MALIBU PARKS PUBLIC ACCESS ENHANCEMENT
NATIVE TREE PROTECTION PLAN
Modified Redesign Plan

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1.0 INTRODUCTION

The Santa Monica Mountains Conservancy (Conservancy) and the Mountains Recreation and Conservation Authority (MRCA) is proposing the Malibu Parks Public Access Enhancement Plan-Public Works Plan (the Plan) for the Malibu and Santa Monica Mountains area, an improvement program that includes a comprehensive set of policies and development standards, and identifies specific actions and park improvements intended to enhance public access and recreation opportunities for specific park properties and recreation areas within the City of Malibu and Los Angeles County. The Plan would enhance public access and recreation opportunities by developing an interconnected system of parks, open space, trails, and habitats; to improve alternative methods of transportation between parklands; and to identify recreational facility and program improvements for the park properties, including new parking, camping, day-use and trailhead improvements, to support existing recreational demand and to facilitate an increased level of accessibility for disabled visitors. In overview, the plan area includes, Ramirez Canyon Park, Escondido Canyon Park, Latigo Trail Head, Corral Canyon Park, and the Conservancy-owned Malibu Bluffs (Figure 1).

This Native Tree Protection Plan provides a summary of Dudek's inventory and evaluation of the trees located within the area proposed for the Plan (the "Project Site"). Dudek conducted a tree inventory and assessment of the Project Site according to the City of Malibu Local Coastal Program (LCP). Dudek arborists, certified by the International Society of Arboriculture (ISA), 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, and impact levels and appropriate mitigation for the Modified Redesign Plan for the project areas' native trees. The project areas are located in the City of Malibu. As such, this report conforms to the regulations and requirements included within the City of Malibu's Certified LCP. The tree quantities and related project impacts (including the proposed project and three alternatives) have been analyzed and are reported in the following sections.

1.1 Project Location and Description

The proposed project plan area encompasses public parkland and trail areas from Ramirez Canyon Park at the westernmost portion of the plan area to Malibu Bluffs, and includes Corral Canyon Park, the Latigo Trailhead and Escondido Canyon Park (Figures 1 and 2). The plan focuses on establishing trail connections to adjacent National Park Service and State parks parklands, in addition to trail, and park-specific improvements proposed for the Conservancy and MRCA-owned parks and open space. A description of each of the existing parklands within the plan area is provided below.

1.1.1 Ramirez Canyon Park

Ramirez Canyon Park encompasses approximately 22 acres in Ramirez Canyon off the Malibu coastline and is bordered by National Park Service land to the north, and private residential land to the south (Figure 2). The park includes five structures that once served as residences on six separate lots. The park includes a manicured landscape area, as well as areas to the extreme north and southeast that are largely undisturbed.

Because Ramirez Canyon Park has a number of pre-existing structures, gardens, and designed hardscape on a large footprint of the overall property, rather than the open natural habitat typically associated with other park properties, this park serves to provide a range of diverse environmental, cultural, and educational opportunities for both passive and active recreation activities. The more developed nature of the park lends itself well to function as a place for special, pre-arranged activities, events, and functions typically permitted by the Santa Monica Mountains Conservancy/ Mountains Recreation Conservation Authority for the benefit of the community and visitors.

Ramirez Canyon Park is bisected in the northern portion of the Park by the City of Malibu-County of Los Angeles jurisdictional boundary. Access to the property is provided by gated vehicular access roads from Pacific Coast Highway via Ramirez Canyon Road or via West Winding Way and Deleplane Road, and then through a gated entrance at the terminus of Ramirez Canyon Road.

Natural Resources

Ramirez Canyon Park is traversed by Ramirez Canyon Creek within the west and southernmost portions of the property, and encompasses extensive stands of native coastal sage scrub and chaparral habitat along the canyon walls and northern portion of the property which is adjacent to National Park Service land.

1.1.2 Escondido Canyon Park

Escondido Canyon Park is located approximately 1 mile east of Kanan Dume Road in the City of Malibu, California (Figure 2). The park is approximately 140 acres in size and is, for the most part, surrounded by privately owned land. The park consists of open land vegetated with a variety of native and non-native plant and tree species.

The park is only accessible by the public via pedestrian access along the road shoulder of East Winding Way from a parking lot located on Winding Way at Pacific Coast Highway, approximately one mile south of the park boundary. A roadside dirt trail then takes access from the terminus of Winding Way onto the park property.

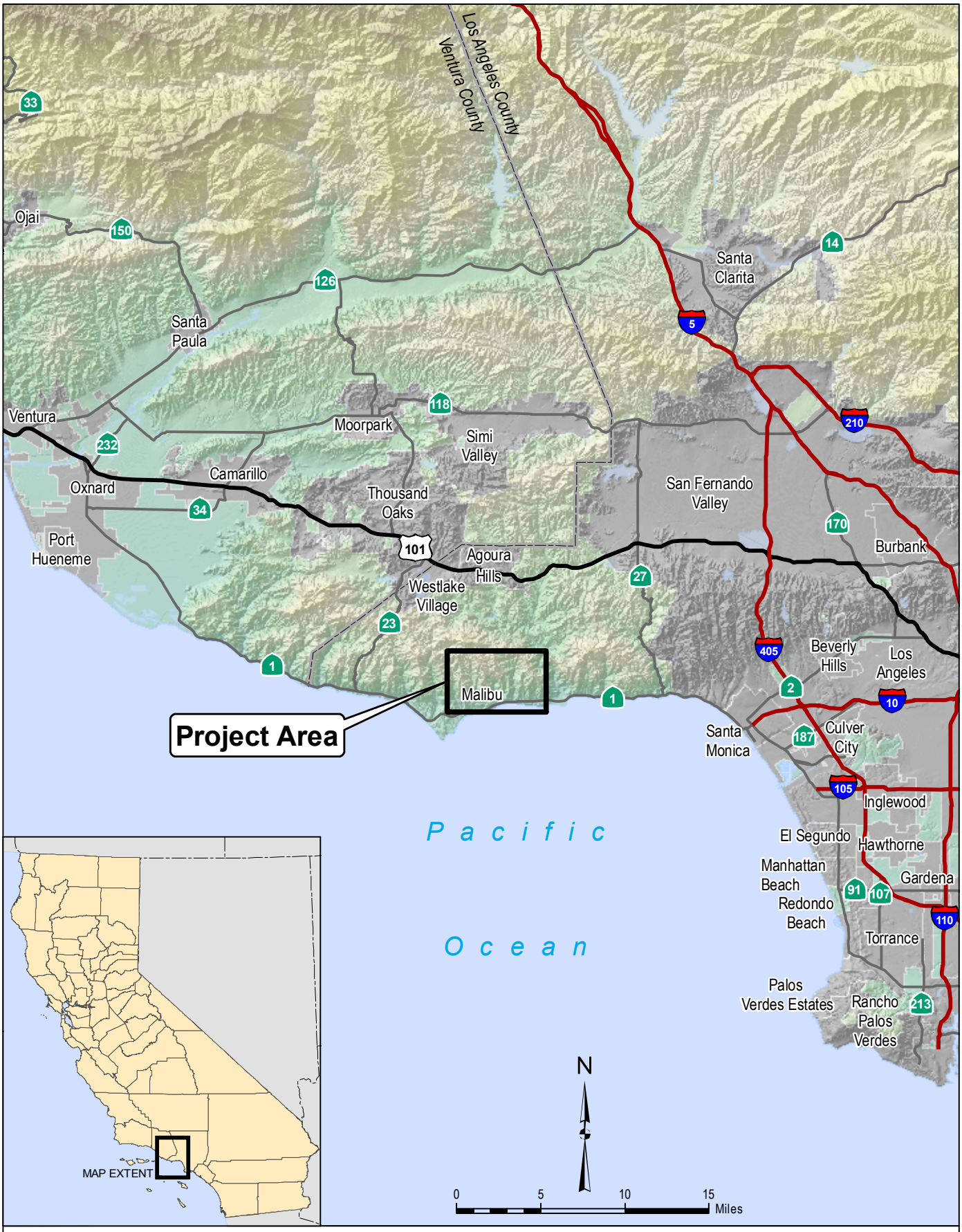

FIGURE 1

Regional Map

DUDEK

Native Tree Protection Plan for the Malibu Parks Public Access Enhancement Plan, Modified Redesign Plan

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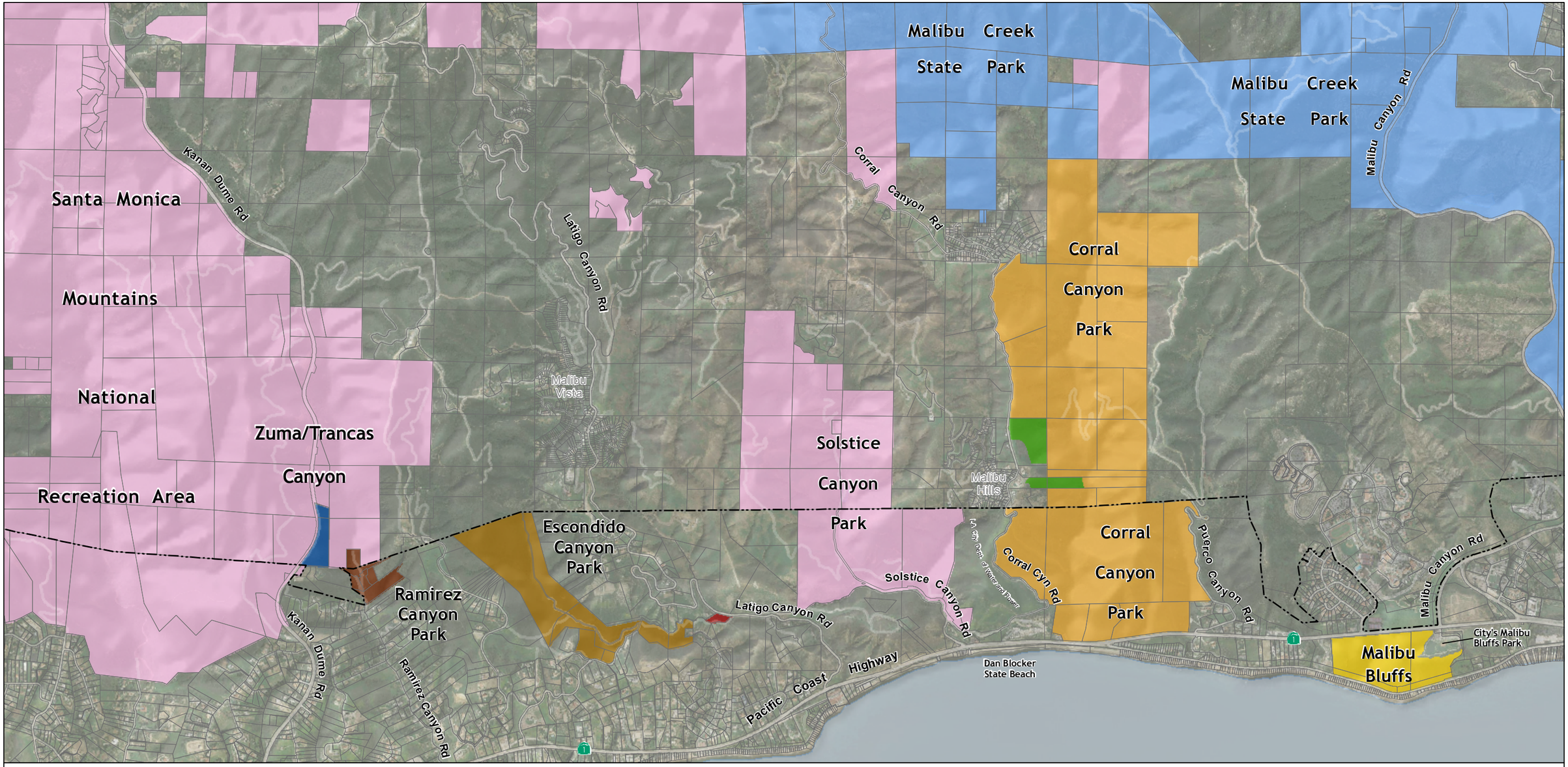

