2177667.10
607.0	Quercus agrifolia	Coast live oak	5	38	24.35	12	13	12	10	6						35	45	Good	Fair	RETAIN	TTM 17270	6200665.72	2177441.17
614.0	Quercus agrifolia	Coast live oak	1	36	32.00	32	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17270	6200325.62	2176764.22
678.0	Quercus agrifolia	Coast live oak	1	20	18.00	18	0	0	0							38	38	Good	Fair	REMOVE	TTM 17270	6201081.02	2176620.65
679.0	Quercus agrifolia	Coast live oak	1	20	16.00	16	0	0	0							40	30	Good	Good	ENCROACH	TTM 17270	6201432.05	2178631.75

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
680.0	Quercus agrifolia	Coast live oak	1	20	18.00	18	0	0	0							48	45	Good	Fair	FMZ D	OFFSITE	6201426.55	2178625.30
681.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							35	30	Good	Fair	FMZ D	OFFSITE	6201403.40	2178645.83
682.0	Quercus agrifolia	Coast live oak	1	20	15.00	15	0	0	0							38	30	Good	Fair	FMZ D	OFFSITE	6201388.72	2178656.50
683.0	Platanus racemosa	Western sycamore	7	54	9.22	7	6	0	0							40	35	Fair	Poor	FMZ D	OFFSITE	6201386.71	2178655.56
684.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							30	20	Fair	Poor	FMZ D	OFFSITE	6201387.72	2178625.94
685.0	Quercus agrifolia	Coast live oak	1	19	16.00	16	0	0	0							35	45	Good	Good	FMZ D	OFFSITE	6201349.06	2178667.91
686.0	Platanus racemosa	Western sycamore	6	50	7.81	6	5	0	0							25	30	Fair	Fair	FMZ D	OFFSITE	6201319.11	2178655.24
687.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							25	20	Fair	Fair	RETAIN	OFFSITE	6201309.45	2178653.80
688.0	Quercus agrifolia	Coast live oak	3	36	14.63	3	14	3	0							30	20	Fair	Poor	RETAIN	OFFSITE	6201291.64	2178661.58
689.0	Quercus agrifolia	Coast live oak	2	36	28.43	22	18	0	0							25	35	Fair	Fair	RETAIN	OFFSITE	6201284.41	2178656.01
896.0	Quercus agrifolia	Coast live oak	1	16	13.00	13	0	0	0							20	20	Poor	Poor	RETAIN	TTM 17270	6202240.57	2177180.42
1562.0	Quercus agrifolia	Coast live oak	3	20	17.46	8	15	4	0							20	20	Good	Fair	FMZ B	TTM 17269	6203502.87	2180994.01
1563.0	Quercus agrifolia	Coast live oak	1	22	16.00	16	0	0	0							30	36	Good	Good	FMZ C	TTM 17269	6203508.62	2181010.96
1564.0	Quercus agrifolia	Coast live oak	2	18	13.60	13	4	0	0							18	20	Fair	Fair	FMZ C	TTM 17269	6203551.86	2181061.70
1565.0	Quercus agrifolia	Coast live oak	4	48	31.84	20	18	13	11							25	45	Fair	Fair	FMZ C	TTM 17269	6203555.59	2181089.31
1566.0	Quercus agrifolia	Coast live oak	2	66	48.41	38	30	0	0							35	40	Fair	Fair	FMZ C	TTM 17269	6203560.19	2181110.19
1567.0	Quercus agrifolia	Coast live oak	1	34	16.00	16	0	0	0							40	40	Good	Good	FMZ D	TTM 17269	6203554.18	2181141.47
1568.0	Platanus racemosa	Western sycamore	2	35	16.40	10	13	0	0							35	20	Good	Good	RETAIN	TTM 17269	6203614.42	2181278.17
1569.0	Quercus agrifolia	Coast live oak	3	20	8.25	6	4	4	0							14	15	Fair	Fair	RETAIN	TTM 17269	6203622.10	2181303.15
1570.0	Quercus agrifolia	Coast live oak	2	45	32.80	20	26	0	0							55	60	Good	Good	RETAIN	TTM 17269	6203594.29	2181325.72
1571.0	Platanus racemosa	Western sycamore	1	18	15.00	15	0	0	0							65	25	Good	Fair	RETAIN	TTM 17269	6203597.83	2181325.20
1572.0	Quercus agrifolia	Coast live oak	3	60	36.82	26	22	14	0							60	65	Fair	Fair	RETAIN	TTM 17269	6203666.06	2181377.80
1573.0	Quercus agrifolia	Coast live oak	1	72	28.00	28	0	0	0							40	45	Fair	Poor	RETAIN	TTM 17269	6203681.07	2181375.27
1574.0	Quercus agrifolia	Coast live oak	4	24	14.25	9	8	7	3							18	18	Good	Good	FMZ D	TTM 17269	6203356.38	2180593.83
1575.0	Platanus racemosa	Western sycamore	1	20	10.00	10	0	0	0							15	20	Fair	Fair	FMZ D	TTM 17269	6203392.09	2180570.77
1577.0	Platanus racemosa	Western sycamore	1	14	5.00	5	0	0	0							7	10	Fair	Fair	ENCROACH	TTM 17269	6203410.09	2180523.14
1578.0	Quercus agrifolia	Coast live oak	1	14	10.00	10	0	0	0							20	18	Fair	Poor	ENCROACH	TTM 17269	6203406.55	2180527.17
1579.0	Quercus agrifolia	Coast live oak	1	42	26.00	26	0	0	0							30	35	Poor	Poor	REMOVE	TTM 17269	6203401.70	2180429.98
1581.0	Quercus agrifolia	Coast live oak	2	15	10.44	10	3	0	0							20	15	Fair	Fair	ENCROACH	TTM 17269	6203362.33	2180305.92
1582.0	Quercus agrifolia	Coast live oak	1	60	24.00	24	0	0	0							35	30	Fair	Poor	ENCROACH	TTM 17269	6203364.42	2180321.76
1583.0	Quercus agrifolia	Coast live oak	1	11	9.00	9	0	0	0							38	35	Good	Good	REMOVE	TTM 17269	6203366.54	2180333.36
1584.0	Quercus agrifolia	Coast live oak	5	75	26.46	16	12	10	10	10						75	40	Good	Fair	REMOVE	TTM 17269	6203390.20	2180317.85
1585.0	Quercus agrifolia	Coast live oak	1	16	16.00	16	0	0	0							40	40	Good	Fair	ENCROACH	TTM 17269	6203388.23	2180307.04
1586.0	Quercus agrifolia	Coast live oak	1	28	20.00	20	0	0	0							40	45	Good	Good	REMOVE	TTM 17269	6203311.41	2180059.13
1587.0	Platanus racemosa	Western sycamore	4	36	6.48	5	3	2	2							20	15	Fair	Fair	REMOVE	TTM 17269	6203322.55	2180017.79
1588.0	Platanus racemosa	Western sycamore	2	36	11.49	10	4	4	0							25	15	Fair	Fair	REMOVE	TTM 17269	6203327.14	2180015.13
1589.0	Platanus racemosa	Western sycamore	1	12	6.00	6	0	0	0							20	10	Fair	Fair	REMOVE	TTM 17269	6203328.03	2180006.65
1590.0	Platanus racemosa	Western sycamore	4	36	7.35	5	4	3	2							20	15	Fair	Fair	REMOVE	TTM 17269	6203321.11	2180004.82
1591.0	Platanus racemosa	Western sycamore	6	72	12.25	10	5	5	0							25	20	Fair	Fair	REMOVE	TTM 17269	6203330.59	2179997.84
1592.0	Quercus agrifolia	Coast live oak	3	54	53.22	32	32	28	0							30	45	Fair	Fair	RETAIN	TTM 17269	6204119.47	2180545.19
1593.0	Platanus racemosa	Western sycamore	2	10	7.62	7	3	0	0							12	15	Poor	Fair	RETAIN	TTM 17269	6204132.75	2180590.23
1594.0	Quercus agrifolia	Coast live oak	2	66	40.36	30	27	0	0							25	50	Fair	Poor	RETAIN	TTM 17269	6204138.81	2180628.24
1595.0	Platanus racemosa	Western sycamore	2	44	24.08	16	18	0	0							50	60	Good	Fair	RETAIN	TTM 17269	6204364.77	2180403.92
1596.0	Quercus agrifolia	Coast live oak	2	36	24.84	19	16	0	0							25	30	Good	Good	RETAIN	TTM 17269	6204266.42	2180353.54