SOURCE: Aerial: DigitalGlobe 2008, MRCA 2009

FIGURE 2

Vicinity Map

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Natural Resources

Escondido Canyon Park is vegetated with native and non-native plant species. The majority of the park area can be characterized as relatively undisturbed coastal sage scrub habitat. However, Escondido Creek winds its way through the park along which riparian woodland is the dominating habitat. In addition, areas containing a mix of native shrubland and non-native grassland occur in various portions of the park. Various pockets of disturbance along the existing trail are evident through the park. The majority of the park property is designated as an Environmentally Sensitive Habitat Area (ESHA) in the City's LCP

1.1.3 Latigo Trailhead Property

The Latigo Trailhead property is approximately 2.4 acres of vegetated and disturbed land located in the City of Malibu (Figure 2). The property is accessed via Latigo Canyon Road and is surrounded by privately owned land, but is within easy walking distance to the easternmost boundary of Escondido Canyon Park. Given its proximity to Escondido Canyon, the property was acquired by MRCA in 2008 with the intent of supporting access to Escondido Canyon Park and the surrounding trail network. The property is designated and zoned Rural Residential (1 unit per 2 acres) in the City of Malibu LCP.

Natural Resources

The majority of the Latigo Trailhead property is naturally vegetated with native and non-native species, with the exception of highly disturbed areas around the driveway access to the property and the burned-out single family residence location. Vegetation communities on the property include annual grassland, coastal sage scrub, oak woodland, and southern willow scrub. The majority of the park property is designated as an ESHA in the City of Malibu LCP.

1.1.4 Corral Canyon Park

Corral Canyon Park is regionally significant in that it encompasses 340 acres of coastal land in the City of Malibu and contains the last undeveloped coastal canyon in Los Angeles County that flows unrestricted to the ocean (Figure 2). The park is surrounded by privately owned land with the exception of where Dan Blocker State Beach lies just south along the shoreline. The park consists of open land vegetated with a variety of native and non-native plant and tree species.

The park is easily accessed directly from Pacific Coast Highway between Malibu Canyon and Kanan Dume Roads and also via public transit as an MTA bus stop is located at the entrance to the park.

Natural Resources

Given the unique terrain of Corral Canyon Park, and its proximity to the Pacific Ocean, the park includes a wide variety of habitat, including coastal sage scrub, coastal bluff, native grassland, and the riparian corridor of Corral Creek which includes among other species alder, coast live oak, Western sycamore, and willow trees. A pocket of coastal salt marsh is located where Corral Creek meets the Pacific Ocean at the Pacific Coast Highway Bridge. Various pockets of disturbance along the trail are evident in the southernmost portion of the park where a number of structures once existed.

1.1.5 Malibu Bluffs Conservancy Property

The Malibu Bluffs Conservancy Property (Malibu Bluffs) encompasses approximately 84 acres of blufftop land in the City of Malibu and is characterized by a large expanse of undeveloped open space directly adjacent to Malibu Road and the shoreline (Figure 2). The park is surrounded by privately owned land to the west, the City's 10-acre Malibu Bluffs Park and private land to east, Malibu Road, residential development and the shoreline to the south, and Pacific Coast Highway and Pepperdine University to the north. The park consists of open land heavily vegetated with a variety of native and non-native plant and tree species. The Malibu Bluffs area is designated and zoned as Public Open Space in the City of Malibu LCP. The Malibu Bluffs area contains very few support facilities with the exception of limited trailhead improvements (signs, trash receptacles) at key entry locations into the property and picnic areas, although picnic areas, restrooms, sitting benches, and other active recreation areas can be accessed on the adjacent City-owned Malibu Bluffs Park.

Natural Resources

The Malibu Bluffs area is in its entirety naturally vegetated with native and non-native plant species. The majority of the park area can be characterized as annual grassland and coastal sage scrub habitat; however, two drainages traverse the open space in a general north-south direction along which southern willow scrub habitat occurs. In addition, areas containing a mix of native and non-native grassland occur in various areas of the park. The majority of the property, particularly along the site's drainages and where large stands of coastal sage scrub occur, is designated as an ESHA in the City of Malibu LCP.

1.1.6 Ramirez Canyon Road

The Ramirez Canyon Road area encompasses approximately 1.1 miles of paved roadway in the City of Malibu within the Ramirez Canyon private community (Figure 2). The easement area on either

side of Ramirez Canyon Road is inclusive of encroaching vegetation, including native and non-native plant species. The road extends from Ramirez Canyon Road in the north to Delaplane Road and then Pacific Coast Highway to the south.

2.0 METHODS

Dudek mapped tree locations within the Project Site using a Trimble Pathfinder Pro XH Global Positioning System (GPS) receiver. The Pathfinder has a horizontal accuracy of 1 meter (1 sigma) using differential code positioning techniques. Since tree canopies and steep canyons 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. The electronic tree locations were then evaluated using ArcView 9.3.1 software to determine the position of the trees related to the proposed project.

Concurrent with tree mapping efforts, Dudek's International Society of Arboriculture (ISA) Certified Arborists collected tree attribute data including species, trunk diameter, overall height, canopy extent, and general health and structural conditions. Trunk diameters were measured using a diameter tape providing adjusted figures[1] for diameter measurements when wrapping the tape around the trunk circumference. Diameter measurements were collected using standard protocol outlined by the Council of Tree and Landscape Appraisers in the *Guide for Plant Appraisal*, published by the International Society of Arboriculture (Council of Tree and Landscape Appraisers 2000). Trunk diameter 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, tree health and structural condition were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Each component of the tree was assessed with regard to health factors such as insect, fungal or

[1] Circumference measurement (inches) divided by 3.14 (π) provides diameter measurement in inches.

pathogen 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 urban standards. Dudek is cognizant of the fact that trees in natural settings have important habitat value even when they are considered in poor 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 hazards.

Finally, the trees within the Project Site were tagged with an aluminum tag bearing a unique identification number. The tags were placed on the trunk of each evaluated tree and these numbers correspond to the tree locations presented in the Tree Location Exhibits in Appendix A and the tree data matrix in Appendix B.

2.1 Scope of Work Limitations

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.

3.0 OBSERVATIONS

There is a total of 336 trees representing 28 species located on and adjacent the project survey area, which encompasses the project and trail footprints for the Modified Redesign Plan. Additionally, the survey area includes a 20-foot-wide buffer for park facilities and a 10-foot-wide buffer along proposed trail alignments (both sides of trails). The trees range from average to good in overall condition rating, with only a few exhibiting poor health and structural conditions. Table 1 provides a summary of the 28 species mapped and evaluated within the survey area.

Table 1
Summary of Tree Species from the Project Site

Scientific Name	Common Name	Number of Trees
Acer saccharinum	Silver maple	1
Alnus rhombifolia	White alder	19
Betula nigra	River birch	1
Betula papyrifera	Paper birch	1
Betula spp.	Birch	1
Citrus spp.	Citrus	8
Eriobotrya deflexa	Bronze loquat	1
Erythrina caffra	Coral tree	1
Eucalyptus cinerea	Silver dollar gum	4
Eucalyptus globulus	Blue gum	23
Eucalyptus maculata	Spotted gum	5
Ficus retusa	Gensing ficus	8
Jacaranda mimisifolia	Jacaranda	3
Juglans californica	Southern California black walnut	11
Persea americana	Avocado	3
Pinus canariensis	Canary Island pine	6
Pinus thunbergiana	Japanese black pine	2
Pittosporum undulatum	Victorian box	11
Platanus racemosa	Western sycamore	80
Podocarpus macrophyllus	Yew pine	3
Quercus agrifolia	Coast live oak	110
Salix lasiolepis	Arroyo willow	5
Salix spp.	Willow	1
Schinus molle	California pepper	2
Schinus terebinthifolius	Brazilian pepper	11
Sequoia sempervirens	Coast redwood	12
Tipuana tipu	Tipu tree	2
Ulmus parvifolia	Chinese elm	1
	Total	336

A majority of the native trees included in the survey are located within the Ramirez Canyon Park site which is the most forested location within the Project Site. Non-native trees are primarily associated with the existing structures in Ramirez Canyon, with scattered specimens found throughout the property. The remaining study areas include mostly native coast live oak and Western sycamore trees, with scattered non-natives. The Tree Location Exhibits in Appendix A presents the location of all trees documented and assessed throughout Ramirez Canyon Park, Escondido Canyon Park, Latigo Trail Head, Corral Canyon Park, Malibu Bluffs, and Ramirez Canyon Park.

4.0 TREE PRESERVATION

4.1 Regulatory Definitions and Requirements

The City of Malibu's Certified LCP's Native Tree Protection Chapter guides the preservation of native trees in the City of Malibu. According to the tree preservation policy, individual native oaks (*Quercus* spp.), California walnut (herein referred to as Southern California black walnut) (*Juglans californica*), western sycamore (*Platanus racemosa*), alder (*Alnus rhombifolia*), and toyon (*Heteromeles arbutifolia*) are provided protective measures. The regulatory definitions and requirements are presented in the following sections.

4.1.1 City of Malibu LCP Native Tree Protection

According to requirements, Dudek arborists performed a tree by tree inventory of the Project Site's native trees between March 5, 2008, and January 12, 2010. Tree mapping and assessment included individual native trees meeting the City of Malibu's criteria as defined by the LCP's Native Tree Protection Chapter:

> …areas containing one or more native oaks (*Quercus* spp.), California walnut (*Juglans californica*), western sycamore (*Platanus racemosa*), alder (*Alnus rhombifolia*), or toyon (*Heteromeles arbutifolia*) tree, that has at least one trunk measuring six inches or more in diameter, or a combination of any two trunks measuring a total of eight inches or more in diameter, measured at four and one-half feet above natural grade.

4.2 Results

4.2.1 Native Trees

The Project Site (portions of Ramirez Canyon Park, Ramirez Canyon Road, Escondido Canyon Park, Latigo Trailhead, Corral Canyon Park, and Malibu Bluffs along with proposed trail extensions and parking areas) includes a total of 220 native trees that are located within the Modified Redesign Plan disturbance areas, or within an approximately 20-foot-wide buffer from these disturbance areas. All included native trees meet the LCP trunk diameter minimum requirements of at least one trunk measuring 6 inches or more in diameter, or a combination of any two trunks measuring a total of 8 inches or more in diameter measured at 4.5 feet above natural grade

Tables 2 through 6 present the quantity and status of native trees on and adjacent to the project areas by trunk diameter, height, canopy spread, health, and structure.

Table 2
Trunk Diameter Distribution of Native Trees
meeting the LCP's Native Tree Protection Chapter

Trunk Diameter at Breast Height (inches)	Number of Native Trees in Project Area
5–7	33
8–11	47
12–15	48
16–19	34
20–23	32
24–27	6
28–31	10
32–35	4
36+	6
Total	220

Table 3
Height Distribution of Native Trees meeting the LCP's Native Tree Protection Chapter

Height (feet)	Number of Native in Project Area
< 10	1
10–20	96
21–30	32
31–40	19
41–50	21
51–60	42
61+	9
Total	220

Table 4
Canopy Coverage of Native Trees meeting the LCP's Native Tree Protection Chapter

Crown Width (feet)	Number of Native Trees in Project Area
< 10	11
10–20	145
21–30	51
31–40	10
41+	3
Total	220

Table 5
Health of Native Trees meeting the LCP's Native Tree Protection Chapter

Health Condition	Number of Native Trees in Proposed Project
Good	162
Fair	54
Poor	4
Dead	0
Total	220

Table 6
Structural Assessment of Native Trees meeting the LCP's Native Tree Protection Chapter

Structural Condition	Number of Native Trees in Project Area
Good	54
Fair	163
Poor	3
Dead	0
Total	220

4.2.2 Non-Native Trees

Non-native trees are not provided the same protective measures as native trees in the LCP. However, Dudek recognizes the importance of non-native trees for shade, air quality, erosion control, carbon sequestration, screening, and noise attenuation and conducted assessments of them during our surveys. The proposed Project Site includes a total of 116 non-native trees located within or adjacent the proposed project or project alternative improvement areas. For consistency, assessment of non-native trees was conducted using the same methods as used for the native tree assessments. In

summary, the trees are generally in fair health and structural condition**.** Appendix B provides a detailed summary of the 116 non-native trees.

4.3 Impacts

Tree impacts were determined through the use of geographic information system (GIS) technology to determine the locations of trees relative to the Modified Redesign Plan design. Impacts were further determined based on Dudek's experience with native and non-native trees and their typical reactions to disturbances such as soil and root damage, compaction, or branch removal. The impact analysis results were utilized for developing appropriate mitigation measures.

Impacts to trees can be classified as either direct or indirect. Direct impacts to trees related to site improvements are typically the result of physical injuries or changes caused by machinery involved with the development process. Direct impacts 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 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.

For the purposes of this report, direct impacts are those associated with tree removal, tree encroachment within the protected zone (drip line plus 5 feet or 15 feet from trunk, whichever is greater), soil and root disturbance from cut and fill, crown raising over trails, or compaction associated with trails, pads, or road widening. Measures to minimize the extent of impact to preserved trees are detailed herein to further reduce the possibility that tree removal will be required. Indirect impacts associated with this project may include changes to the local site that affects soil compaction, percolation rates, or hydrological conditions and include those trees within 20 feet of the project development area which are not subject to removal or root/canopy encroachment.

4.3.1 Modified Redesign Plan

Impact totals presented herein represent a conservative analysis that considers all trees that may experience encroachment as "directly impacted," even though most will be preserved in place. Impact totals presented below are based on site plans as of the date of this Native Tree Protection Plan. As such, the actual number of trees that are subject to direct 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 disturbance envelope. These trees are often identified at later stages of project design or implementation.

4.3.1.1 Direct Impacts to Native Trees

A total of 220 native trees are located within the Modified Redesign Plan development area (development extent plus a 20 foot buffer). As noted in Section 4.3.1, all trees that may experience encroachment have conservatively been identified as "directly impacted," even though most will be preserved in place. Of the 220 native trees located within the Modified Redesign Plan development area, 131 native trees are considered directly impacted due to removal (13 trees) or canopy/root zone encroachment associated with trails, pads, or road widening (118 trees). A maximum of 13 trees could be removed depending on the disturbance levels for each camp area and the Ramirez Canyon Road widening plan.

Of the 13 native trees that could potentially be removed, four trees (two oaks and two walnuts) are associated with widening of Ramirez Canyon Road (Phase 1, if the widening is required by the responsible fire agency). Two additional trees (one alder and one oak) which could be removed are associated with improvements to Via Acero as a secondary emergency access to Ramirez Canyon Park (Phase 2, if the improvements are required by the responsible fire agency).

The remaining 118 trees that would be impacted due to encroachment are to be retained on site and measures to protect these retained trees prior to, during, and after construction are provided. As detailed in Section 4.3.1.2 below, all other native trees located within 20 feet of the Modified Redesign Plan development area which would not be subject to removal or root/canopy encroachment (64 trees) may be subject to indirect impacts. Indirect impacts associated with this project may include changes to the local site that affect soil compaction, percolation rates, or hydrological conditions. Direct impacts to native trees associated with the Modified Redesign Plan are presented for each park area and trail segment and by tree species in Table 7.

Table 7
Modified Redesign Plan Direct Native Tree Impact Summary

Project Area	Native Tree Species				
	Coast live oak (*Quercus agrifolia*)	Southern California black walnut (*Juglans californica*)	Western sycamore (*Platanus racemosa*)	Alder (*Alnus rhombifolia*)	Toyon (*Heteromeles arbutifolia*)
Ramirez Canyon Park					
Park and Recreation Support Facilities Impacts	4	0	13 (4)*	1	0
Creek Restoration Impacts	9	1	8	3	0
Escondido Canyon Park					
Park and Recreation Support Facilities Impacts	0	0	0	0	0
Latigo Trailhead					
Park and Recreation Support Facilities Impacts	0	0	0	0	0
Corral Canyon Park					
Park and Recreation Support Facilities Impacts	0	0	1	0	0
Conservancy-Owned Malibu Bluffs					
Park and Recreation Support Facilities Impacts	0	0	0	0	0
Via Acero Improvements					
Facilities Impacts	1 (1)	0	0	2 (1)	0
Ramirez Canyon Road Improvements					
Facilities Impacts	24 (5)	3 (2)	12	4	0
Trail Segments					
1a – Kanan Dume to Ramirez Cyn. Park	0	0	1	0	0
2a3 - Ramirez Cyn. Park to Murphy Way	1	2	0	0	0
4 - Escondido Cyn. Park to Solstice Cyn. Park	31	0	0	0	0
11a - Corral Cyn. Park (Beach – Backbone Trail)	2	0	0	0	0
14 - Corral Cyn. Park (Beach - Backbone Trail)	8	0	0	0	0
TOTAL	80 (6)	6 (2)	35 (4)	10 (1)	0

* Number in parentheses indicates quantity of trees which may require removal. The number presented in parentheses is included in the cell total.

4.3.1.2 Indirect Impacts to Native Trees

A total of 64 native trees are located within 20 feet of the Modified Redesign Plan development area which are not subject to removal or root/canopy encroachment and may be subject to indirect impacts. These 64 trees are not considered impacted for the purposes of this report. However, due to the proximity of proposed development activity, indirect impacts may occur. All native trees not

designated for removal (including both direct and indirect impacts) will be provided protection measures to avoid construction-related impacts. Tree protection measures for all retained trees are presented in Section 5.2. Indirect impacts to native trees associated with the Modified Redesign Plan are presented in Table 8.

Table 8
Modified Redesign Plan Indirect Native Tree Impact Summary

Project Area	Native Tree Species				
	Coast live oak (*Quercus agrifolia*)	Southern California black walnut (*Juglans californica*)	Western sycamore (*Platanus racemosa*)	Alder (*Alnus rhombifolia*)	Toyon (*Heteromeles arbutifolia*)
Ramirez Canyon Park					
Park and Recreation Support Facilities Impacts	4	5	20	4	0
Creek Restoration Impacts	0	0	2	0	0
Escondido Canyon Park					
Park and Recreation Support Facilities Impacts	0	0	0	0	0
Latigo Trailhead					
Park and Recreation Support Facilities Impacts	2	0	0	0	0
Corral Canyon Park					
Park and Recreation Support Facilities Impacts	0	0	2	1	0
Conservancy-Owned Malibu Bluffs					
Park and Recreation Support Facilities Impacts	0	0	0	0	0
Via Acero Improvements					
Facilities Impacts	2	0	0	0	0
Ramirez Canyon Road Improvements					
Facilities Impacts	4	0	3	1	0
Trail Segments					
1a – Kanan Dume to Ramirez Cyn. Park	0	0	1	0	0
2a3 - Ramirez Cyn. Park to Murphy Way	0	0	0	0	0
4 - Escondido Cyn. Park to Solstice Cyn. Park	3	0	0	0	0
4d - Escondido Cyn. Park to Solstice Cyn. Park	1	0	0	0	0
11a - Corral Cyn. Park (Beach – Backbone Trail)	3	0	0	0	0
11e - Corral Cyn. Park (Beach - Backbone Trail)	0	0	0	0	0
14 - Corral Cyn. Park (Beach - Backbone Trail)	6	0	0	0	0
TOTAL	25	5	28	6	0

4.3.1.3 Impacts to Non-Native Trees

A total of 67 non-native trees located within the Modified Redesign Plan disturbance areas will be either removed or encroached upon and are considered to be directly impacted. Depending on the disturbance levels for each camp area and Ramirez Canyon Road widening, up to 11 of the 67 non-native trees within the limits of disturbance may require removal.

A total of 25 non-native trees are located outside of the Modified Redesign Plan development area but within the 20- foot disturbance buffer, and due to the proximity to proposed development activity, may be subject to indirect impacts. All non-native trees not designated for removal (including both direct and indirect impacts) will be provided protection measures to avoid construction-related impacts. Tree protection measures for all retained trees are presented in Section 5.2.

5.0 LOCAL COASTAL PROGRAM MITIGATION

5.1 Mitigation Definition

The Certified LCP governs native tree impact mitigation associated with direct tree impacts. According to the LCP, avoidance of tree impacts is given the highest priority. Encroachment into trees' protected zones is the result of avoiding tree removals, but with protective measures, these trees are expected to be only minimally impacted and able to adapt.

According to the LCP, if tree impacts are unavoidable, then they are to be fully mitigated, with priority given to on-site mitigation. The primary mitigation for impacted trees occurs in two forms: (1) trees that are encroached upon within the tree protection zone are to be monitored for a period of 10 years or more, and (2) trees that are removed shall be replaced with seedling plantings at a 10:1 ratio. In addition, protection and retention of native oaks (*Quercus* spp.), Southern California black walnut (*Juglans californica*), western sycamore (*Platanus racemosa*), alder (*Alnus rhombifolia*) and toyon (*Heteromeles arbutifolia*) is required, to the maximum extent feasible. The Tree Information Matrix in Appendix B presents the impact status of trees for the Modified redesign Plan. Tables 7 and 8 present the status of native tree impacts from the Modified Redesign Plan and the following recommendations address tree monitoring activities for the Project Site, as well as site-specific tree protection standards designed to minimize impacts to retained trees.

5.2 Site-Specific Mitigation Recommendations

The following measures are provided to mitigate tree removals and potential tree encroachment and enhance the survivability of those trees designated for retention on the project site.