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
1601.0	Quercus agrifolia	Coast live oak	2	60	29.21	23	18	0	0							25	45	Fair	Fair	FMZ D	TTM 17269	6203278.07	2179726.18
1602.0	Quercus agrifolia	Coast live oak	1	30	24.00	24	0	0	0							25	40	Fair	Fair	FMZ D	TTM 17269	6203283.48	2179727.25
1603.0	Quercus agrifolia	Coast live oak	1	36	26.00	26	0	0	0							30	35	Fair	Fair	FMZ D	TTM 17269	6203295.28	2179727.81
1604.0	Platanus racemosa	Western sycamore	1	18	12.00	12	0	0	0							15	20	Fair	Poor	FMZ D	TTM 17269	6203301.09	2179736.60
1605.0	Platanus racemosa	Western sycamore	1	10	6.00	6	0	0	0							8	12	Fair	Poor	FMZ D	TTM 17269	6203270.59	2179722.97
1606.0	Quercus agrifolia	Coast live oak	1	22	18.00	18	0	0	0							30	25	Good	Good	FMZ C	TTM 17269	6203202.63	2179443.50
1607.0	Arroyo willow	Arroyo willow	2	72	31.24	24	20	0	0							50	55	Good	Fair	FMZ C	TTM 17269	6203225.27	2179415.82
1608.0	Platanus racemosa	Western sycamore	1	15	9.00	9	0	0	0							22	20	Fair	Fair	FMZ D	TTM 17269	6203299.87	2179237.41
1609.0	Platanus racemosa	Western sycamore	1	12	9.00	9	0	0	0							25	10	Fair	Fair	FMZ D	TTM 17269	6203297.65	2179225.08
1610.0	Platanus racemosa	Western sycamore	1	15	12.00	12	0	0	0							25	20	Fair	Fair	FMZ D	TTM 17269	6203300.66	2179215.76
1611.0	Platanus racemosa	Western sycamore	1	16	10.00	10	0	0	0							25	15	Fair	Fair	FMZ D	TTM 17269	6203317.61	2179236.56
1612.0	Quercus agrifolia	Coast live oak	2	16	7.81	6	5	0	0							12	15	Fair	Poor	FMZ D	TTM 17269	6203328.97	2179231.70
1614.0	Quercus agrifolia	Coast live oak	1	9	6.00	6	0	0	0							12	12	Good	Poor	FMZ D	TTM 17269	6203342.81	2179196.81
1616.0	Platanus racemosa	Western sycamore	2	40	17.03	13	11	0	0							30	25	Fair	Poor	FMZ D	TTM 17269	6203357.92	2179197.27
1617.0	Quercus agrifolia	Coast live oak	1	16	11.00	11	0	0	0							15	18	Fair	Poor	FMZ D	TTM 17269	6203362.01	2179197.80
1644.0	Quercus agrifolia	Coast live oak	3	85	49.33	28	32	25	0							85	65	Good	Good	REMOVE	TTM 17269	6202748.80	2179434.35
1647.0	Quercus agrifolia	Coast live oak	2	20	9.49	9	3	0	0							18	18	Good	Good	REMOVE	TTM 17269	6202927.65	2179713.50
1648.0	Quercus agrifolia	Coast live oak	3	18	15.00	15	0	0	0							50	48	Good	Fair	REMOVE	TTM 17269	6202961.14	2179717.85
1650.0	Quercus agrifolia	Coast live oak	2	16	13.89	12	7	0	0							30	30	Good	Fair	REMOVE	TTM 17269	6202949.77	2179752.70
1651.0	Quercus agrifolia	Coast live oak	3	60	32.37	20	18	18	0							60	45	Good	Fair	REMOVE	TTM 17269	6202919.51	2179772.26
1652.0	Platanus racemosa	Western sycamore	2	12	8.94	4	8	0	0							20	20	Good	Good	ENCROACH	TTM 17269	6202795.10	2179794.47
1653.0	Platanus racemosa	Western sycamore	1	10	8.00	8	0	0	0							18	12	Fair	Fair	ENCROACH	TTM 17269	6202798.15	2179798.02
1654.0	Platanus racemosa	Western sycamore	1	11	8.00	8	0	0	0							18	15	Fair	Fair	REMOVE	TTM 17269	6202837.25	2179854.04
1657.0	Quercus agrifolia	Coast live oak	2	18	11.31	8	8	0	0							20	25	Good	Good	REMOVE	TTM 17269	6202857.71	2179872.35
1658.0	Quercus agrifolia	Coast live oak	2	14	15.00	12	9	0	0							20	20	Fair	Fair	REMOVE	TTM 17269	6202878.11	2179899.20
1659.0	Quercus agrifolia	Coast live oak	2	9	7.81	6	5	0	0							15	12	Fair	Fair	REMOVE	TTM 17269	6202897.23	2179920.93
1660.0	Quercus agrifolia	Coast live oak	1	12	9.00	9	0	0	0							18	15	Good	Fair	REMOVE	TTM 17269	6202884.75	2179916.10
1661.0	Quercus agrifolia	Coast live oak	3	14	13.75	10	8	5	0							18	20	Good	Fair	REMOVE	TTM 17269	6202888.64	2179932.24
1663.0	Quercus agrifolia	Coast live oak	2	24	18.11	18	2	0	0							30	25	Fair	Fair	REMOVE	TTM 17269	6202935.71	2180005.19
1664.0	Quercus agrifolia	Coast live oak	1	10	7.00	7	0	0	0							22	10	Fair	Fair	REMOVE	TTM 17269	6202930.79	2179997.33
1665.0	Quercus agrifolia	Coast live oak	1	36	29.00	29	0	0	0							30	40	Fair	Fair	REMOVE	TTM 17269	6202907.18	2179967.06
1666.0	Quercus agrifolia	Coast live oak	2	48	39.82	31	25	0	0							30	45	Fair	Fair	REMOVE	TTM 17269	6202925.46	2179969.44
1667.0	Quercus agrifolia	Coast live oak	5	36	5.66	4	4	0	0							12	18	Fair	Fair	REMOVE	TTM 17269	6202910.70	2179927.67
1682.0	Arroyo willow	Arroyo willow	1	12	9.00	9	0	0	0							15	8	Poor	Poor	FMZ D	TTM 17269	6202306.69	2178507.79
1683.0	Arroyo willow	Arroyo willow	2	14	12.37	12	3	0	0							22	16	Fair	Fair	FMZ D	TTM 17269	6202315.12	2178494.54
1684.0	Quercus agrifolia	Coast live oak	1	50	50.00	50	0	0	0							50	60	Good	Fair	RETAIN	TTM 17269	6201873.21	2179177.65
1685.0	Quercus agrifolia	Coast live oak	2	12	8.94	8	4	0	0							20	15	Good	Fair	RETAIN	TTM 17269	6201888.12	2179206.45
1686.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							25	30	Good	Fair	RETAIN	TTM 17269	6201882.17	2179231.25
1687.0	Arroyo willow	Arroyo willow	1	10	8.00	8	0	0	0							12	6	Poor	Poor	RETAIN	TTM 17269	6201916.25	2179312.76
1688.0	Arroyo willow	Arroyo willow	1	14	10.00	10	0	0	0							18	12	Fair	Fair	RETAIN	TTM 17269	6201933.12	2179306.73
1697.0	Quercus agrifolia	Coast live oak	1	16	13.00	13	0	0	0							18	25	Fair	Good	RETAIN	TTM 17269	6202377.78	2179600.76
1698.0	Quercus agrifolia	Coast live oak	2	11	7.81	5	6	0	0							15	12	Good	Good	RETAIN	TTM 17269	6202354.89	2179588.71
1699.0	Quercus agrifolia	Coast live oak	1	36	32.00	32	0	0	0							35	55	Good	Good	RETAIN	TTM 17269	6202433.21	2179603.17
1700.0	Arroyo willow	Arroyo willow	2	40	15.81	13	9	0	0							20	22	Fair	Fair	RETAIN	TTM 17269	6202415.14	2179597.14

Appendix E - Master Tree Information Matrices																						
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
1704.0	Quercus agrifolia	Coast live oak	4	48	20.52	15	12	6	4							25	30	Poor	Poor	FMZ D	TTM 17269	6202821.24	2179146.46
1714.0	Quercus agrifolia	Coast live oak	2	48	29.83	23	19	0	0							30	35	Good	Good	REMOVE	TTM 17269	6202535.64	2179151.28
2048.0	Quercus agrifolia	Coast live oak	2	36	26.91	18	20	0	0							35	50	Good	Good	RETAIN	TTM 17269	6201895.75	2179388.17
2049.0	Quercus agrifolia	Coast live oak	2	42	33.30	25	22	0	0							35	50	Good	Fair	RETAIN	TTM 17269	6201872.32	2179435.66
2051.0	Platanus racemosa	Western sycamore	2	24	9.49	9	3	0	0							25	20	Fair	Fair	RETAIN	TTM 17269	6201831.42	2179426.99
2052.0	Quercus agrifolia	Coast live oak	1	19	15.00	15	0	0	0							30	35	Fair	Fair	RETAIN	TTM 17269	6201836.45	2179420.97
2053.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							20	20	Fair	Fair	RETAIN	TTM 17269	6201824.43	2179414.40
2054.0	Quercus agrifolia	Coast live oak	1	12	11.00	11	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17269	6201812.77	2179418.93
2055.0	Quercus agrifolia	Coast live oak	1	28	12.00	12	0	0	0							40	35	Fair	Fair	RETAIN	TTM 17269	6201799.62	2179399.30
2056.0	Quercus agrifolia	Coast live oak	1	24	19.00	19	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17269	6201797.31	2179382.89
2057.0	Quercus agrifolia	Coast live oak	1	36	32.00	32	0	0	0							35	40	Fair	Fair	RETAIN	TTM 17269	6201838.65	2179381.48
2058.0	Quercus agrifolia	Coast live oak	1	21	19.00	19	0	0	0							35	40	Poor	Poor	RETAIN	TTM 17269	6201833.79	2179348.37
2059.0	Quercus agrifolia	Coast live oak	2	48	36.77	26	26	0	0							40	40	Fair	Fair	RETAIN	TTM 17269	6201816.85	2179336.98
2060.0	Quercus agrifolia	Coast live oak	1	16	12.00	12	0	0	0							25	25	Fair	Fair	RETAIN	TTM 17269	6201847.83	2179335.18
2061.0	Quercus agrifolia	Coast live oak	2	24	11.31	8	8	0	0							15	20	Fair	Poor	RETAIN	TTM 17269	6201813.29	2179338.75
2062.0	Quercus agrifolia	Coast live oak	1	6	8.00	8	0	0	0							15	12	Fair	Fair	RETAIN	TTM 17269	6201811.11	2179351.62
2063.0	Quercus agrifolia	Coast live oak	3	18	9.85	5	6	6	0							15	20	Fair	Fair	RETAIN	TTM 17269	6201811.38	2179313.99
2064.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	20	Fair	Fair	RETAIN	TTM 17269	6201818.07	2179313.28
2065.0	Quercus agrifolia	Coast live oak	1	32	20.00	20	0	0	0							30	35	Good	Fair	RETAIN	TTM 17269	6201815.81	2179302.43
2067.0	Quercus agrifolia	Coast live oak	1	16	12.00	12	0	0	0							40	40	Fair	Fair	RETAIN	TTM 17269	6201832.48	2179298.83
2068.0	Quercus agrifolia	Coast live oak	1	10	6.00	6	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17269	6201830.24	2179291.19
2069.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							35	30	Fair	Fair	RETAIN	TTM 17269	6201835.47	2179288.42
2070.0	Quercus agrifolia	Coast live oak	2	36	25.50	19	17	0	0							40	40	Good	Fair	RETAIN	TTM 17269	6201833.27	2179284.35
2071.0	Quercus agrifolia	Coast live oak	1	8	5.00	5	0	0	0							20	15	Good	Fair	RETAIN	TTM 17269	6201813.41	2179274.43
2072.0	Quercus agrifolia	Coast live oak	1	18	15.00	15	0	0	0							40	30	Good	Fair	RETAIN	TTM 17269	6201813.99	2179281.57
2073.0	Quercus agrifolia	Coast live oak	1	8	6.00	6	0	0	0							10	15	Fair	Fair	RETAIN	TTM 17269	6201805.99	2179282.02
2074.0	Quercus agrifolia	Coast live oak	1	12	9.00	9	0	0	0							8	10	Fair	Fair	RETAIN	TTM 17269	6201809.73	2179293.88
2075.0	Quercus agrifolia	Coast live oak	2	28	17.20	14	10	0	0							30	35	Good	Fair	RETAIN	TTM 17269	6201803.92	2179273.28
2076.0	Quercus agrifolia	Coast live oak	1	13	12.00	12	0	0	0							25	20	Good	Fair	RETAIN	TTM 17269	6201802.19	2179264.28
2077.0	Quercus agrifolia	Coast live oak	1	15	12.00	12	0	0	0							25	25	Good	Fair	RETAIN	TTM 17269	6201811.89	2179269.03
2078.0	Quercus agrifolia	Coast live oak	2	22	19.85	15	13	0	0							25	25	Dead	Dead	RETAIN	TTM 17269	6201765.45	2179220.66
2079.0	Quercus agrifolia	Coast live oak	1	14	11.00	11	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17269	6201748.02	2179254.79
2080.0	Quercus agrifolia	Coast live oak	1	16	13.00	13	0	0	0							25	15	Good	Good	RETAIN	TTM 17269	6201738.22	2179263.60
2081.0	Quercus agrifolia	Coast live oak	1	16	12.00	12	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17269	6201748.36	2179280.44
2082.0	Quercus agrifolia	Coast live oak	1	14	11.00	11	0	0	0							20	18	Fair	Fair	RETAIN	TTM 17269	6201734.62	2179292.67
2084.0	Quercus agrifolia	Coast live oak	2	12	8.94	4	8	0	0							20	15	Fair	Fair	RETAIN	TTM 17269	6201776.42	2179303.12
2086.0	Quercus agrifolia	Coast live oak	1	26	20.00	20	0	0	0							20	20	Poor	Poor	RETAIN	TTM 17269	6201753.19	2179308.65
2087.0	Platanus racemosa	Western sycamore	1	26	22.00	22	0	0	0							40	40	Fair	Fair	RETAIN	TTM 17269	6201773.73	2179382.52
2088.0	Quercus agrifolia	Coast live oak	1	20	18.00	18	0	0	0							50	35	Good	Fair	RETAIN	TTM 17269	6201764.81	2179347.62
2089.0	Quercus agrifolia	Coast live oak	1	40	24.00	24	0	0	0							50	40	Good	Fair	RETAIN	TTM 17269	6201758.26	2179341.26
2090.0	Platanus racemosa	Western sycamore	1	24	16.00	16	0	0	0							45	35	Good	Fair	RETAIN	TTM 17269	6201761.02	2179326.72
2091.0	Platanus racemosa	Western sycamore	1	14	8.00	8	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17269	6201753.58	2179336.48
2092.0	Platanus racemosa	Western sycamore	1	18	15.00	15	0	0	0							45	35	Good	Fair	RETAIN	TTM 17269	6201751.59	2179331.50
2093.0	Quercus agrifolia	Coast live oak	1	16	15.00	15	0	0	0							20	15	Good	Fair	RETAIN	TTM 17269	6201748.55	2179322.78