- Where development encroaches into the root zone of retained native trees, each affected tree shall be monitored annually for a period of not less than 10 years. An annual monitoring report shall be submitted to the Coastal Commission by the MRCA for each of the 10 years. Should any of these trees be lost or suffer worsened health or vigor as a result of the proposed development, the applicant shall mitigate the impacts at a 10:1 ratio with seedling sized trees. Mitigation planting shall occur annually, if necessary, based on the results of the annual monitoring reports. Mitigation trees planted during the 10-year monitoring period shall also be monitored for 10 years, with annual reporting to the Coastal Commission on tree health/survival.
- Protective fencing shall be used around the outermost limits of the protected zones of the native trees within or adjacent to the construction area that may be disturbed during construction activities. Before the commencement of any clearing, grading, or other construction activities, protective fencing shall be placed around each applicable tree. Fencing shall be maintained in place for the duration of all construction. No construction, grading, staging, or materials storage shall be allowed within the fenced exclusion areas or within the protected zones of any of the sites native trees. The fencing shall be installed 5 feet outside of the dripline of each native tree (or edge of canopy for cluster of trees) and shall be staked every 6 feet.
- Any approved development, including grading or excavation, that encroaches into the protected zone of a native tree shall be completed using only hand-held tools or other methods that avoid damage to tree roots such as air spade excavation.
- Any trail or pathway that encroaches under a tree's crown shall be constructed to minimize encroachment to the maximum extent feasible. Construction and trail maintenance crews shall ensure that the natural duff layer under all trees be maintained. This will reduce soil compaction, stabilize soil temperatures in root zones, conserve soil moisture, and reduce erosion. The contractors shall ensure that the mulch be kept clear of the trunk base to avoid creating conditions favorable to the establishment and growth of decay-causing fungal pathogens. Should it become necessary to add organic mulch beneath retained oak trees, packaged or commercial oak leaf mulch shall not be used, as it may contain Oak Root Fungus. Also, the use of Redwood chips shall be avoided as certain inhibitive chemicals may be present in the wood. Other wood chips and crushed walnut shells can be used, but the best mulch that provides a source of nutrients for the tree is its own leaf litter. Any added organic mulch added by the contractor shall be applied to a maximum depth of 4 inches.
- Grade Changes: It is assumed that minor grade changes will be necessary to level camp site pads and to even trail sections that may occur beneath tree crowns. Wherever feasible, grade

changes, including adding fill, shall be minimized unless completed by or under supervision by an ISA Certified Arborist. Additionally, alternative grading techniques (e.g. incorporation of retaining walls) shall be considered to protect retained trees under consultation with the project arborist.

- Root Pruning: Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wine glass. Where pruning is necessary in areas that contain tree roots, prune the roots using a root pruner that makes clean cuts. All cuts will minimize ripping, tearing, and fracturing of the root system.
- Crown Pruning Cuts: All pruning shall be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Removal of live branches and associated leaf area can have a negative impact on tree health. When relatively large amounts of leaf area are removed, the capacity of a tree to produce energy for growth and pest resistance is diminished. Pruning should be limited to that amount needed to accomplish the pruning objective. In some cases, it may be best to complete pruning over a 2- or 3-year period rather than do all that is needed in 1 year. Where tree crowns occur over camp site's removal of dead and dying limbs is recommended to occur on a regular basis.
- Remaining trees that are not directly impacted shall be preserved and protected in place. Trees within approximately 20- feet of proposed construction activity shall be temporarily fenced with chain link or other material meeting LCP standards throughout all grading and construction activities. The fencing shall be installed 5 feet outside of the dripline of each native tree (or edge of canopy for cluster of trees) and shall be staked every 6 feet.
- The project arborist shall monitor all soil disturbing activities occurring directly under tree crowns, including demolition, excavation, and installation. Arborist monitoring shall occur for the duration of project construction activities. This will require the project agent and/or contractor to notify the project arborist well in advance of scheduled work adjacent to protected trees. A preconstruction conference with the arborist and contractor shall occur prior to commencement of activities.
- Any landscaping and/or irrigation to be installed within the canopy dripline of retained native trees shall strive to ensure that environmental conditions both above and below ground are similar to naturally occurring conditions. Plant palette and irrigation design shall be reviewed by the project arborist to ensure compatibility with retained native trees.

6.0 CONCLUSION

The Project Site (portions of Ramirez Canyon, Ramirez Canyon Road, Escondido Creek, Latigo Trailhead, Corral Canyon, and Malibu Bluffs) includes 220 native trees meeting the certified LCP definition of a protected native tree. Some of these native trees are considered directly impacted (per LCP definition). Direct impacts, per LCP definition, are anticipated for up to 131 native trees. Of these 131 directly impacted native trees, up to 13 trees occur close enough to project improvement areas that they could require removal, depending on the extent of the grading/soil disturbances. Based on the Modified Redesign Plan, the remaining 207 native trees will be protected in place.

This Native Tree Protection Plan provides for the mitigation of impacted native trees to include monitoring for a period of no less than 10 years, as stated in the LCP. The native tree mitigation monitoring is a necessary component of the Native Tree Protection Plan to ensure that disturbed trees successfully survive as they would have pre-disturbance. Any tree requiring removal will be mitigated with 10:1 tree planting at on-site locations and will include long-term monitoring for successful establishment. Finally, this Native Tree Protection Plan proposes that undisturbed native trees are subject to protection measures that, when implemented, minimize the possibility that trees are inadvertently damaged during both pre and post construction phases.

APPENDIX A

Tree Location Exhibits

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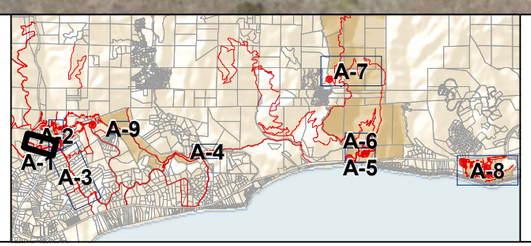
SOURCE: Penfield&Smith 2010

0 50 100 Feet



Tree Location

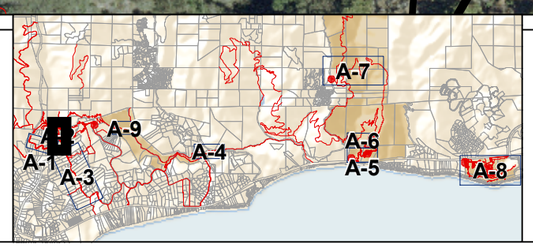
- Non-Native Trees
- Coast live oak (Quercus agrifolia)
- Western sycamore (Platanus racemosa)
- White alder (Alnus rhombifolia)
- Toyon (Heteromeles arbutifolia)
- Southern California black walnut (Juglans californica)
- Project Development Area
- Malibu City Limits

FIGURE A-1

Tree Location Exhibit - Via Acero

SOURCE: Penfield&Smith 2010

0 50 100 Feet



Tree Location

- Non-Native Trees
- Coast live oak (Quercus agrifolia)
- Western sycamore (Platanus racemosa)
- White alder (Alnus rhombifolia)
- Toyon (Heteromeles arbutifolia)
- Southern California black walnut (Juglans californica)
- Project Development Area
- Malibu City Limits

Appendix A-2

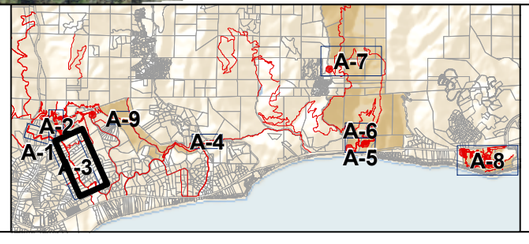
Tree Location Exhibit - Ramirez Canyon - Meadow and Entry Areas

Native Tree Protection Plan for the Malibu Parks Public Access Enhancement Plan, Modified Redesign Plan

DUDEK

SOURCE: Penfield&Smith 2010

0 100 200 Feet



- Non-Native Trees
- Coast live oak (Quercus agrifolia)
- Western sycamore (Platanus racemosa)
- White alder (Alnus rhombifolia)
- Toyon (Heteromeles arbutifolia)
- Southern California black walnut (Juglans californica)
- Project Development Area
- Malibu City Limits

Appendix A-3

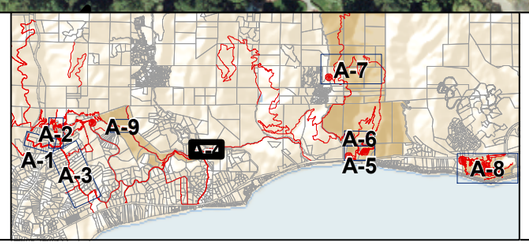
Tree Location Exhibit - Ramirez and Delaplane Road Improvements

DUDEK

Native Tree Protection Plan for the Malibu Parks Public Access Enhancement Plan, Modified Redesign Plan

SOURCE: Penfield&Smith 2010

0 100 200 Feet



Tree Location

- Non-Native Trees
- Coast live oak (Quercus agrifolia)
- Western sycamore (Platanus racemosa)
- White alder (Alnus rhombifolia)
- Toyon (Heteromeles arbutifolia)
- Southern California black walnut (Juglans californica)
- Project Development Area
- Malibu City Limits

Appendix A-4

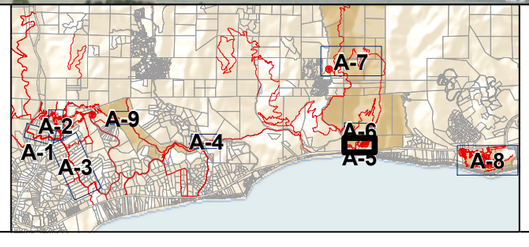
Tree Location Exhibit - Latigo Trailhead

591

1

SOURCE: Penfield&Smith 2010

0 100 200 Feet



Tree Location

- Non-Native Trees
- Coast live oak (Quercus agrifolia)
- Western sycamore (Platanus racemosa)
- White alder (Alnus rhombifolia)
- Toyon (Heteromeles arbutifolia)
- Southern California black walnut (Juglans californica)
- Project Development Area
- Malibu City Limits

Appendix A-5

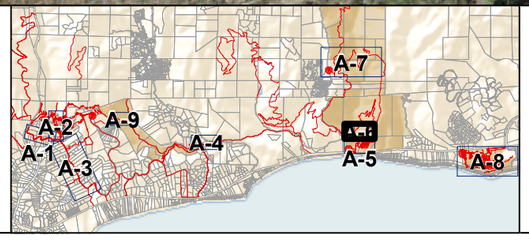
Tree Location Exhibit - Corral Canyon Camp Area South

DUDEK

Native Tree Protection Plan for the Malibu Parks Public Access Enhancement Plan, Modified Redesign Plan