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
2094.0	Quercus agrifolia	Coast live oak	1	12	6.00	6	0	0	0							15	10	Fair	Fair	RETAIN	TTM 17269	6201746.08	2179308.64
2095.0	Quercus agrifolia	Coast live oak	1	12	5.00	5	0	0	0							12	12	Fair	Poor	RETAIN	TTM 17269	6201736.04	2179304.32
2096.0	Quercus agrifolia	Coast live oak	1	13	12.00	12	0	0	0							10	6	Poor	Poor	RETAIN	TTM 17269	6201711.06	2179323.72
2097.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							25	20	Dead	Dead	RETAIN	TTM 17269	6201691.66	2179325.32
2098.0	Quercus agrifolia	Coast live oak	1	20	20.00	20	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17269	6201686.83	2179341.42
2100.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							20	20	Fair	Fair	RETAIN	TTM 17269	6201695.56	2179368.46
2101.0	Quercus agrifolia	Coast live oak	1	18	13.00	13	0	0	0							25	20	Fair	Fair	RETAIN	OFFSITE	6201679.86	2179389.70
2102.0	Quercus agrifolia	Coast live oak	1	18	14.00	14	0	0	0							35	30	Good	Fair	RETAIN	TTM 17269	6201679.91	2179376.31
2103.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	20	Good	Fair	RETAIN	OFFSITE	6201692.19	2179391.58
2106.0	Quercus agrifolia	Coast live oak	1	18	14.00	14	0	0	0							25	20	Dead	Dead	RETAIN	TTM 17269	6201719.92	2179366.86
2107.0	Quercus agrifolia	Coast live oak	1	8	6.00	6	0	0	0							20	15	Good	Fair	RETAIN	TTM 17269	6201730.69	2179370.11
2108.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17269	6201718.24	2179369.08
2110.0	Quercus agrifolia	Coast live oak	1	7	5.00	5	0	0	0							15	10	Good	Fair	RETAIN	TTM 17269	6201730.08	2179373.49
2111.0	Quercus agrifolia	Coast live oak	1	26	21.00	21	0	0	0							30	30	Dead	Dead	RETAIN	TTM 17269	6201731.79	2179386.00
2113.0	Quercus agrifolia	Coast live oak	1	15	12.00	12	0	0	0							25	20	Good	Fair	RETAIN	OFFSITE	6201729.23	2179406.49
2114.0	Quercus agrifolia	Coast live oak	1	8	6.00	6	0	0	0							20	20	Fair	Poor	RETAIN	OFFSITE	6201743.13	2179405.33
2116.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							20	18	Dead	Dead	RETAIN	TTM 17269	6201757.38	2179407.14
2117.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							20	20	Fair	Fair	RETAIN	OFFSITE	6201759.91	2179412.53
2118.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							30	20	Fair	Fair	RETAIN	OFFSITE	6201758.13	2179423.04
2119.0	Platanus racemosa	Western sycamore	2	60	29.73	22	20	0	0							60	60	Good	Fair	RETAIN	TTM 17269	6201760.84	2179409.75
2120.0	Quercus agrifolia	Coast live oak	1	22	14.00	14	0	0	0							25	20	Dead	Dead	RETAIN	TTM 17269	6201740.58	2179362.14
2122.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							30	15	Good	Fair	RETAIN	TTM 17269	6201730.04	2179353.14
2123.0	Quercus agrifolia	Coast live oak	1	9	5.00	5	0	0	0							20	18	Fair	Fair	RETAIN	TTM 17269	6201727.01	2179348.73
2124.0	Quercus agrifolia	Coast live oak	1	8	7.00	7	0	0	0							12	15	Fair	Fair	RETAIN	TTM 17269	6201712.88	2179349.53
2125.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							25	20	Dead	Dead	RETAIN	TTM 17269	6201724.72	2179339.07
2126.0	Quercus agrifolia	Coast live oak	1	16	13.00	13	0	0	0							22	18	Dead	Dead	RETAIN	TTM 17269	6201718.54	2179346.37
2127.0	Quercus agrifolia	Coast live oak	1	9	6.00	6	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17269	6201717.18	2179339.37
2128.0	Quercus agrifolia	Coast live oak	1	12	9.00	9	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17269	6201721.08	2179336.11
2130.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							30	20	Good	Fair	RETAIN	TTM 17269	6201728.21	2179299.44
2131.0	Quercus agrifolia	Coast live oak	1	10	6.00	6	0	0	0							20	15	Good	Fair	RETAIN	TTM 17269	6201717.49	2179292.98
2132.0	Quercus agrifolia	Coast live oak	2	16	10.82	9	6	0	0							35	30	Good	Fair	RETAIN	TTM 17269	6201691.62	2179293.30
2133.0	Quercus agrifolia	Coast live oak	2	30	24.84	19	16	0	0							35	55	Good	Fair	RETAIN	TTM 17269	6201713.34	2179281.24
2134.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							45	35	Good	Fair	RETAIN	TTM 17269	6201719.45	2179265.24
2135.0	Quercus agrifolia	Coast live oak	1	16	12.00	12	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17269	6201725.06	2179265.92
2136.0	Quercus agrifolia	Coast live oak	1	16	12.00	12	0	0	0							30	35	Fair	Fair	RETAIN	TTM 17269	6201673.88	2179272.76
2137.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							35	40	Good	Fair	RETAIN	TTM 17269	6201680.11	2179280.62
2138.0	Quercus agrifolia	Coast live oak	1	36	22.00	22	0	0	0							20	25	Fair	Fair	RETAIN	TTM 17269	6201725.14	2179259.08
2139.0	Quercus agrifolia	Coast live oak	2	36	23.85	20	13	0	0							25	35	Fair	Fair	RETAIN	TTM 17269	6201706.71	2179251.89
2140.0	Quercus agrifolia	Coast live oak	2	8	5.39	5	2	0	0							15	12	Fair	Fair	RETAIN	TTM 17269	6201740.41	2179238.71
2141.0	Quercus agrifolia	Coast live oak	2	12	8.49	6	6	0	0							15	15	Fair	Fair	RETAIN	TTM 17269	6201728.54	2179219.24
2142.0	Platanus racemosa	Western sycamore	2	36	20.00	16	12	0	0							35	55	Good	Fair	RETAIN	TTM 17269	6201731.76	2179223.95
2143.0	Platanus racemosa	Western sycamore	3	60	22.14	15	12	11	0							25	50	Fair	Fair	RETAIN	OFFSITE	6201664.47	2179241.30
2144.0	Quercus agrifolia	Coast live oak	4	14	5.74	4	3	2	2							18	15	Fair	Fair	RETAIN	TTM 17269	6201670.87	2179243.58
2145.0	Platanus racemosa	Western sycamore	1	12	10.00	10	0	0	0							25	20	Fair	Fair	RETAIN	TTM 17269	6201692.89	2179221.78

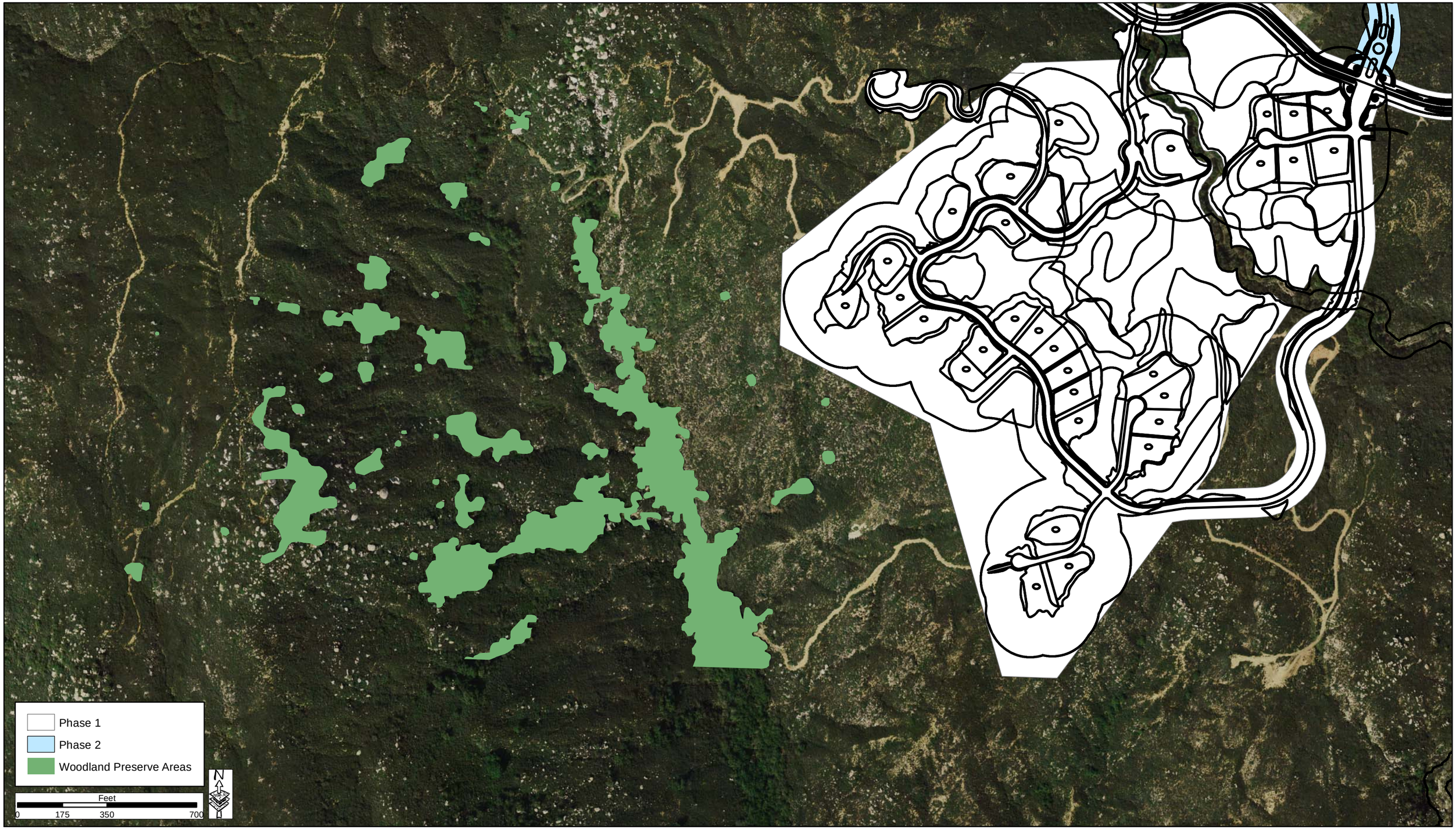
Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
2146.0	Platanus racemosa	Western sycamore	1	8	6.00	6	0	0	0							20	10	Fair	Fair	RETAIN	TTM 17269	6201714.45	2179234.67
2147.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							25	25	Fair	Fair	RETAIN	TTM 17269	6201718.87	2179229.89
2148.0	Platanus racemosa	Western sycamore	3	36	17.23	15	6	6	0							25	35	Fair	Fair	RETAIN	TTM 17269	6201680.10	2179222.41
2149.0	Quercus agrifolia	Coast live oak	1	11	8.00	8	0	0	0							20	15	Fair	Fair	RETAIN	TTM 17269	6201675.99	2179218.21
2150.0	Quercus agrifolia	Coast live oak	2	14	11.66	10	6	0	0							20	20	Fair	Fair	RETAIN	OFFSITE	6201640.16	2179168.48
2151.0	Quercus agrifolia	Coast live oak	1	13	11.00	11	0	0	0							25	20	Fair	Fair	RETAIN	OFFSITE	6201652.99	2179155.67
2152.0	Quercus agrifolia	Coast live oak	1	24	20.00	20	0	0	0							35	40	Poor	Fair	RETAIN	OFFSITE	6201653.73	2179169.81
2153.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							20	20	Fair	Fair	RETAIN	OFFSITE	6201656.12	2179179.63
2154.0	Quercus agrifolia	Coast live oak	1	10	5.00	5	0	0	0							15	15	Fair	Fair	RETAIN	OFFSITE	6201663.69	2179168.27
2155.0	Quercus agrifolia	Coast live oak	1	20	17.00	17	0	0	0							30	25	Fair	Fair	RETAIN	TTM 17269	6201670.93	2179157.65
2156.0	Platanus racemosa	Western sycamore	1	14	11.00	11	0	0	0							30	20	Fair	Fair	RETAIN	OFFSITE	6201657.84	2179159.14
2157.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							20	20	Poor	Fair	RETAIN	OFFSITE	6201664.13	2179152.86
2236.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							20	20	Fair	Fair	RETAIN	OFFSITE	6201460.05	2178780.11
2237.0	Platanus racemosa	Western sycamore	3	48	16.61	8	14	4	0							25	25	Poor	Fair	RETAIN	OFFSITE	6201510.43	2178711.87
2238.0	Quercus agrifolia	Coast live oak	2	26	23.02	19	13	0	0							25	50	fair	Fair	RETAIN	OFFSITE	6201560.83	2178746.63
2239.0	Quercus agrifolia	Coast live oak	2	20	13.42	12	6	0	0							20	22	fair	Fair	RETAIN	OFFSITE	6201574.33	2178746.49
2240.0	Quercus agrifolia	Coast live oak	1	13	12.00	12	0	0	0							35	25	Fair	Fair	RETAIN	OFFSITE	6201559.80	2178703.31
2241.0	Quercus agrifolia	Coast live oak	1	16	14.00	14	0	0	0							35	35	Fair	Fair	RETAIN	OFFSITE	6201543.36	2178689.41
2242.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							25	20	Fair	Fair	RETAIN	OFFSITE	6201543.02	2178683.05
2243.0	Quercus agrifolia	Coast live oak	1	22	19.00	19	0	0	0							35	35	Fair	Fair	RETAIN	OFFSITE	6201553.51	2178684.07
2244.0	Quercus agrifolia	Coast live oak	1	20	19.00	19	0	0	0							34	31	Poor	Poor	RETAIN	OFFSITE	6201555.81	2178672.48
2245.0	Platanus racemosa	Western sycamore	2	24	13.15	13	2	0	0							25	12	Poor	Poor	FMZ D	OFFSITE	6201521.27	2178676.35
2246.0	Platanus racemosa	Western sycamore	6	80	29.83	13	5	10	12	14	16					40	55	Poor	Poor	FMZ D	OFFSITE	6201523.98	2178657.99
2247.0	Quercus agrifolia	Coast live oak	3	54	27.20	20	14	12	0							25	40	Fair	Fair	FMZ D	OFFSITE	6201522.15	2178671.75
2248.0	Quercus agrifolia	Coast live oak	1	52	40.00	40	0	0	0							45	35	Fair	Poor	ENCROACH	TTM 17270	6201500.39	2178641.43
2249.0	Platanus racemosa	Western sycamore	2	18	8.25	8	2	0	0							20	18	Fair	Fair	ENCROACH	TTM 17270	6201467.64	2178657.47
2251.0	Quercus agrifolia	Coast live oak	1	28	24.00	24	0	0	0							30	40	Fair	Fair	REMOVE	TTM 17270	6201443.84	2178667.41
2252.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							25	15	Good	Good	ENCROACH	TTM 17270	6201441.07	2178674.54
2253.0	Quercus agrifolia	Coast live oak	1	54	47.00	47	0	0	0							30	35	Fair	Poor	REMOVE	TTM 17270	6201560.20	2178610.55
2270.0	Quercus agrifolia	Coast live oak	1	14	12.00	12	0	0	0							30	20	Fair	Fair	RETAIN	OFFSITE	6201628.75	2178725.23
2271.0	Quercus agrifolia	Coast live oak	1	36	32.00	32	0	0	0							35	45	Fair	Fair	RETAIN	OFFSITE	6201625.54	2178723.81
2273.0	Quercus agrifolia	Coast live oak	1	22	14.00	14	0	0	0							35	30	Fair	Fair	RETAIN	OFFSITE	6201616.39	2178710.52
2274.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							25	20	Fair	Fair	RETAIN	OFFSITE	6201587.30	2178706.69
2275.0	Quercus agrifolia	Coast live oak	1	8	5.00	5	0	0	0							15	20	Fair	Fair	RETAIN	OFFSITE	6201602.97	2178707.49
2276.0	Quercus agrifolia	Coast live oak	1	8	6.00	6	0	0	0							15	10	Fair	Fair	RETAIN	OFFSITE	6201602.61	2178718.60
2277.0	Quercus agrifolia	Coast live oak	1	12	10.00	10	0	0	0							35	25	Fair	Fair	RETAIN	OFFSITE	6201600.47	2178711.86
2278.0	Quercus agrifolia	Coast live oak	1	13	12.00	12	0	0	0							30	25	Fair	Fair	RETAIN	OFFSITE	6201601.74	2178727.67
2279.0	Quercus agrifolia	Coast live oak	1	22	18.00	18	0	0	0							40	35	Fair	Fair	RETAIN	OFFSITE	6201596.73	2178690.10
2280.0	Quercus agrifolia	Coast live oak	2	24	18.38	13	13	0	0							30	30	Fair	Fair	RETAIN	OFFSITE	6201620.40	2178679.08
2281.0	Quercus agrifolia	Coast live oak	1	10	8.00	8	0	0	0							20	20	Good	Fair	RETAIN	OFFSITE	6201606.05	2178678.33
2282.0	Quercus agrifolia	Coast live oak	2	40	23.60	19	14	0	0							30	40	Fair	Fair	RETAIN	OFFSITE	6201612.52	2178689.13
2283.0	Quercus agrifolia	Coast live oak	1	30	27.00	27	0	0	0							35	30	Good	Good	FMZ D	OFFSITE	6201621.41	2178633.91
2284.0	Quercus agrifolia	Coast live oak	2	36	26.63	22	15	0	0							35	45	Fair	Fair	FMZ D	OFFSITE	6201642.29	2178623.94
2285.0	Quercus agrifolia	Coast live oak	1	18	16.00	16	0	0	0							45	40	Good	Good	REMOVE	TTM 17270	6201665.90	2178609.76