SOURCE: Penfield&Smith 2010

0 100 200 Feet



Tree Location

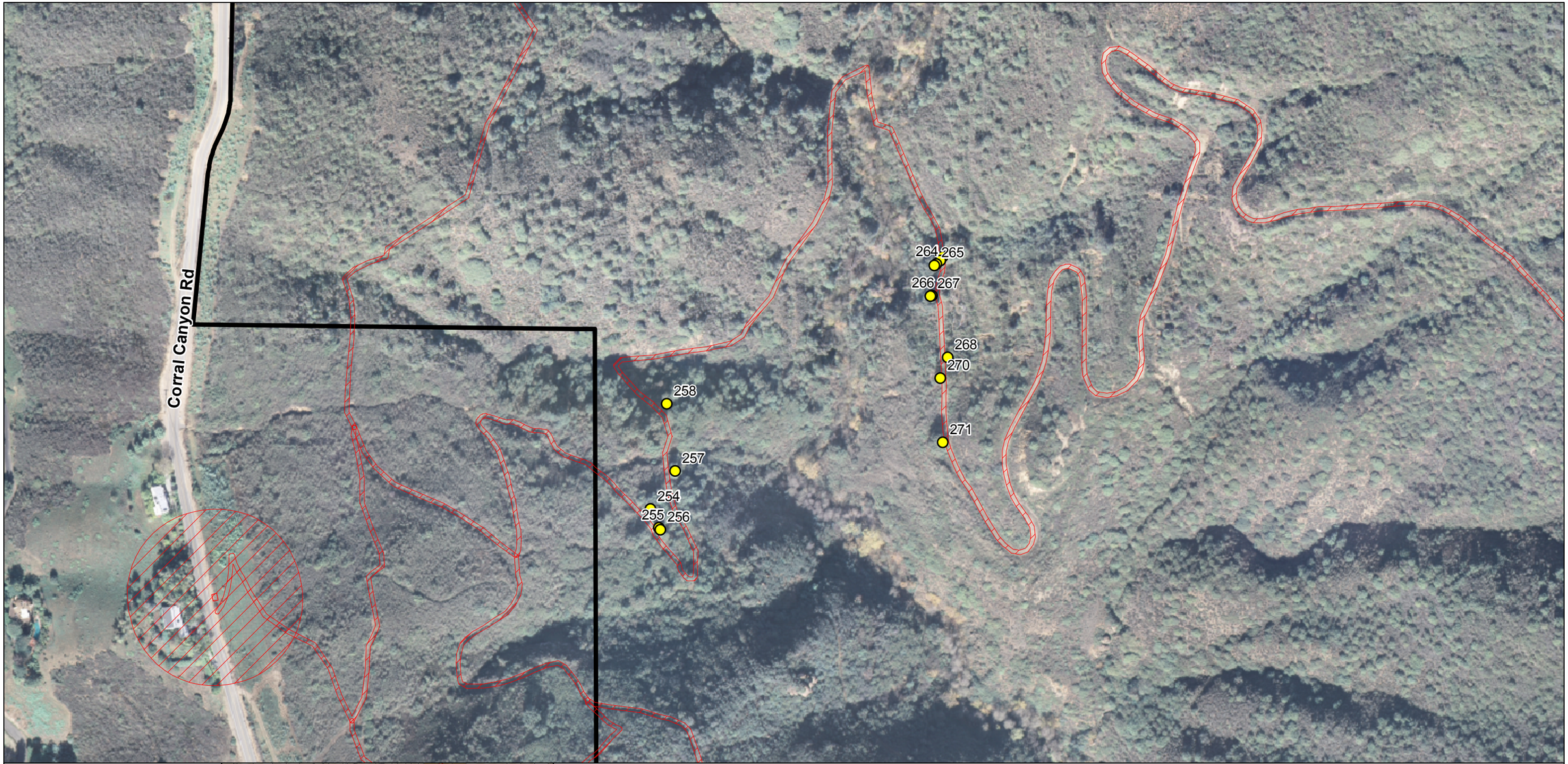
- Non-Native Trees
- Coast live oak (Quercus agrifolia)
- Western sycamore (Platanus racemosa)
- White alder (Alnus rhombifolia)
- Toyon (Heteromeles arbutifolia)
- Southern California black walnut (Juglans californica)
- Project Development Area
- Malibu City Limits

Appendix A-6

Tree Location Exhibit - Corral Canyon Camp Area North

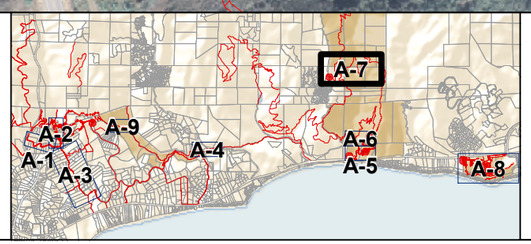
DUDEK

Native Tree Protection Plan for the Malibu Parks Public Access Enhancement Plan, Modified Redesign Plan



SOURCE: Penfield&Smith 2010

0 100 200 Feet



Tree Location

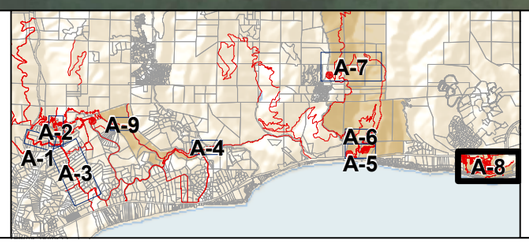
- Non-Native Trees
- Coast live oak (Quercus agrifolia)
- Western sycamore (Platanus racemosa)
- White alder (Alnus rhombifolia)
- Toyon (Heteromeles arbutifolia)
- Southern California black walnut (Juglans californica)
- Project Development Area
- Malibu City Limits

Appendix A-7

Tree Location Exhibit - Fire Shelter at Corral Canyon North

SOURCE: Penfield&Smith 2010

0 100 200 Feet



Tree Location

- Non-Native Trees
- Coast live oak (Quercus agrifolia)
- Western sycamore (Platanus racemosa)
- White alder (Alnus rhombifolia)
- Toyon (Heteromeles arbutifolia)
- Southern California black walnut (Juglans californica)
- Project Development Area
- Malibu City Limits

Appendix A-8

Tree Location Exhibit - Malibu Bluffs Open Space

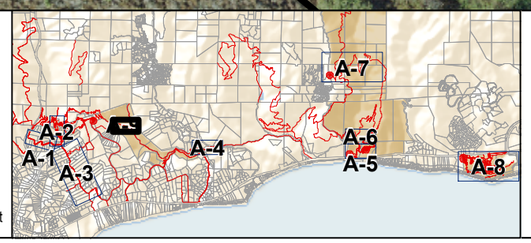
DUDEK

Native Tree Protection Plan for the Malibu Parks Public Access Enhancement Plan, Modified Redesign Plan

Legend

SOURCE: Penfield&Smith 2010

0 100 200 Feet



Tree Location

- Non-Native Trees
- Coast live oak (Quercus agrifolia)
- Western sycamore (Platanus racemosa)
- White alder (Alnus rhombifolia)
- Toyon (Heteromeles arbutifolia)
- Southern California black walnut (Juglans californica)
- Project Development Area
- Malibu City Limits

Appendix A-9

Tree Location Exhibit - Primary Trail

DUDEK

Native Tree Protection Plan for the Malibu Parks Public Access Enhancement Plan, Modified Redesign Plan

APPENDIX B

Tree Information Matrix

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Appendix B - Tree Information Matrix - Malibu Park Public Access Enhancement Native Tree Protection Plan, Modified Redesign Plan

Tree Number	Botanical Name	Common Name	Stems	Individual Trunk Diameters (in.)						Trunk DBH (in.)*	Height (ft.)	Canopy (ft.)	Health	Structure	Notes	Heritage Tree**	Impact Status
				S1	S2	S3	S4	S5	S6								
1	*Eucalyptus globulus*	Blue gum	2	21	19					28	50	30	fair	fair			Encroachment
2	*Quercus agrifolia*	Coast live oak	6	9	7	7	7	5	4	16	20	20	poor	fair	fire damage		Non-Impact
5	*Quercus agrifolia*	Coast live oak	3	7	9	9				15	18	10	good	good			Indirect
6	*Quercus agrifolia*	Coast live oak	2	5	4					6	10	10	good	good			Indirect
7	*Quercus agrifolia*	Coast live oak	1	23						23	25	25	good	good			Encroachment
9	*Quercus agrifolia*	Coast live oak	1	5						5	8	7	good	good			Encroachment
13	*Quercus agrifolia*	Coast live oak	2	4	4					6	10	6	good	fair			Indirect
18	*Platanus racemosa*	Western sycamore	5	5	5	4	3	2		9	18	10	good	fair			Indirect
19	*Platanus racemosa*	Western sycamore	3	7	5	2				9	20	10	good	fair			Non-Impact
20	*Alnus rhombifolia*	White alder	1	21						21	40	18	good	fair			Indirect
22	*Salix lasiolepsis*	Arroyo willow	1	15						15	25	20	fair	fair			Encroachment
25	*Platanus racemosa*	Western sycamore	2	13	9					16	35	25	fair	poor	fire damage		Indirect
26	*Platanus racemosa*	Western sycamore	1	14						14	60	15	fair	good	fire damage		Non-Impact
27	*Podocarpus macrophyllus*	Yew pine	1	21						21	45	20	good	good	fire damage		Non-Impact
28	*Platanus racemosa*	Western sycamore	1	13						13	45	20	good	good	fire damage		Non-Impact
29	*Platanus racemosa*	Western sycamore	1	17						17	50	20	good	good	fire damage		Indirect
30	*Alnus rhombifolia*	White alder	1	12						12	50	15	good	good			Indirect
31	*Platanus racemosa*	Western sycamore	1	9						9	35	10	good	good			Indirect
32	*Alnus rhombifolia*	White alder	1	14						14	50	15	good	good			Indirect
33	*Alnus rhombifolia*	White alder	1	14						14	50	18	good	good			Non-Impact
34	*Schinus terebinthifolius*	Brazillian pepper	1	7						7	22	10	good	good			Non-Impact
35	*Platanus racemosa*	Western sycamore	1	19						19	60	20	good	good			Non-Impact
36	*Alnus rhombifolia*	White alder	1	19						19	60	25	good	good			Indirect
37	*Platanus racemosa*	Western sycamore	1	19						19	60	25	fair	fair			Non-Impact
38	*Platanus racemosa*	Western sycamore	1	19						19	60	30	fair	fair			Non-Impact
39	*Salix lasiolepsis*	Arroyo willow	1	7						7	20	15	fair	fair			Non-Impact
40	*Alnus rhombifolia*	White alder	1	14						14	60	15	good	fair			Non-Impact
41	*Platanus racemosa*	Western sycamore	1	7						7	45	10	good	fair			Non-Impact
42	*Salix lasiolepsis*	Arroyo willow	1	9						9	18	10	poor	fair			Non-Impact
43	*Schinus terebinthifolius*	Brazillian pepper	1	4						4	20	10	good	fair			Non-Impact
44	*Platanus racemosa*	Western sycamore	1	9						9	60	15	good	fair			Non-Impact
45	*Platanus racemosa*	Western sycamore	1	13						13	65	25	good	fair			Non-Impact
46	*Salix lasiolepsis*	Arroyo willow	1	19						19	45	20	fair	fair			Non-Impact
47	*Platanus racemosa*	Western sycamore	1	13						13	55	10	fair	fair			Non-Impact
48	*Alnus rhombifolia*	White alder	2	17	16					23	60	25	good	fair			Non-Impact
49	*Alnus rhombifolia*	White alder	2	15	15					21	70	30	fair	fair			Encroachment
50	*Schinus terebinthifolius*	Brazillian pepper	1	7						7	18	8	fair	fair			Non-Impact
51	*Schinus terebinthifolius*	Brazillian pepper	1	5						5	18	8	good	fair			Non-Impact
52	*Betula spp.*	Birch	2	11	7					13	60	10	good	fair			Indirect
53	*Platanus racemosa*	Western sycamore	1	15						15	60	20	fair	fair			Non-Impact
54	*Platanus racemosa*	Western sycamore	1	15						15	55	20	fair	fair			Non-Impact
57	*Platanus racemosa*	Western sycamore	1	7						7	55	10	fair	fair			Indirect
58	*Platanus racemosa*	Western sycamore	1	17						17	60	20	good	fair			Indirect
59	*Platanus racemosa*	Western sycamore	2	14	14					20	55	25	good	fair			Indirect
60	*Podocarpus macrophyllus*	Yew pine	1	17						17	45	25	good	fair			Non-Impact
61	*Podocarpus macrophyllus*	Yew pine	4	18	7	7	6			21	50	25	good	fair			Non-Impact
62	*Pittosporum undulatum*	Victorian box	1	7						7	35	20	good	fair			Non-Impact
63	*Pittosporum undulatum*	Victorian box	1	15						15	25	20	good	fair			Indirect
64	*Pittosporum undulatum*	Victorian box	2	5	5					7	25	18	good	fair			Encroachment

Appendix B - Tree Information Matrix - Malibu Park Public Access Enhancement Native Tree Protection Plan, Modified Redesign Plan

Tree Number	Botanical Name	Common Name	Stems	Individual Trunk Diameters (in.)						Trunk DBH (in.)*	Height (ft.)	Canopy (ft.)	Health	Structure	Notes	Heritage Tree**	Impact Status
				S1	S2	S3	S4	S5	S6								
65	*Schinus terebinthifolius*	Brazillian pepper	1	11						11	30	18	fair	fair			Non-Impact
66	*Quercus agrifolia*	Coast live oak	1	11						11	25	18	good	fair			Non-Impact
67	*Quercus agrifolia*	Coast live oak	1	5						5	18	12	good	fair			Non-Impact
68	*Schinus terebinthifolius*	Brazillian pepper	1	9						9	20	15	fair	fair			Non-Impact
69	*Jacaranda mimisifolia*	Jacaranda	1	15						15	20	20	fair	fair			Non-Impact
70	*Pittosporum undulatum*	Victorian box	2	9	4					10	20	15	good	fair			Non-Impact
71	*Pittosporum undulatum*	Victorian box	2	9	4					10	20	15	good	fair			Indirect
72	*Pittosporum undulatum*	Victorian box	1	5						5	18	14	good	fair			Non-Impact
73	*Sequoia sempervirens*	Coast redwood	1	5						5	18	10	good	fair			Indirect
74	*Sequoia sempervirens*	Coast redwood	1	15						15	50	15	good	fair			Removal
75	*Sequoia sempervirens*	Coast redwood	1	14						14	45	15	good	fair			Encroachment
76	*Sequoia sempervirens*	Coast redwood	1	12						12	45	15	good	good			Encroachment
77	*Sequoia sempervirens*	Coast redwood	1	5						5	18	10	good	good			Encroachment
78	*Sequoia sempervirens*	Coast redwood	1	9						9	30	15	good	good			Removal
79	*Sequoia sempervirens*	Coast redwood	2	9	6					11	40	15	good	good			Encroachment
80	*Sequoia sempervirens*	Coast redwood	1	13						13	50	15	good	good			Encroachment
81	*Pittosporum undulatum*	Victorian box	1	5						5	20	8	fair	good			Removal
82	*Pittosporum undulatum*	Victorian box	2	12	9					15	55	15	good	good			Indirect
83	*Pinus canariensis*	Canary Island pine	1	15						15	65	20	good	good			Indirect
84	*Pinus canariensis*	Canary Island pine	1	19						19	65	20	good	good			Encroachment
85	*Pittosporum undulatum*	Victorian box	1	5						5	35	15	good	good			Encroachment
86	*Schinus terebinthifolius*	Brazillian pepper	1	19						19	30	15	fair	fair			Encroachment
87	*Pinus canariensis*	Canary Island pine	1	19						19	65	18	good	fair			Encroachment
88	*Quercus agrifolia*	Coast live oak	1	7						7	25	15	good	fair			Encroachment
89	*Quercus agrifolia*	Coast live oak	2	26	21					33	45	30	good	fair			Encroachment
90	*Platanus racemosa*	Western sycamore	1	19						19	55	20	good	fair			Removal
91	*Platanus racemosa*	Western sycamore	1	15						15	55	20	good	fair			Encroachment
92	*Platanus racemosa*	Western sycamore	1	15						15	55	20	good	fair			Removal
93	*Quercus agrifolia*	Coast live oak	1	21						21	55	35	good	fair			Encroachment
94	*Platanus racemosa*	Western sycamore	1	19						19	65	30	good	fair			Encroachment
95	*Platanus racemosa*	Western sycamore	1	21						21	70	35	good	fair			Encroachment
96	*Platanus racemosa*	Western sycamore	1	21						21	35	20	good	fair			Indirect
97	*Sequoia sempervirens*	Coast redwood	1	21						21	60	20	good	fair			Non-Impact
98	*Platanus racemosa*	Western sycamore	1	19						19	60	25	fair	fair			Indirect
99	*Quercus agrifolia*	Coast live oak	1	11						11	35	25	good	fair			Encroachment
100	*Quercus agrifolia*	Coast live oak	1	11						11	40	25	good	fair			Removal
101	*Quercus agrifolia*	Coast live oak	1	9						9	35	20	good	fair			Encroachment
102	*Quercus agrifolia*	Coast live oak	1	15						15	50	20	good	fair			Encroachment
103	*Platanus racemosa*	Western sycamore	1	15						15	65	20	good	fair			Encroachment
104	*Platanus racemosa*	Western sycamore	1	23						23	65	20	good	fair			Encroachment
105	*Quercus agrifolia*	Coast live oak	1	9						9	30	18	good	fair			Encroachment
106	*Quercus agrifolia*	Coast live oak	1	9						9	35	15	good	fair			Encroachment
107	*Quercus agrifolia*	Coast live oak	1	19						19	40	20	good	fair			Encroachment
108	*Quercus agrifolia*	Coast live oak	1	9						9	20	10	good	fair			Encroachment
109	*Platanus racemosa*	Western sycamore	1	23						23	65	30	good	fair			Encroachment
111	*Platanus racemosa*	Western sycamore	2	17	14					22	60	20	fair	fair			Indirect
112	*Platanus racemosa*	Western sycamore	1	12						12	55	15	good	fair			Indirect
113	*Platanus racemosa*	Western sycamore	1	11						11	50	15	fair	fair			Encroachment
114	*Platanus racemosa*	California sycamore	1	11						11	55	15	fair	fair			Indirect

Appendix B - Tree Information Matrix - Malibu Park Public Access Enhancement Native Tree Protection Plan, Modified Redesign Plan

Tree Number	Botanical Name	Common Name	Stems	Individual Trunk Diameters (in.)						Trunk DBH (in.)*	Height (ft.)	Canopy (ft.)	Health	Structure	Notes	Heritage Tree**	Impact Status
				S1	S2	S3	S4	S5	S6								
115	*Platanus racemosa*	California sycamore	1	21						21	65	25	fair	fair			Indirect
116	*Alnus rhombifolia*	White alder	1	21						21	60	20	good	fair			Encroachment
117	*Sequoia sempervirens*	Coast redwood	1	16						16	60	15	good	fair			Indirect
118	*Platanus racemosa*	Western sycamore	1	7						7	55	15	good	fair			Indirect
119	*Platanus racemosa*	Western sycamore	1	7						7	45	15	fair	fair			Encroachment
120	*Platanus racemosa*	Western sycamore	1	13						13	60	15	fair	fair			Indirect
121	*Alnus rhombifolia*	White alder	1	9						9	55	15	fair	fair			Encroachment
122	*Alnus rhombifolia*	White alder	1	7						7	55	15	fair	fair			Encroachment
123	*Alnus rhombifolia*	White alder	1	9						9	55	18	good	fair			Encroachment
124	*Alnus rhombifolia*	White alder	1	13						13	55	10	poor	fair			Indirect
125	*Alnus rhombifolia*	White alder	1	11						11	55	10	fair	fair			Encroachment
126	*Alnus rhombifolia*	White alder	1	13						13	55	10	fair	fair			Indirect
127	*Ficus retusa*	Gensing ficus	2	11	9					14	30	15	fair	fair			Encroachment
128	*Ficus retusa*	Gensing ficus	3	11	9	5				15	35	20	fair	fair			Encroachment
129	*Ficus retusa*	Gensing ficus	1	9						9	55	15	good	fair			Encroachment
130	*Ficus retusa*	Gensing ficus	1	15						15	60	20	good	fair			Encroachment
131	*Ficus retusa*	Gensing ficus	1	11						11	50	20	good	fair			Encroachment
132	*Ficus retusa*	Gensing ficus	1	5						5	45	20	fair	fair			Encroachment
133	*Ficus retusa*	Gensing ficus	1	13						13	45	20	fair	fair			Encroachment
134	*Ficus retusa*	Gensing ficus	1	15						15	50	20	fair	fair			Encroachment
135	*Betula nigra*	River birch	1	13						13	55	20	fair	fair			Removal
136	*Betula papyrifera*	Paper birch	1	7						7	40	15	fair	fair			Removal
137	*Platanus racemosa*	Western sycamore	1	29						29	60	20	good	fair			Encroachment
138	*Platanus racemosa*	Western sycamore	1	33						33	60	25	good	fair			Encroachment
141	*Pittosporum undulatum*	Victorian box	1	7						7	45	15	good	good			Non-Impact
142	*Pittosporum undulatum*	Victorian box	2	26	17					31	45	25	good	good			Non-Impact
143	*Quercus agrifolia*	Coast live oak	1	7						7	18	15	good	good			Encroachment
152	*Jacaranda mimisifolia*	Jacaranda	1	15						15	20	18	fair	fair			Encroachment
153	*Jacaranda mimisifolia*	Jacaranda	1	15						15	20	18	fair	fair			Encroachment
154	*Platanus racemosa*	Western sycamore	1	17						17	55	20	fair	fair			Indirect
155	*Salix lasiolepsis*	Arroyo willow	1	9						9	50	10	fair	fair			Encroachment
168	*Platanus racemosa*	Western sycamore	1	21						21	60	30	good	fair			Indirect
169	*Platanus racemosa*	Western sycamore	1	21						21	60	30	good	fair			Encroachment
171	*Juglans californica*	Southern California black walnut	2	7	4					8	15	12	fair	fair			Indirect
172	*Juglans californica*	Southern California black walnut	2	5	4					6	15	12	fair	fair			Indirect
174	*Platanus racemosa*	Western sycamore	1	21						21	45	20	fair	fair			Indirect
175	*Platanus racemosa*	Western sycamore	1	23						23	50	30	good	fair			Indirect
176	*Platanus racemosa*	Western sycamore	1	21						21	50	25	good	fair			Encroachment
177	*Quercus agrifolia*	Coast live oak	2	18	16					24	35	30	good	fair			Encroachment
178	*Schinus terebinthifolius*	Brazillian pepper	2	16	12					20	35	30	fair	poor			Encroachment
179	*Platanus racemosa*	Western sycamore	1	19						19	55	20	good	fair			Removal
180	*Platanus racemosa*	Western sycamore	1	28						28	55	25	good	fair			Encroachment
182	*Quercus agrifolia*	Coast live oak	2	23	6					24	25	30	good	fair			Encroachment
190	*Citrus spp.*	Citrus	1	5						5	8	5	fair	fair			Encroachment
191	*Citrus spp.*	Citrus	1	5						5	8	6	fair	fair			Encroachment
192	*Citrus spp.*	Citrus	1	5						5	8	6	fair	fair			Encroachment
193	*Citrus spp.*	Citrus	1	5						5	10	10	fair	fair			Encroachment
194	*Citrus spp.*	Citrus	1	5						5	8	8	fair	fair			Encroachment
195	*Citrus spp.*	Citrus	1	5						5	10	10	fair	fair			Encroachment