Appendix E - Master Tree Information Matrices																					
Tree #	Botanical name	Common name	Stems	Basal diameter (in)	DBH*	Individual Trunk Diameters (in.)										Height (ft.)	Canopy (ft.)	Health	Structure	Impact Status	Location	E	N
						1	2	3	4	5	6	7	8	9	10								
2286.0	Quercus agrifolia	Coast live oak	2	54	30.61	24	19	0	0							35	55	Good	Good	RETAIN	OFFSITE	6201657.60	2178655.67
2287.0	Quercus agrifolia	Coast live oak	1	20	16.00	16	0	0	0							25	30	Good	Fair	RETAIN	TTM 17269	6201670.95	2178700.37
2288.0	Quercus agrifolia	Coast live oak	1	8	7.00	7	0	0	0							18	12	Fair	Fair	REMOVE	TTM 17270	6201637.70	2178603.21
2295.0	Quercus agrifolia	Coast live oak	1	5	5.00	5	0	0	0							15	10	Fair	Fair	RETAIN	TTM 17270	6201743.40	2178233.31
2304.0	Quercus agrifolia	Coast live oak	2	8	6.40	5	4	0	0							20	15	Fair	Fair	FMZ D	TTM 17270	6201762.86	2178124.94
2305.0	Quercus agrifolia	Coast live oak	1	5	5.00	5	0	0	0							18	10	Good	Fair	RETAIN	TTM 17270	6201859.39	2178088.96
2307.0	Quercus agrifolia	Coast live oak	1	6	5.00	5	0	0	0							15	10	Fair	Fair	RETAIN	TTM 17270	6201857.89	2178097.93
2315.0	Quercus agrifolia	Coast live oak	1	8	6.00	6	0	0	0							25	15	Fair	Fair	FMZ C	TTM 17270	6201910.25	2177845.24
2322.0	Platanus racemosa	Western sycamore	4	36	9.27	6	5	4	3							45	30	Fair	Fair	RETAIN	TTM 17270	6201986.18	2177446.96
2344.0	Quercus agrifolia	Coast live oak	3	8	7.00	3	2	6	0							25	25	Fair	Fair	RETAIN	TTM 17270	6201814.83	2177547.54
2630.0	Platanus racemosa	Western sycamore	3	12	7.07	5	4	3	0							20	16	Good	Fair	RETAIN	OFFSITE	6201284.63	2178635.85