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Tree Number	Botanical Name	Common Name	Stems	Individual Trunk Diameters (in.)						Trunk DBH (in.)*	Height (ft.)	Canopy (ft.)	Health	Structure	Notes	Heritage Tree**	Impact Status
				S1	S2	S3	S4	S5	S6								
196	*Citrus spp.*	Citrus	1	5						5	10	10	fair	fair			Indirect
198	*Citrus spp.*	Citrus	1	5						5	8	6	fair	fair			Encroachment
211	*Platanus racemosa*	Western sycamore	1	40						40	42	30	good	fair			Encroachment
212	*Juglans californica*	Southern California black walnut	6	14	16	14	8	10	7	28	22	35	good	fair			Encroachment
213	*Quercus agrifolia*	Coast live oak	2	5	2					5	15	10	good	fair			Encroachment
214	*Juglans californica*	Southern California black walnut	2	10	6					12	18	20	good	fair			Encroachment
215	*Quercus agrifolia*	Coast live oak	1	7						7	12	8	good	fair			Encroachment
216	*Quercus agrifolia*	Coast live oak	1	14						14	20	14	good	good			Encroachment
217	*Quercus agrifolia*	Coast live oak	1	5						5	17	6	good	good			Encroachment
218	*Quercus agrifolia*	Coast live oak	1	7						7	17	7	good	good			Encroachment
219	*Quercus agrifolia*	Coast live oak	1	9						9	17	16	good	good			Encroachment
223	*Quercus agrifolia*	Coast live oak	1	58						58	21	28	good	good			Encroachment
224	*Quercus agrifolia*	Coast live oak	1	10						10	17	17	good	good			Encroachment
226	*Quercus agrifolia*	Coast live oak	2	11	9					14	20	16	good	fair			Encroachment
227	*Quercus agrifolia*	Coast live oak	2	11	7					13	21	16	good	fair			Encroachment
228	*Quercus agrifolia*	Coast live oak	1	6						6	18	10	good	fair			Indirect
229	*Quercus agrifolia*	Coast live oak	3	14	12	12				22	21	20	good	fair			Encroachment
230	*Quercus agrifolia*	Coast live oak	5	9	6	5	5	4		13	18	20	good	fair			Encroachment
231	*Quercus agrifolia*	Coast live oak	2	10	12					16	18	20	good	fair			Encroachment
232	*Quercus agrifolia*	Coast live oak	1	12						12	18	11	good	fair			Encroachment
233	*Quercus agrifolia*	Coast live oak	1	11						11	20	15	good	fair			Encroachment
234	*Quercus agrifolia*	Coast live oak	1	7						7	19	12	good	fair			Encroachment
235	*Quercus agrifolia*	Coast live oak	1	14						14	20	14	good	fair			Encroachment
236	*Quercus agrifolia*	Coast live oak	1	11						11	23	12	good	fair			Encroachment
237	*Quercus agrifolia*	Coast live oak	2	8	7					11	19	14	good	fair			Encroachment
239	*Quercus agrifolia*	Coast live oak	1	13						13	20	25	good	fair			Encroachment
240	*Quercus agrifolia*	Coast live oak	1	9						9	19	25	good	fair			Encroachment
241	*Quercus agrifolia*	Coast live oak	1	14						14	20	17	good	fair			Indirect
242	*Quercus agrifolia*	Coast live oak	1	12						12	17	15	good	fair			Encroachment
243	*Quercus agrifolia*	Coast live oak	3	11	6	4				13	19	20	good	fair			Encroachment
244	*Quercus agrifolia*	Coast live oak	1	7						7	17	10	good	fair			Encroachment
245	*Quercus agrifolia*	Coast live oak	1	7						7	17	8	good	fair			Encroachment
246	*Quercus agrifolia*	Coast live oak	2	9	8					12	18	20	good	fair			Encroachment
247	*Quercus agrifolia*	Coast live oak	1	8						8	18	12	good	fair			Encroachment
248	*Quercus agrifolia*	Coast live oak	1	10						10	18	14	good	fair			Encroachment
249	*Quercus agrifolia*	Coast live oak	2	7	3					8	18	12	good	fair			Encroachment
250	*Quercus agrifolia*	Coast live oak	1	10						10	18	12	good	fair			Encroachment
251	*Quercus agrifolia*	Coast live oak	1	10						10	18	12	good	fair			Encroachment
252	*Quercus agrifolia*	Coast live oak	1	10						10	18	12	fair	fair			Indirect
253	*Quercus agrifolia*	Coast live oak	1	7						7	16	10	good	fair			Encroachment
254	*Quercus agrifolia*	Coast live oak	3	16	11	9				21	16	23	fair	fair			Indirect
255	*Quercus agrifolia*	Coast live oak	1	11						11	17	10	fair	fair			Indirect
256	*Quercus agrifolia*	Coast live oak	1	11						11	17	10	fair	fair			Indirect
257	*Quercus agrifolia*	Coast live oak	3	12	11	9				19	18	16	fair	fair			Indirect
258	*Quercus agrifolia*	Coast live oak	1	18						18	20	15	fair	fair			Indirect
262	*Quercus agrifolia*	Coast live oak	1	18						18	20	20	good	fair			Encroachment
263	*Quercus agrifolia*	Coast live oak	1	16						16	20	25	good	fair			Encroachment
264	*Quercus agrifolia*	Coast live oak	1	22						22	20	25	good	fair			Encroachment
265	*Quercus agrifolia*	Coast live oak	1	15						15	16	15	fair	fair			Indirect

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Tree Number	Botanical Name	Common Name	Stems	Individual Trunk Diameters (in.)						Trunk DBH (in.)*	Height (ft.)	Canopy (ft.)	Health	Structure	Notes	Heritage Tree**	Impact Status
				S1	S2	S3	S4	S5	S6								
266	*Quercus agrifolia*	Coast live oak	1	12						12	25	17	fair	fair			Encroachment
267	*Quercus agrifolia*	Coast live oak	1	28						28	22	28	fair	fair			Encroachment
268	*Quercus agrifolia*	Coast live oak	1	10						10	17	12	fair	fair			Encroachment
270	*Quercus agrifolia*	Coast live oak	1	11						11	16	17	poor	fair			Encroachment
271	*Quercus agrifolia*	Coast live oak	1	37						37	25	32	good	good		Yes	Encroachment
272	*Platanus racemosa*	Western sycamore	1	18						18	20	28	fair	fair			Encroachment
273	*Platanus racemosa*	Western sycamore	1	21						21	15	30	good	fair			Encroachment
274	*Platanus racemosa*	Western sycamore	3	21	19	18				34	35	32	good	fair			Encroachment
275	*Quercus agrifolia*	Coast live oak	2	10	9					13	16	21	good	fair			Indirect
276	*Platanus racemosa*	Western sycamore	1	5						5	11	10	fair	fair			Indirect
277	*Platanus racemosa*	Western sycamore	1	7						7	16	10	fair	fair			Indirect
278	*Juglans californica*	Southern California black walnut	3	12	9	9				17	16	20	fair	fair			Removal
281	*Schinus terebinthifolius*	Brazillian pepper	2	16	9					18	20	20	fair	fair			Indirect
283	*Schinus terebinthifolius*	Brazillian pepper	3	10	9	6				15	18	17	fair	fair			Indirect
285	*Quercus agrifolia*	Coast live oak	2	17	15					23	25	30	fair	fair			Encroachment
286	*Quercus agrifolia*	Coast live oak	1	24						24	20	26	good	fair			Encroachment
287	*Quercus agrifolia*	Coast live oak	1	5						5	12	8	fair	fair			Encroachment
288	*Eucalyptus maculata*	Spotted gum	1	5						5	12	8	fair	fair			Indirect
289	*Eucalyptus maculata*	Spotted gum	1	15						15	30	20	fair	fair			Indirect
290	*Eucalyptus maculata*	Spotted gum	1	14						14	30	20	fair	fair			Encroachment
291	*Eucalyptus maculata*	Spotted gum	1	11						11	25	18	fair	fair			Indirect
292	*Eucalyptus maculata*	Spotted gum	1	17						17	40	20	good	fair			Encroachment
293	*Quercus agrifolia*	Coast live oak	1	24						24	30	25	fair	fair			Encroachment
294	*Quercus agrifolia*	Coast live oak	1	14						14	18	22	fair	fair			Removal
295	*Tipuana tipu*	Tipu tree	1	10						10	20	15	good	fair			Encroachment
296	*Tipuana tipu*	Tipu tree	2	9	4					10	25	15	good	fair			Removal
297	*Quercus agrifolia*	Coast live oak	1	15						15	18	16	good	fair			Encroachment
298	*Quercus agrifolia*	Coast live oak	1	38						38	30	42	good	fair			Encroachment
299	*Quercus agrifolia*	Coast live oak	1	28						28	28	20	good	fair			Indirect
301	*Platanus racemosa*	Western sycamore	1	10						10	32	18	fair	fair			Encroachment
302	*Schinus molle*	California pepper	1	13						13	24	18	good	fair			Encroachment
303	*Platanus racemosa*	Western sycamore	1	6						6	15	17	good	fair			Encroachment
304	*Platanus racemosa*	Western sycamore	1	10						10	24	19	good	fair			Encroachment
305	*Acer saccharinum*	Silver maple	1	15						15	20	30	good	fair			Encroachment
307	Salix spp.	Willow	1	10						10	13	15	fair	fair			Encroachment
308	*Ulmus parvifolia*	Chinese elm	1	12						12	28	16	good	fair			Encroachment
309	*Platanus racemosa*	Western sycamore	1	23						23	26	30	good	fair			Encroachment
310	*Quercus agrifolia*	Coast live oak	1	10						10	16	14	good	fair			Indirect
311	*Juglans californica*	Southern California black walnut	1	13						13	20	18	good	good			Removal
312	*Quercus agrifolia*	Coast live oak	3	13	9	6				17	22	17	good	good			Encroachment
313	*Quercus agrifolia*	Coast live oak	1	10						10	17	14	good	fair			Encroachment
314	*Quercus agrifolia*	Coast live oak	1	7						7	15	14	good	fair			Indirect
316	*Quercus agrifolia*	Coast live oak	2	11	7					13	16	18	good	fair			Removal
317	*Platanus racemosa*	Western sycamore	2	28	9					29	34	26	good	fair			Encroachment
319	*Quercus agrifolia*	Coast live oak	1	16						16	20	27	good	good			Removal
328	*Quercus agrifolia*	Coast live oak	1	6						6	10	10	fair	good			Indirect
330	*Eucalyptus globulus*	Blue gum	4	34	10	5	5			36	50	22	fair	fair			Non-Impact
331	*Eucalyptus globulus*	Blue gum	1	9						9	20	8	fair	fair			Indirect
332	*Eucalyptus globulus*	Blue gum	1	7						7	20	8	fair	fair			Indirect