*DBH for multiple-stem trees is based on International Society of Arboriculture (ISA) standards and equals the square root of the sum of all squared individual stem diameters. Individual stem diameters measured at 4.5 feet (54 inches) above natural grade.

APPENDIX F

Woodland Preservation Areas



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WOODLAND PRESERVATION AREAS
THE PRESERVE AT SAN JUAN TMPP

Appendix
F

APPENDIX G

Tree Impact Status – Phase 1

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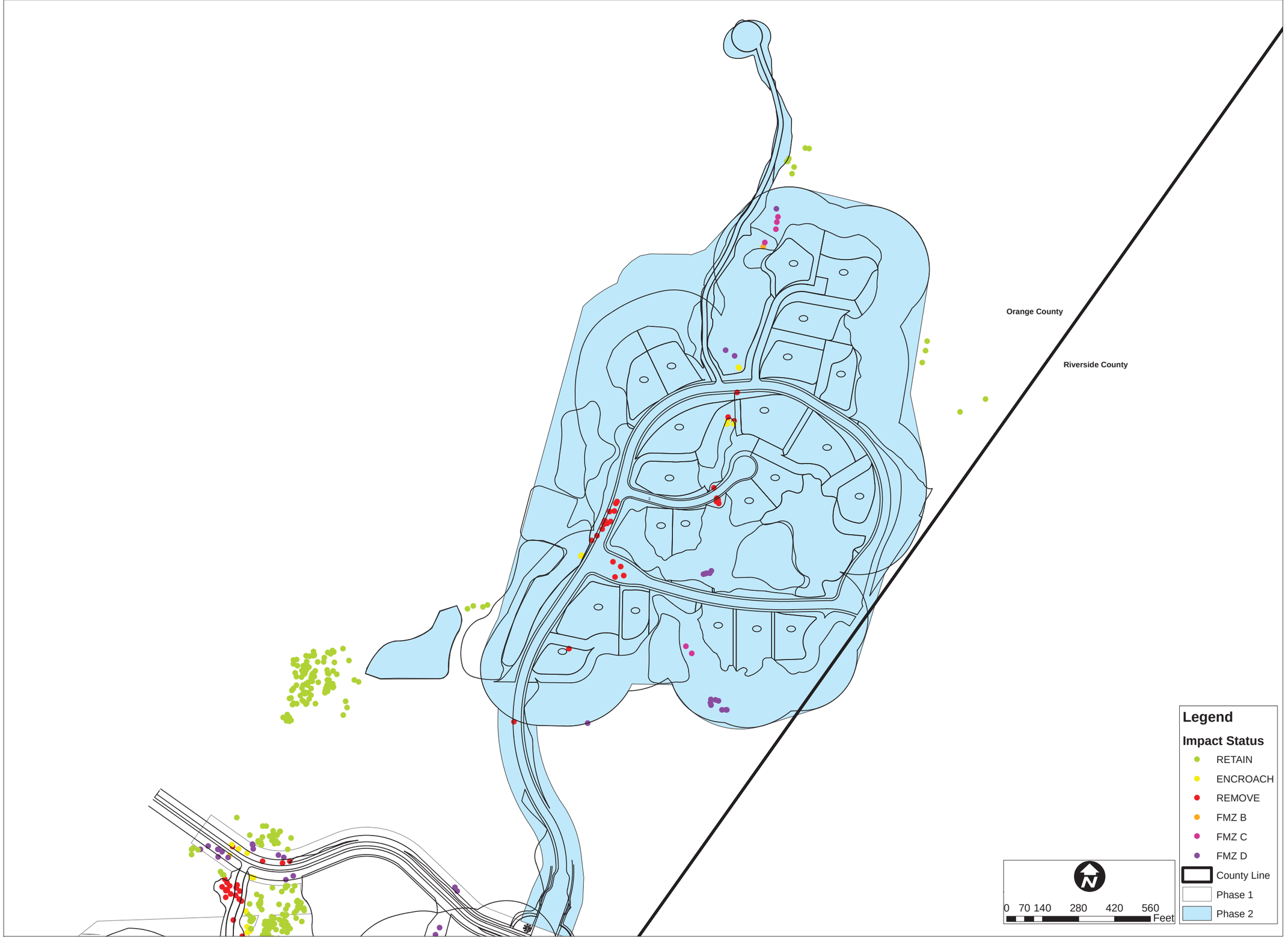
TREE IMPACT STATUS - PHASE 1
THE PRESERVE AT SAN JUAN TMPP

Appendix G

APPENDIX G-1

Tree Impact Status – Phase 2



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TREE IMPACT STATUS - PHASE 2
THE PRESERVE AT SAN JUAN TMPP

Appendix
G-1

APPENDIX H

Tree Protection Specifications

Appendix H
Tree Protection Specifications

The following sections are included as general guidelines for tree protection from construction impacts. The measures presented should be monitored and enforced by arborists 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 not been root pruned, shall not be irrigated during the summer or fall. This section applies only to those trees that have had more than 30% of their root zone removed. Note: In cases where natural drainage flows (above or below ground) have been diverted away from trees by land modifications, irrigation may be necessitated.*** 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 preserved 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 oak and sycamore trees.

Mulch: Maintain the natural duff layer under all preserved trees.

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. Once native oaks are placed in an improved landscape setting, there is a greater concern for over-watering than under-watering.

Watering Adjacent Plant Material: All plants near the preserved 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 preserved 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.

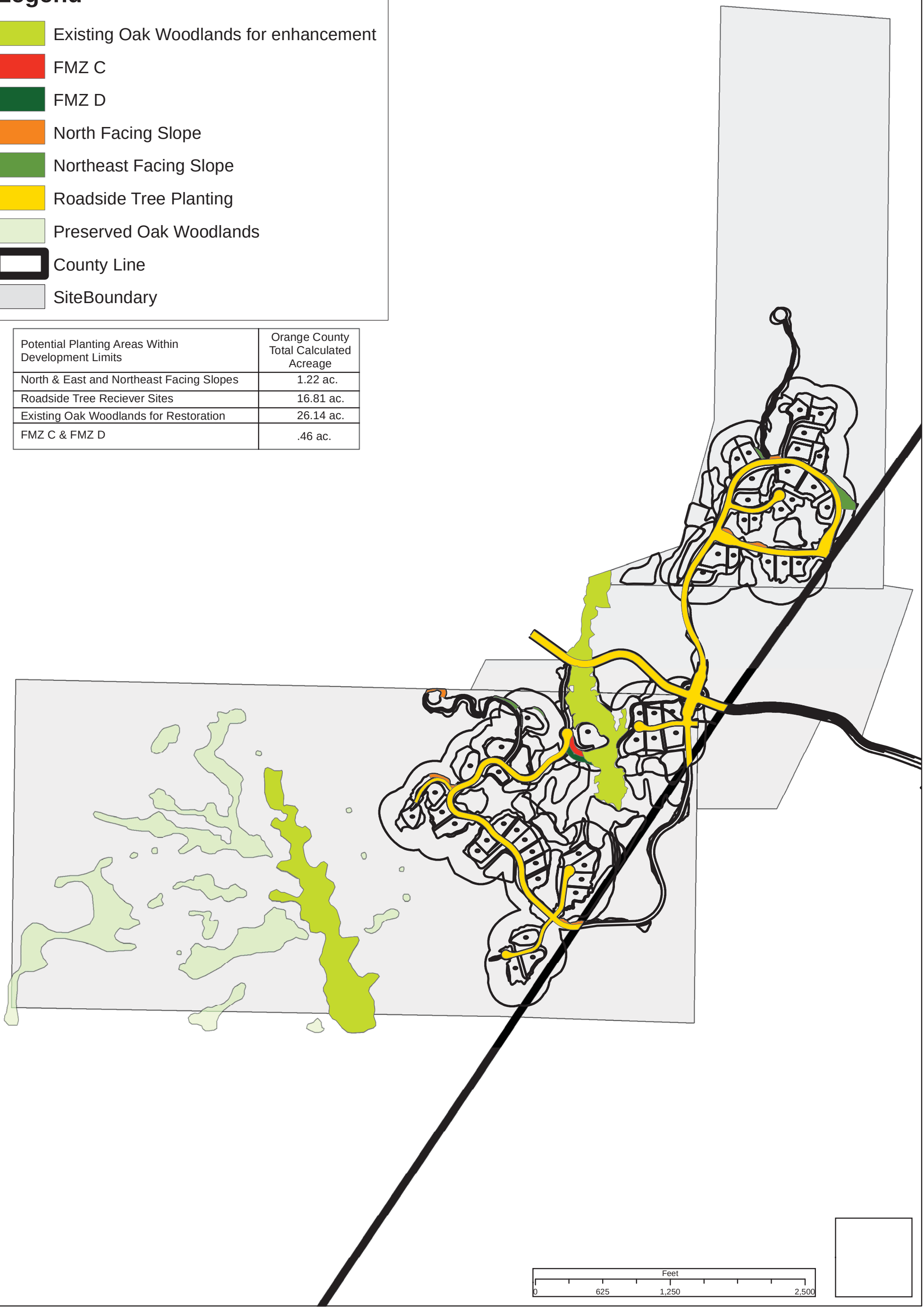
APPENDIX I

Preliminary Tree Receiver Areas – Orange County

Legend

- Existing Oak Woodlands for enhancement
- FMZ C
- FMZ D
- North Facing Slope
- Northeast Facing Slope
- Roadside Tree Planting
- Preserved Oak Woodlands
- County Line
- SiteBoundary

Potential Planting Areas Within Development Limits	Orange County Total Calculated Acreage
North & East and Northeast Facing Slopes	1.22 ac.
Roadside Tree Reciever Sites	16.81 ac.
Existing Oak Woodlands for Restoration	26.14 ac.
FMZ C & FMZ D	.46 ac.



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PRELIMINARY TREE RECIEVER AREAS - ORANGE COUNTY
THE PRESERVE AT SAN JUAN TMPP

Appendix
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