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Tree Number	Botanical Name	Common Name	Stems	Individual Trunk Diameters (in.)						Trunk DBH (in.)*	Height (ft.)	Canopy (ft.)	Health	Structure	Notes	Heritage Tree**	Impact Status
				S1	S2	S3	S4	S5	S6								
333	*Eucalyptus globulus*	Blue gum	4	15	12	10	8			23	30	10	dead	dead	dead		Encroachment
334	*Eucalyptus globulus*	Blue gum	2	19	4					19	48	15	fair	fair			Indirect
346	*Quercus agrifolia*	Coast live oak	3	18	12	10				24	16	15	good	good			Indirect
347	*Quercus agrifolia*	Coast live oak	1	11						11	18	17	good	good			Encroachment
348	*Platanus racemosa*	Western sycamore	1	32						32	55	30	good	good			Encroachment
349	*Quercus agrifolia*	Coast live oak	2	9	6					11	17	16	good	fair			Encroachment
350	*Quercus agrifolia*	Coast live oak	1	11						11	23	17	good	fair			Encroachment
351	*Sequoia sempervirens*	Coast redwood	2	15	13					20	55	17	good	good			Indirect
352	*Platanus racemosa*	Western sycamore	1	19						19	48	26	good	fair			Encroachment
353	*Juglans californica*	Southern California black walnut	1	5						5	12	15	good	fair			Encroachment
354	*Platanus racemosa*	Western sycamore	1	12						12	30	17	good	fair			Non-Impact
355	*Quercus agrifolia*	Coast live oak	1	7						7	20	19	good	fair			Encroachment
356	*Platanus racemosa*	Western sycamore	2	21	16					26	38	40	good	fair			Encroachment
357	*Juglans californica*	Southern California black walnut	2	12	7					14	24	20	fair	poor			Indirect
358	*Platanus racemosa*	Western sycamore	1	29						29	70	35	good	good			Non-Impact
359	*Quercus agrifolia*	Coast live oak	1	5						5	15	8	good	fair			Encroachment
360	*Juglans californica*	Southern California black walnut	1	4						4	13	8	fair	fair			Indirect
361	*Quercus agrifolia*	Coast live oak	2	13	5					14	20	16	good	fair			Indirect
362	*Platanus racemosa*	Western sycamore	1	21						21	50	25	good	good			Encroachment
363	*Quercus agrifolia*	Coast live oak	1	16						16	30	25	good	fair			Encroachment
364	*Juglans californica*	Southern California black walnut	3	9	5	4				11	17	15	fair	fair			Indirect
371	*Quercus agrifolia*	Coast live oak	1	31						31	23	35	good	fair			Indirect
375	*Sequoia sempervirens*	Coast redwood	2	18	16					24	55	18	good	good			Indirect
386	*Platanus racemosa*	California sycamore	1	38						38	58	50	good	fair			Removal
437	*Platanus racemosa*	California sycamore	1	23						23	60	40	good	good			Encroachment
438	*Platanus racemosa*	California sycamore	2	35	29					45	50	60	good	fair			Encroachment
448	*Platanus racemosa*	California sycamore	2	16	12					20	48	30	fair	fair			Indirect
449	*Platanus racemosa*	California sycamore	1	10						10	38	12	good	fair			Indirect
450	*Platanus racemosa*	California sycamore	1	12						12	34	17	good	fair			Indirect
451	*Platanus racemosa*	California sycamore	1	20						20	60	32	fair	good			Indirect
485	*Schinus molle*	California pepper	1	9						9	18	10	good	good			Non-Impact
486	*Eriobotrya deflexa*	Bronze loquat	1	5						5	10	9	good	good			Non-Impact
487	*Pinus canariensis*	Canary Island pine	1	17						17	48	15	good	good			Non-Impact
488	*Quercus agrifolia*	Coast live oak	1	7						7	14	9	good	good			Indirect
489	*Pinus canariensis*	Canary Island pine	1	17						17	50	15	good	good			Non-Impact
490	*Quercus agrifolia*	Coast live oak	1	7						7	14	8	good	good			Indirect
491	*Alnus rhombifolia*	White alder	1	13						13	30	15	fair	fair			Removal
492	*Alnus rhombifolia*	White alder	1	8						8	15	15	fair	fair			Encroachment
493	*Quercus agrifolia*	Coast live oak	3	13	5	5				15	15	15	good	good			Removal
494	*Eucalyptus globulus*	Blue gum	4	13	12	12	6			22	14	12	fair	fair			Encroachment
495	*Eucalyptus globulus*	Blue gum	4	6	5	4	4			10	14	12	fair	fair			Encroachment
496	*Eucalyptus globulus*	Blue gum	3	10	10	9				17	14	12	fair	fair			Encroachment
497	*Eucalyptus globulus*	Blue gum	1	10						10	14	8	fair	fair			Encroachment
498	*Eucalyptus globulus*	Blue gum	2	6	6					8	14	10	fair	fair			Removal
499	*Eucalyptus globulus*	Blue gum	3	6	6	5				10	14	10	fair	fair			Removal
500	*Eucalyptus globulus*	Blue gum	2	13	6					14	14	10	fair	fair			Removal
501	*Eucalyptus globulus*	Blue gum	3	12	12	10				20	14	10	fair	fair			Removal
502	*Erythrina caffra*	Coral tree	5	14	12	10	12	8		24	16	15	good	good			Encroachment
503	*Eucalyptus globulus*	Blue gum	3	18	8	10				22	30	16	good	good			Encroachment

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Tree Number	Botanical Name	Common Name	Stems	Individual Trunk Diameters (in.)						Trunk DBH (in.)*	Height (ft.)	Canopy (ft.)	Health	Structure	Notes	Heritage Tree**	Impact Status
				S1	S2	S3	S4	S5	S6								
504	*Platanus racemosa*	Western sycamore	2	20	19					28	45	28	good	good			Indirect
505	*Platanus racemosa*	Western sycamore	1	15						15	45	18	good	good			Non-Impact
506	*Platanus racemosa*	Western sycamore	1	16						16	50	18	good	good			Non-Impact
507	*Alnus rhombifolia*	White alder	1	17						17	40	18	good	good			Encroachment
508	*Platanus racemosa*	Western sycamore	1	11						11	30	15	good	good			Indirect
509	*Quercus agrifolia*	Coast live oak	1	14						14	20	15	poor	poor			Indirect
510	*Alnus rhombifolia*	White alder	1	15						15	25	15	good	good			Encroachment
520	*Quercus agrifolia*	Coast live oak	2	17	9					19	18	20	good	good			Indirect
521	*Quercus agrifolia*	Coast live oak	1	21						21	20	25	good	good			Encroachment
540	*Persea americana*	Avocado	4	7	7	6	5			13	15	16	good	good			Indirect
541	*Persea americana*	Avocado	5	8	6	6	5	6		13	15	14	good	good			Indirect
543	*Persea americana*	Avocado	2	10	3					10	14	12	fair	fair			Indirect
544	*Eucalyptus cinerea*	Silver dollar gum	1	10						10	16	12	fair	fair			Indirect
549	*Quercus agrifolia*	Coast live oak	1	17						17	22	26	good	good			Encroachment
550	*Quercus agrifolia*	Coast live oak	1	22						22	35	18	fair	fair			Encroachment
551	*Platanus racemosa*	Western sycamore	1	9						9	25	15	good	good			Non-Impact
554	*Quercus agrifolia*	Coast live oak	3	10	10	9				17	15	12	good	good			Non-Impact
555	*Quercus agrifolia*	Coast live oak	4	10	10	10	9			20	15	15	good	good			Non-Impact
557	*Quercus agrifolia*	Coast live oak	2	13	13					18	25	20	good	good			Indirect
558	*Quercus agrifolia*	Coast live oak	4	15	16	14	12			29	25	26	good	good			Removal
568	*Juglans californica*	Southern California black walnut	2	13	11					17	20	16	fair	fair			Encroachment
571	*Eucalyptus cinerea*	Silver dollar gum	1	17						17	20	18	good	good			Removal
573	*Eucalyptus cinerea*	Silver dollar gum	1	15						15	20	16	good	good			Indirect
574	*Platanus racemosa*	Western sycamore	3	11	13	7				18	19	17	good	good			Encroachment
575	*Platanus racemosa*	Western sycamore	2	8	6					10	19	16	good	good			Indirect
577	*Schinus terebinthifolius*	Brazillian pepper	3	22	19	20				35	20	20	fair	fair			Encroachment
579	*Eucalyptus globulus*	Blue gum	1	36						36	28	25	fair	fair			Encroachment
580	*Eucalyptus globulus*	Blue gum	4	26	12	8	8			31	24	17	poor	poor			Encroachment
581	*Eucalyptus globulus*	Blue gum	1	11						11	18	10	poor	poor			Encroachment
582	*Eucalyptus globulus*	Blue gum	1	11						11	18	10	poor	poor			Encroachment
583	*Eucalyptus globulus*	Blue gum	2	15	12					19	20	12	poor	very poor			Encroachment
584	*Eucalyptus globulus*	Blue gum	1	7						7	17	5	dead	dead	dead		Encroachment
585	*Eucalyptus globulus*	Blue gum	3	16	16	15				27	25	5	dead	dead	dead		Indirect
590	*Eucalyptus globulus*	Blue gum	1	13						13	10	5	dead	dead	dead		Encroachment
591	*Platanus racemosa*	Western sycamore	1	10						10	14	11	good	good			Encroachment
592	*Pinus thunbergiana*	Japanese black pine	1	12						12	16	15	good	good			Encroachment
593	*Eucalyptus cinerea*	Silver dollar gum	1	11						11	16	15	good	good			Encroachment
594	*Pinus thunbergiana*	Japanese black pine	1	12						12	17	15	good	good			Indirect
595	*Quercus agrifolia*	Coast live oak	3	16	9	8				20	18	20	good	good			Encroachment
596	*Quercus agrifolia*	Coast live oak	1	15						15	17	18	good	good			Encroachment
598	*Platanus racemosa*	Western sycamore	1	16						16	38	16	fair	fair			Encroachment
599	*Pinus canariensis*	Canary Island pine	1	6						6	16	10	good	good			Encroachment

** Trunk DBH totals represent the square root of the sum of squared individual trunk diameter measurements.*

*** 'Heritage Tree' status only for trees in Los Angeles County jurisdiction (outside of the Malibu City limits). Status based on County of Los Angeles Oak Tree Ordinance and includes oaks with DBH measurements of 36 inches or greater.*